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M-SPHERE

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MULTI-DISCIPLINARITY OF SCIENCES, CURRENT ECONOMICS AND BUSINESS

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ABSTRACT

The issue of multi-discipliarity in sciences is not only important issue for the various fields of science and knowledge, but also an imperative for the study of Economics and Business in theory and in practice. My views actually stem from a prevalent crisis of confidence in the central tenets of the various scientific disciplines and its impact that has afflicted simultaneously the business and intellectual community all over the world. A universal feeling of frustration and hollowness pervades in most sciences.

KEYWORDS: Multi-disciplinarity, Development of Knowledge, Science, Economics and Business Studies, Economic Downturn

1. MULTI-DISCIPLINARITY AND ITS SIGNIFICANCE FOR THE DEVELOPMENT OF KNOWLEDGE AND SCIENCE

Today, as new needs and professions have emerged, multi-disciplinarity has attracted researchers, students, and teachers alike in an endeavour of connecting and integrating several academic thoughts, professions, or technologies. The concept of multi-disciplinarity has its root in Greek Philosophy and it implies combining of two or more academic fields into one. The Greek historians took elements from other realms of knowledge to further understand their own. It involved creating something new by crossing boundaries, and thinking across them.

Multidisciplinary programmes usually arise from a shared conviction that the traditional disciplines are unable or unwilling to address an important problem. For example, social sciences, such as economics and sociology, pay scant attention to the social analysis of technology. But, with the growing interest in the subject many people have joined such courses that are conducted by scholars coming from varied disciplines.

Multi-disciplinarity may also arise from new research developments such as nano-technology, quantum information processing, bio-informatics, molecular biology etc. Lately, in economics and business studies, the concept of sustainable development has attracted worldwide attention. Since, the concept deals with the analysis and synthesis across economic, social and environmental spheres, experts from various fields have joined the search for eco-econ solutions.

Debate among scholars over the usefulness of multi-disciplinarity continues. While some consider it as a remedy to the harmful effects of excessive specialization, others are worried because most participants in multi-disciplinary ventures are basically trained in traditional disciplines, and thus they fail to learn to appreciate differing perspectives and methods. The simple argument, in such cases, is that a discipline that places more emphasis on quantitative 'rigour' may produce practitioners who think of their discipline as 'more scientific' than others; in turn, professional in 'softer' subjects may associate quantitative approaches with an inability to grasp the broader dimensions of a problem. Furthermore, a multi-disciplinary programme may not succeed because team members remain stuck in their original fields of specialization. The obstacles and challenges faced by multi-disciplinary activities today can be classified as 'professional', 'organizational', and 'cultural'. Supporters and detractors alike, in academic institutions and businesses are faced with a most common complaint that these programmes lack in synthesis. In academic field, for example, multi-disciplinary programmes may generally fail, if they are not given sufficient autonomy.

Resulting from the above difficulties, today many multi-disciplinary research areas are strongly motivated to become disciplines themselves. Examples to cite are: cybernetics, biochemistry, bioengineering, etc. But, let us not forget that when new solutions to problems emerge, much information is fed back to the various disciplines involved. Therefore, multi-disciplinary work may also be considered as complementary.

2. MULTI-DISCIPLINARITY IN ECONOMICS AND BUSINESS STUDIES

In this context, I would like to address two questions: First, who are the economists and what are their duties that they need to discharge in the future; and Second, I want to answer myself as an educationist: what sort of economics and business education is required for economists and managers of the future?

Let me remind that during the last three decades, on the one hand, to no one's surprise, the classical teaching of economics has slowly withered away even in the most prestigious universities on one hand; at the same time, on the other hand, in the US, Europe and Asia there had been a strong surge in admissions to the Business Schools at the cost of pure Economics. If we look at the state of Economics and Business studies, sadly enough, these sciences are ailing today. In the 1980s scepticism engulfed the economic forecasting activity. As the doubts in its accuracy grew, the interest of researchers in pure economics declined. Inside the companies, stress was laid down on focused research. Many companies disbanded their forecasting units. Independent forecasting economic consultancies withered away. Naturally, after thirty or more years, we are asking ourselves as to what has happened to Economics.

My quest for answer takes me back to the history of philosophical and economic thought. From there we learn that the general technique to study the doctrines and philosophers who develop, apply, and discuss the theory is to rely on the tentative results of contemporary economics and on initial judgments concerning the nature and worth of economic theory and economics as a discipline. Economists, usually, talk about their own work in terms of *principles*, *models*, *theories*, *assumptions*, and *definitions* and make use of previous work by epistemologists and philosophers of science. Let us give the economists same benefit of doubt as we do to the philosophers of science seeking knowledge. However, economists need to trim, revise, and even invent philosophical categories in trying to make sense of economic theory.

Since 1990s, the confidence of American, Japanese and West European corporations in the economic forecasts was badly shaken, because even with the help of sophisticated computer models, Economists had failed to foresee the stagflation of the 1970s and the cyclical trends of the 1980s. The confidence further depleted in the usefulness of Economics as a science for the experts did not accurately predict the consumption pattern of the households or the firms. In the wake of economic shake-up of 1980s and 1990s the reputation of the science has taken the beating. In the mid 1990s some big multinationals in the US started firing their crystal bowl watchers[1]. The Swedish Academy of Sciences too recognised this shifting course in Economics by awarding the 1990 Nobel Prize in Economics to Harvey Markovitz, Merton Miller, and William Sharpe.

I should mention here that the macroeconomic models of the 1930s were based on consumption and saving/investment equations. The year following the WWII, were the golden years for such models. For two decades the world recorded high growth rates, but in the 1970s the high hopes were watered down when these models could not foresee the repercussions of the explosive hikes in oil prices. The mainframe computers were fed with known and unknown parameters to produce equations that could be used in justification of proposed growth policies[2]. These models were designed to simulate faster sustained economic growth of the national economies[3].

Recession that has afflicted the global economy during last five years, and may even last longer than the mentioned Biblical years, has anew placed Economics in fire. During these five years, economic failures have provoked a lack of confidence in the validity of economic theories and business wisdom. It is being said often among the economists themselves that *few economic bubbles have burst more spectacularly than the reputation of Economics as a science.* While, famous economist, Paul Krugman in 2008, in his LSE lecture, argued that much of the macroeconomics of the past 30 years was *spectacularly useless at best and positively harmful at worst*; Barry Eichengreen, another renowned economist, went on to say that *current economic turmoil has cast in doubt much of what we thought we knew about economics*.

Nevertheless, I would like to add that the troubles of economic science are purely methodological issues and it is in this context that these should be addressed. We should acknowledge that the discussions of economic issues are often biased and distorted because of their importance to interests of individuals and social groups. Economists can, however, address a broader audience and a wider spectrum of issues if they do not start by taking them as the paradigm for what economics should be. Economics must thus struggle to avoid becoming apologetics for any school of economic thought.
History is a witness that, usually, the business cycles have been followed by the reassessments of the economic science. Deep recessions have been followed by negation of the existing orthodoxies giving way to the new. As more than over a century ago, as now, economists seemed to feel that the glaring lack of consensus on fundamental

[1] General Electric, a giant corporation that earned revenue of some 70 billion in 1996 did not employ even a single economist, IBM fired its 'team of economists' in favour of good 'portfolio and risk managers', because as one spokesperson said, 'it is much cheaper for us'. Soon company experts became more concerned with risk management, watching financial derivates, hedging against price and interest rate fluctuations, inventory management, etc.

[2] Note that using such models in 1974 the Economic Council of the President of the United States enthusiastically overestimated the economic growth for 3 per cent and underestimated inflation by the same percentage.

[3] One worthy author of such models Lawrence Klein won a Nobel Prize for his models in 1980.

principles compromised the scientific status of Economics, and there were strong professional and public pressures to establish new orthodoxies that could speak authoritatively on economic matters.

Now let us now redeem who is an economist in practice? What he does? Is he someone a social philosopher like Adam Smith or an analyst and teacher like Alfred Marshall or a dentist of Keynes's dream? To me, it seems that modern economist is none of the said sort. He is someone – with a little bit of everything – a theoretician, observer/researcher, analyst, diagnostician, policy designer and sometimes one who gets involved in policy implementation. Evidently, such a person would have to be an intellectual giant and could exist only in our minds.

Keynes in his remark on the role of the future of economists was rather sceptic as he thought that economists could manage to get themselves thought of a humble, complete people, on a level with dentists. If so, he said, that would be splendid! Alas, even after eighty years of this remark that has not happened. Today, economists have either been reduced to pure theorists – academics caged in prestigious university campuses, some receiving the Nobel Prize in Economics for their theoretical contributions, or the massive number holding graduate degrees in economics and business working for state or private employers. Except a few, to our regret, the vast majority is neither well averse with real economics nor is able to use the acquired knowledge in appropriate manner. Professional economists have been to their desks doing some routine statistical analyses of little use. Evidently, we have reached nowhere close to Keynes's dream.

Personally, I would like to see my fellow economists of the future in the role of a mechanic – knowledgeable, well-equipped with plenty of analytical tools in his toolbox, capable of fixing the defects in the economic system[4]. I see him well aware of economic doctrine, finance, economic history, mathematics and philosophy. I see him talented in understanding the socio-psychological reactions of the people in face of economic trends, and capable of using appropriate analytical tools. Since, the economic system by nature, like an old car, is prone to frequent breakdowns and cyclical fluctuations, his role as constructor and repairer is of utmost priority. For such a role, I visualise an apprenticeship in places where economic policy is evolved.

Let me also mention that we do not require an army of economists. Thus, there is no need to enrol a massive number of students in the universities. Educating an economist[5] of the needed type is not going to be an easy task. While the students will have to be gifted, the teachers would have to be highly qualified and competent and curriculum tough. For a moment, let us not be misled by Keynes's remark that the study of Economics does not seem to require any specialised gift of an unusually high order[6], instead I would like to cite and agree with him when he writes in his essay *Alfred Marshall* that …*the master economist must possess a rare combination of gifts*[7].

I see education as a complex process. As a teacher, I am inclined to believe that education is not only acquiring skill or aptitudes, but it is also about acquisition of attitudes. People need to know not only methodology, but also reality and should be problem/solution driven. They should know the scope as well as the limits of techniques they learn.

Greek philosophers have long back recognised the importance of education of the people. Modern economics, in pioneering work of Theodore Schultz[8] has recognised the significance of the role that education plays in economic development of a country. Questions are many and open. Should it be general or specialised, scientific or skill-oriented, intermediate or higher, self-paid or state funded, etc? But let us not forget that from a country's perspective and its future, all types of education facilities need to find proper place to suit the public choice. But, at all levels and for every science/art there must be the right type of education. This, moreover, depends upon the choice of curriculum, length of study, intensity of learning, quality of teachers and institutional facilities, etc.

[4] Economic system should be understood as a compound of institutional framework including economic legislation, economic structure of the society and economic policy of the state.

[5] I mean here graduate (master) and postgraduate (doctoral) education of 'economists' only.

[6] Keynes, J. M., 'Alfred Marshall' in his Essays in Biography, London: Macmillan (1972). This remark should be taken in context to the then prevailing widespread feeling among the university students and the public that the study of economics, compared to other sciences or law, does not require any pre-requirements and is easy to complete.

[7] "Is it not intellectually regarded a very easy subject compared with the higher branches of philosophy and pure science? Yet good or even competent, economists are the rarest of the birds". He further adds, He must reach a high standard in several different directions and must combine talents not often found together. …. He must be mathematician, historian, statesman, philosopher – in some degree. He must understand symbols and speak in words. He must contemplate the particular in terms of the general, and touch abstract and concrete in the same flight of thought. He must study the present in the light of the past for the purpose of the future. No part of human nature or their institutions must lie entirely outside his regard. He must be purposeful and disinterested in a simultaneous mood; as aloof and incorruptible as an artist, yet sometimes as near the earth as a politician." Ibid.

[8] See his (1963), The Economic Value of Education, New York: Columbia University Press; (1971), Investment in Human Capital: The Role of Education and of Research, New York: Free Press.

In the 1980s, voices against Economics and the Economists were uttered loudly[9] and are reflected in an earlier statement of Nobel economist Fredrich August von Hayek that no body can be a great economist who is only an economist..., and (as such he) is likely to become a nuisance if not a positive danger[10]. In academia, the pressure for jobs, promotion, tenure and publication in American and British universities grew such that the economists had to cultivate ever narrower fields. The slogan became publish or perish. The result was that the economics students were trained to become narrow specialists without understanding the institutions, the economic thought, the economic literature, the handling and evaluation of quantitative and qualitative data, learning to weigh evidence, and without wider visions.

Lately, with the reform of the education system within Europe, the so called *Bologna Process*, Europe has lost its edge. Unfortunately, as against its age-long tradition and culture, it has followed the poor American example, destroying the very foundations of knowledge. Economics requires broader knowledge. Does this broadening not mean that we have to sacrifice some education in economics that is all the time becoming more and more technical, specialised, fragmented and professional? I am afraid that unless we lengthen the time of study, evidently, some sacrifices in curriculum will have to be made. As far as the question of specialised economics education is concerned, to me it basically relates to business studies. Scholars are saying world-wide that the *specialist knows more and more about less and less until he knows everything about nothing*. The real question is should a well-trained business economist deal with few areas or spread his investigation widely? I feel that it should be left to individual choice.

Since J. M. Keynes published his *General Theory of Employment, Interest and Money* (1936), Economics education in the Western world, particularly in the US, has moved far away from the tradition. Many distinguished economists in 1990s accepted that in the US Graduate (Master) education tools and theory are preferred at the cost of creativity and problem solving. It was also noted that graduate students who come from other fields can get Ph.D.s with little or no knowledge of economic problems and institutions[11].

To me, it seems that time has come to reverse the trend. In the light of the above observation, I believe that it would perhaps be right to sacrifice some technical aspects of economics (including some of mathematics) in favour of disciplines like political science, logic, sociology, philosophy and history. Philosophy consists of logic, epistemology, moral and political philosophy. A sound knowledge of logic and theory of knowledge will make an economist not only good theorist but also teach him to distinguish between, on one hand, tautology and deductions from them, and on the other, empirical facts and their relation. Economics suffers from mistaken validity for truth and the easy transition to falsehood that lies at the alleged rigour and precision of mathematical economics. Conclusion may be valid but untrue. Similarly, a good education in moral and political philosophy would avoid or at least reduce the numerous hidden biases in economic reasoning. The knowledge of political institutions and processes makes the economist aware of the constraints and opportunities for getting policies right. The economists need to take their investigation into the political variables in economic policy, and supplement positive with normative political economy. Further, social, political and economic history is deeply neglected in modern economics education. It hardly needs any argument of defence.

Does this broadening not mean that we have to sacrifice some education in economics that is all the time becoming more and more technical, specialised, fragmented and professional? I am afraid that unless we lengthen the time of study, evidently, some sacrifices in curriculum will have to be made.

A widely held criticism of modern American and European education of economics is that it has, unfortunately, become too narrow and too far from reality[12]. The Economics Departments in universities are awarding degrees to generations of *fach idiots - brilliant at esoteric mathematics yet innocent of actual economic life*[13]. I would rather agree with my late friend Professor Paul Streeten and *favour being a broad-gauged economist and vaguely right to being precisely wrong*[14]. Economics is not a science in which controlled experiments can be conducted and no economic theory has ever been falsified by an experiment.

3. ECONOMIC DOWNTURN AND THE MULTI-DISCIPLINARITY OF SCIENCES

As we all know, the World economy, for a couple of years, is passing through a serious economic recession. Many of its problems are deep rooted and have long been neglected. Problem-fixing solutions have not yet been found. We learn from economic history of some serious recessions in the past[15]. Of course, every time the intensity of the economic pain and social cost was different. I have discussed these in of some detail in my key note speeches and papers at Opatija (2010) and Pula (2011) Zagreb (2012) Conferences.

[9] F.A. von Hayek (1988), in his The Fatal Conceit.
[10] F.A. von Hayek (1967), in his Studies in Philosophy, Politics and Economics.
[11] See Krueger, Ann, et. al., JEL, Vol. XXIX, No.3 Sept. 1991, pp 1035-1053.
[12] Klamer, Arjo and David Colander, (1990), The Making of an Economist, Boulder: Westview Press.
[13] Kuttner, R (1986), "The Poverty of Economics", Atlantic Monthly, February Issue, pp 74-84.
[14] Paul Streeten, American Economics Education, Mimeo.

In short, I can mention that recessions of the 19th century were acute and lasted long enough to create economic hardships for the ordinary people. Hunger, poverty, unemployment were widespread and the governments made it more difficult by doing little or nothing. The Great Depression of 1929-32 was definitely the worse in the series with deep effects on global economy. Note that each recession and its negative effects have in the past had serious impact on the economic thinking that followed.

Current recession is in no way less severe than most in the past. Most of the recessions have lasted long. The only difference now is that the sustainability of the global world has increased tremendously and that the world can absorb the shocks much easily than ever before. Geographically, Europe is worst hit by it and recovery soon is not in sight as yet.

Let me make a passing comment on the most recent developments in European Union countries. Although, The IMF, The World Bank and the European Bank have reacted to the situation with a bail-out packages. Hardly, any improvement in job creation and GDP growth is visible. Why? *Firstly*, to my mind, the economic DNA of the Southern Euro-zone countries is altogether different than that of the North. While the South basically depends upon the primary sectors, the North relies heavily upon export of industrial goods. Accordingly, there is a great North-South divide in per capita GDP of the countries in the zone. *Secondly*, sticking to a utopian ideal of economic convergence, spill-over effects and automatic evaporation of income distribution gaps through common denominator of money – the Euro, the EU is living under a false hope. It has not happened so far and will not in the near future. It is unrealistic because of the disparity in the terms of trade among the primary, secondary and tertiary sectors within the zone. For this to happen over time, major economic restructuring will have to take place, and the financial costs of this change will be enormously large for which there is no money available in near future. *Finally*, in this very context, let me make another point. In the post WWII era the World in general and the OECD economy in particular, has witnessed an unprecedented economic growth in past history. The Western world, however, has learned to live rather too well, that had unmatched with its labour productivity and sustainability of natural resources. The globalization process that the West has so enthusiastically pushed forward in the 1990s had let loose forces in which the tides shifted to the Eastern hemisphere.

Now a days, every body talks about the rising economic power of the Asian economies. Let us record that in the Asian economies the production, incomes, consumption, investments, employment have rapidly grown over last two decades. Their higher absolute productivity of labour and the low wage rates has led the OECD countries to gradually bleed for quite some time, and dices are not to likely change in the near future. Some people would like to ask if some more dominos will fall victim to this recession in the East (e.g. Japan, China, India and others). I would say, hopefully yes! Must we worry? No! From history we learn that mankind has always resisted to odds and adapted to the situation. It has also moulded the course of events by making strides in science and technology.

How multi-disciplinarity does come in the picture in current economic context? To my firm belief it is the key to many solutions. We have learned from the past history and everybody acknowledges that progress in science and technology is vital to economic growth of nations. Innovations, inventions and scientific progress, in general, brings in new entrepreneurs in the markets who create new jobs, products, incomes and profits and turn the business cycle in upswing and ultimately recovery and economic growth.

4. CONCLUSION

Finally, we all know that 'knowledge' is a 'stock' (fund) that grows over time. Education is a process of learning and experiments. As there are no boundaries in science, the 'mixing' or the multi-disciplinarity creates new knowledge and new solutions. In times of crisis, by nature, human mind looks for new avenues. So is happening now. Scholars and scientists in the universities, institutes, laboratories; engineers and mechanics in workshops and factories are busy in search for new solutions. Acquisition of interdisciplinary knowledge is an inborn characteristic of human mind, and the scientific progress relies on this very trait. In times of current economic difficulties, it is not only the natural scientists but the economists and business managers too are busy in finding new ways to ride the tide of recovery when it comes. Combined knowledge of different sciences is our future and hope.

LITERATURE

As referred in the foot notes to the text.

[15] In the last 250 years, recessions have caused economic failures and wide-spread misery and destitute e.g. 1750s, 1820s, 1870s, 1880s, 1920s, 1970s, 1990s, and now 2008/12.

CUSTOMER PERCEIVED VALUE AS A MEDIATOR BETWEEN CORPORATE REPUTATION AND WORD OF MOUTH IN BUSINESS MARKETS

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ABSTRACT

This paper examines customer perceived value as one of the most important marketing concepts in business markets and its mediating role between corporate reputation and word of mouth. Corporate reputation represents an intangible asset for the company and its positive influence on customer value has been widely researched. Additionally, reputation is usually related with the concept of word of mouth (WOM). WOM is becoming one of the most powerful promotional tools, and this is especially true for business markets as well as for services. Our research is done in the organizational services setting with focus on the relationships of banks with their organizational customers. Data in the study were analyzed using partial least squares (PLS) structural equation modeling. Results of the study confirm hypothesized model and show that customer perceived value is mediating the relationship between corporate reputation and word of mouth.

KEYWORDS: Word of mouth, customer perceived value, corporate reputation, services, business markets

1. INTRODUCTION

Value is one of the most crucial elements when it comes to any relationship. This statement is also true when it comes to the business relationships analysis. In our research, we look for more insights and better understanding of customer perceived value in organizational setting. We observe relationship between clients and business services providers. As perceived value is defined as a tradeoff between all benefits and sacrifices from the relationship (Zeithaml, 1988), we assume the necessary evaluation of all possible tangible and functional elements such as quality and price, however we search for more information about the influence of other, intangible elements on consumer perceptions of services (Levy, 1959). Primarily, we assert the influence of corporate reputation on customer perceived value in business relationships.

On the other hand, the same way we are interested in corporate reputation as the intangible antecedent of customer value, we are interested in customer value consequences. More precisely, we are interested in relationship consequences and hence we analyze the influence of customer perceive value on word of mouth (WOM) in this setting. Word of mouth has been increasingly popular research construct in relational analyses and it has been analyzed as a consequence of customer perspective (Walsh et al., 2009). Therefore, the main purpose of this research is to examine a potential mediating role of customer perceived value between corporate reputation and WOM (Baron & Kenny, 1986) in business services through empirical research. The structure of this paper is as follows: first we give basic theoretical assumptions and review of relevant literature for the field. Secondly, we present our empirical research methodology and our research findings. Finally, we give conclusions and recommendations for further research.

2. THEORETICAL FRAMEWORK

2.1. Corporate reputation

Authors often define corporate reputation as a collective impression about the company, internally from the side of employees and externally from the side of other interest groups (Bailey, 2005; Fombrun & Van Riel, 1997; Walker, 2010). Thereby, Wartick's (2002) emphasis on the fact that reputation of a company or of an individual could not be anything else but the observers' perception should not be forgotten. Reputation could be defined as stakeholders' perception of companies' success in satisfying demands and expectations of its interest groups (Longsdon & Wood, 2002). This understanding implies the fact that each in-

dividual formulates its individual perception about the company and its own attitude towards its activities. This is much more acceptable for services and service interactions customers assess in the so-called 'moments of truth' (Albrecht & Zemke, 1985),

Different dimensions of corporate reputation could be perceived differently, depending on the subject that is perceived, and on the importance given to certain dimensions and criteria that are used (Dowling, 1988; Walsh & Beatty, 2007). Although authors mostly represented the viewpoint that there are relatively homogeneous attitudes on corporate reputation within certain interest groups (Bromley, 2002), some researches (Helm, 2006) showed that there is significant overlapping within the dimensions different stakeholders assess as important ones.

Relationship between customer loyalty and profitability has been identified in previous research (Bown & Chen 2001) as well as satisfaction and customer perceived value influence on loyalty formation (Aaker, 1995; Anton, 1996; Hoyer & MacInnis, 2001). On the other hand, influence of corporate reputation on the customer perceived value represent an important avenue in business relationships research (Hansen et al., 2008) and this is in focus of our research.

2.2. Customer Perceived Value

Customers and service providers' interaction create certain level of value for both sides. Essentially it is a measure of gains both sides receive from the mutual interaction.

Value concept hence becomes customer perceived value that represents the individual experience of the interaction between customer and service provider, often compared with company's competitors (Anderson & Narus, 1999; Ulaga & Chacour, 2001). Consumer (customer) behavior measurement models are essentially reduced to comparing of what is invested and what received from the interaction (Zeithaml, 1988; Lovelock, 1996; Teas & Agarwal, 2000; Grönroos, 2000).

On the other hand, provider's value creation is basically a result of marketing activities and service process. If service process and service providing creates value for the company it will be a base for developing and building relationships between service provider and a client (Peterson, 1995; Egan, 2004; Berry, 1995; Roig et al., 2006). For service companies it is important that customers are having positive perception about service and the service process share their experience with the others. That will have positive influence on company's reputation between prospective customers, as well as positive public opinions.

Analysis of perceived value structure, actually of its "benefit side" from the perspective of customers often includes psychological value of the relationship with the service company that has positive reputation in the public. Since customers want to create the perception of themselves as the responsible members' community, they prefer to build exchange and relations with socially responsible companies (Yeung, 2011). Based on previous mentioned, customer perceived value delivered by service company will be influenced by company reputation too.

Our previous research (Babic-Hodovic et al., 2012) had shown intermediate influence of customer perceived value (CPV) between corporate reputation and WOM, no matter the fact that primary goal was to investigate separate relations between corporate reputation and WOM, and between CPV and WOM. The level of influence is stronger if customer perceived value is intermediate, comparing with the separately measured influence of corporate reputation on the customer perceived value. Caused by the fact that corporate reputation has significant influence on customer perceived value and a fact that WOM could be regarded as an outcome of customer perceived value in business relationships, we improved our research with hypothesis that customer perceived value is mediating relationship between corporate reputation and WOM.

2.3. Word of mouth

Personal sources and WOM messages used by customers in pre-purchase phase are mostly the result of others customers' previous experience. This means that the influence of this element of the communication mix can be attributed to company's previous customers and clients (Hartmann et al., 2008). Nature, power and quality of WOM's influence will depend on the business practices and effects that company has provided to its customers (Anderson et al., 1994; Athanassopoulos et al., 2001). Specifically, customers will evaluate the positive economic (Peterson, 1995) and psychological (Lewis, 2001) benefits just in case that company provided services better tailored to their needs, preferences, or additional services (Gwinner, Gremler & Bitner, 1998; Rust, Zeithaml & Lemmon, 2000). Therefore, customers will be willing to continue with the relationship and, accordingly, to spread a "positive word" about the service and the service provider only if they perceive positive value as a result of interaction (Peterson 1995), that is, if their expectations had fulfilled (Zeithaml, Parasuraman & Berry, 1985; Kano 1984).

Hence, if we observe WOM from the services customers' point of view, we can conclude that it appears on two "opposite" sides of corporate and service encounters. Primarily, in consideration phase, as "borrowed WOM", and afterwards, at the end of purchase phase as "own WOM" and the message that the user wants to pass on. As much as the previous expectations are significantly influenced by WOM spread by previous customers, the source of WOM stimuli is in service encounter and a result of the service process (Grönroos, 2000).

Together with the messages of personal sources in the consideration phase, corporate reputation has the specifically important role. As one of two visible attributes (Hoffman & Bateson, 1997; Zeithaml, 1981.) customers can assess in the service provider and service selection process, corporate reputation represent especially significant help and contribution to the decision of company selection and of accepting some of the services. This is especially true when it comes to new services that customers do not have enough information about.

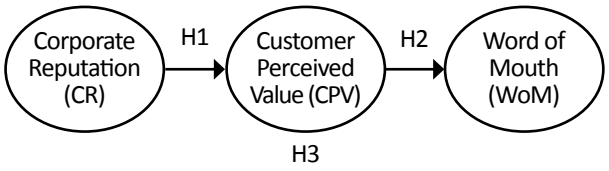
This category "produces" certain level of WOM. Firstly, in the form of messages and expectations formed as an effect of the corporate reputation analysis before service interaction. Secondly, it is produced as the results of quality perception ''filtering'' through corporate reputation. According to Grönroos (2000) quality model, corporate reputation (image) is a factor that significantly influences functional and technical quality perception. Depending on the results and the value they received, users will create a positive or negative word of mouth (Walsh et al., 2009, Sundaram, Mitra & Webster, 1998).

WOM represents a very important marketing instrument that is difficult to manage. It is often considered as a complementary factor that follows advertising (Herr et al., 1991; Hogan et al. 2004), and some authors are evaluating it as much more powerful compared to traditional forms of promotion (Silverman, 2001). This is especially the case when advertising is used as the factor and the initiator of the first purchase, and positive post purchase experience transfer through WOM messages "complements" target communication, given that customers share their experiences (Chevalier & Msyzlin 2006). In the paper we will present how corporate reputation influence on the level of WOM.

3. METHODOLOGY

With the footholds in previous theoretical and research findings (Hansen et al., 2008; Walsh et al., 2009; Babic-Hodovic et al., 2012) we hypothesize conceptual framework shown on a Figure 1.

Figure 1. Conceptual Framework



Therefore, we test following hypothesis in our research:

H1: Corporate Reputation (CR) has positive and significant influence on Customer Perceived Value (CPV) in business services relationships.
H2: Customer Perceived Value (CPV) has a positive and significant influence on Word of Mouth (WoM) in business services relationships.
H3: Customer Perceived Value (CPV) mediates the relationship between Corporate Reputation (CR) and Word of Mouth (WoM).

3.1. Measures and data gathering

Developed and previously validated measurement scales were used in the survey for the purpose of this research (Hansen et al., 2008; Selnes, 1993; Zeithaml, Berry & Parasuraman, 1996). Six items were used to measure customer perceived value (CPV), and three item scales were used for corporate reputation (CR) and word of mouth (WOM) measurement. Five point Likert scale was used to see the level of respondents' agreement with the items. Additionally, a set of demographical questions was included in the survey.

Survey was conducted amongst CEOs, top managers, directors or financial managers who represented their companies, in year 2011 in Bosnia and Herzegovina (B&H). They were asked to evaluate their perceptions of reputation, value and WOM for a bank that they have business operations with. We selected a banking sector as representative and generalizable for business services relationships as it is more than 90% owned by foreign banks, therefore, representing a structure present at markets in Europe. We used random sample and convenient sampling method for collecting our data. Questionnaires were sent by e-mail and respondents were afterwards reminded with a telephone call. A total of 104 valid responses out of 650 sent questionnaires were collected, which makes an acceptable response rate of 16%.

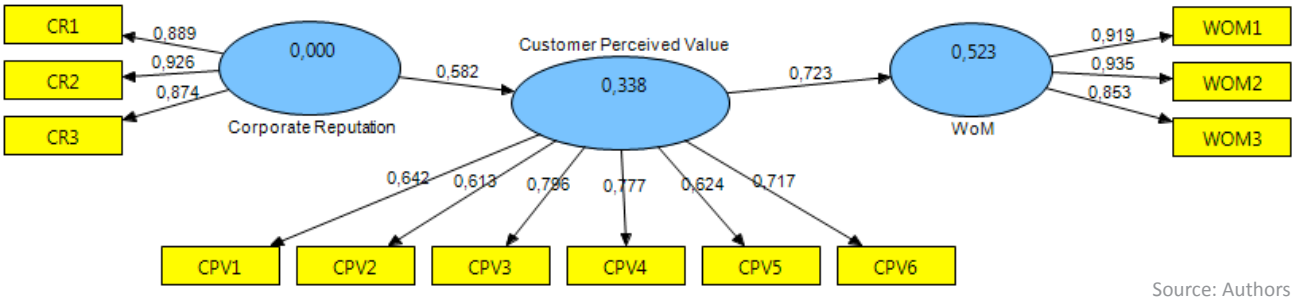
Hypothesized model was analyzed using partial least squares (PLS) structural equation modeling and SmartPLS software (Ringle et al., 2005).

4. RESULTS AND DISCUSSION

In our research sample, 19% of companies were in production, 28% in trade and 34% in services while the rest were having business activity that is combination of previous ones. Companies with less than 50 employees comprised 64% of the sample, while 37% categorized them to small and 34% to medium enterprises, which leaves us with 27% large enterprises. With this and other demographical data provided (58% trade on both domestic and foreign market; 50% trades at more than 4 markets; 86% are limited liability companies, 73% are in domestic ownership) we conclude that our sample is representative according to the Statistical Business Register (Agency for Statistics of Bosnia and Herzegovina, 2011).

As our primary goal was to explore customer perceptions about service providers in business to business relationships, we used PLS modeling as it is claimed it has more significance when it comes to practical results and less when it comes to theory confirmation (Hair, Ringle, & Sarstedt, 2011; Henseler, 2010). Graphical summary of our results is presented on a Figure 2 below.

Figure 2: Graphical Summary of the Results



Source: Authors

From this comprehensive figure, we can analyze both measurement and structural part of the model. When it comes to measurement model, we can see that all items measuring Corporate Reputation and Word of Mouth loaded higher than 0,85 and all items in Customer Perceived Value loaded higher than 0,6 which is an acceptable range (Hair et al., 2006). Additionally, validity and reliability of measures was tested through composite reliability, Cronbach's Alpha and Average Variance Extracted (AVE) measures.

Table 1. Reliability and validity of measurement part of the model

Description	Cronbachs Alpha	AVE	Composite Reliability
Corporate Reputation (CR)	0,88	0,80	0,92
Customer Perceived Value (CPV)	0,79	0,49	0,85
Word of Mouth (WOM)	0,89	0,82	0,93

Source: Authors

When it comes to additional quality criteria aimed at the measurement part of the model, we can asses that coefficients of determination for CPV (R-square = 0,338) and WOM (R-square = 0,523) are high which underlines that CR construct is explaining a significant amount of variance of CPV construct and that CPV constructs is explaining even more of variance of WOM construct. Now as we asses that our measurement model is acceptable, valid and reliable, we continue our analysis with the structural analysis.

Structural part of the model aimed at testing our research hypothesis. Results are summarized in a Table 2 below.

Table 2. Structural model

Hypothesis	Description	Path coefficient
H1	Corporate Reputation -> Customer Perceived Value	0,582***
H2	Customer Perceived Value -> Word of Mouth	0,723***
Note: *** Significant at the p< 0,001 level		

Source: Authors

We can observe that both hypothesized relationships (H1 and H2) are confirmed. Corporate reputation significantly and positively influences CPV and CPV has the same type of influence on WOM. However, although from the strengths observed in the paths we can conclude that CPV is a mediator between CR and WOM; this is still not necessary information when it comes to testing H3. In order to test H3, we observed second model, where there is no mediating CPV construct and where there is just a direct relationship between CR and Word of Mouth. Our results are presented in Table 3.

Table 3. Results for a model without mediating CPV variable

Hypothesis	Description	Path coefficient	R-square
H3	Corporate Reputation -> Word of Mouth	0,513***	0,262***
Note: *** Significant at the p< 0,001 level			

Source: Authors

Now we observe that, when CPV construct is omitted from the analysis, that we have significant paths and coefficients between CR and WOM, however that their size is considerably lower than when CPV is included in the analysis. This is a necessary condition for confirmation of H3.

5. CONCLUSION

This research has its theoretical, methodological and practical contributions. When it comes to building the theory, it confirms the theoretically developed relationship between selected concepts. Hence, it positions the customer perceived value as an intermediate between corporate reputation and word of mouth in business services. This helps us to understand the concept of value in business markets and its influence better. From the methodological perspective, this research replicates already developed scales and helps improving them with additional empirical evidences, in terms of reliability and validity. It also gives evidence from the developing economy. Last, but not the least, this research is important from practitioners too, especially for service companies/providers who are doing their business on business markets. More precisely, we find that corporate reputation as an intangible asset of the company plays very significant role in explaining the perception of value in companies, which is regarded as important as customer satisfaction on business markets (Eggert & Ulaga, 2002), with significant percentage of variance. Additionally, we pointed out the influence of both reputation and value on word of mouth phenomenon, which is out of substantive significance when it comes to services and business markets.

As for the limitations of this study, we need to mention the sample size, which was not crucial for the method of statistical inference used, but it is necessary to conduct a study on a larger sample to get more generalizable results. Additionally, as PLS SEM method is used, we understand that theoretical implications are not that strong as they would be with covariance based SEM, and that this kind of analysis would also be desirable. Further researches in this area should analyze the influence of other intangible marketing aspects on customer perceived value.

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COMPARISONS OF COMMODITY AND EQUITY MARKET

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ABSTRACT

The results of the development of science and technology in the field of information technology, significantly affected the trading on the financial markets. Trading on world stock exchanges are essentially continuously. Time intervals of these trading are carried out by the microseconds. Information necessary to trade in financial and commodity exchanges, are freely available to the general public. On the basis of the investment process, in addition to institutional investors in may, involved also small investors and population. In the article, deal with comparing the commodity and stock market. The comparison is processed from the point of view of performance of the stocks and commodity futures and correlation between them.

KEYWORDS: Commodity market, commodity exchange, investors, derivates, futures, commodity index, volatility, comparison, liquidity, precious metals, agriculture, exchanges, inflation.

1. INTRODUCTION

The revolution in information technology has significantly changed the method and system of trading on all world stock exchanges. Trading on the stock exchange floor using the human voice, businessmen running around in colourful suits, waving arena cards, is becoming a thing of the past and is being replaced by computer systems. These processes take the form of receiving, processing, matching, negotiating and settling trades. At the same time there is regulation and supervision of the financial markets. The electronization of stock exchanges has thus dominated and closely linked stock markets around the world. It allows all-day 24-hour trading from anywhere in the world. We have also recorded the emergence of new financial products such as financial derivatives and ETF, and on the other hand it also enables the spreading of a pessimistic mood quickly.

2. CHICAGO MERCANTILE EXCHANGE

Chicago Mercantile Exchange (CME) is the world's largest and most diverse exchange, trading with a wide range of commodity derivatives, futures contracts and options on interest rates of foreign currency, energy, agricultural commodities, indices, metals, and other alternative instruments such as weather and real estate. Since 2008, CME Group is the common operator of Chicago Mercantile Exchange (CME), Chicago Board of Trade (CBOT), the New York Mercantile Exchange (NYMEX) and its COMEX Division. Since 2000 there has been a large increase in trading volumes on the financial derivative exchanges. In the last ten years, global growth rate has increased over the previous year by 30% in 2003, by 9% in 2004, by 12.5% in 2005, by 19% in 2006, by 31% in 2007, by 14% in 2008 and by 0.12% in 2009.[1]

Table 1. Development of the volume of trades on financial derivatives stock exchanges in the past ten years

Global Total	2005	2006	2007	2008	2009
Futures	4,034,753,646	5,294,073,171	7,217,729,477	8,317,699,090	8,179,106,145
% change	*15.56%*	*31.21%*	*36.34%*	*15.24%*	*-1.67%*
Options	5,939,069,862	6,579,394,595	8,308,902,627	9,361,078,113	9,520,925,954
% change	*10.53%*	*10.78%*	*26.29%*	*12.66%*	*1.71%*
Total	9,973,823,508	11,873,467,766	15,526,632,104	17,678,777,203	17,700,032,099
% change	*12.51%*	*19.05%*	*30.77%*	*13.86%*	*0.12%*

Source: Futures Industry Institute. Trading Volume Statistics. [online], 2001-2011 [cit. 2011-01-31]. Available in WWW: <http:// www.futuresindustry.org/volume-.asp>.

[1] CME Group [online]. 2010 [cit. 2010-12-28]. Available in www.cmegoup.com/trading/agricultural/grain-and oilseed/corn_contract_specifications.html

Table 2. The twenty largest stock exchanges ordered by volume of trading futures

Top Exchanges - Part 4 - Futures-Only Exchanges
Based on the number of futures traded and/or cleared in 2009

Rank	Exchange	Jan-Dec 2008	Jan-Dec 2009	% Change
1	Chicago Mercantile Exchange	1,612,884,857	1,276,264,462	-20.9%
2	Eurex	1,231,646,824	928,766,700	-24.6%
3	NYSE Liffe	610,023,995	629,257,336	3.2%
4	Chicago Board of Trade	825,257,796	587,977,047	-28.8%
5	National Stock Exchange of India	439,616,060	583,175,127	32.7%
6	Russian Trading Systems Stock Exchange	191,981,604	454,465,573	136.7%
7	Shanghai Futures Exchange	140,263,185	434,864,068	210.0%
8	Dalian Commodity Exchange	319,159,693	416,782,261	30.6%
9	Multi Commodity Exchange of India	103,049,912	384,730,330	273.3%
10	New York Mercantile Exchange	338,434,758	362,426,620	7.1%
11	BM&F	323,770,173	289,551,236	-10.6%
12	Zhengzhou Commodity Exchange	222,557,134	227,112,521	2.0%
13	Korea Exchange	99,007,894	181,900,142	83.7%
14	ICE Futures Europe	152,322,268	164,741,412	8.2%
15	JSE South Africa	475,051,729	138,668,058	-70.8%
16	Osaka Securities Exchange	131,028,334	130,690,652	-0.3%
17	London Metal Exchange	105,861,588	106,463,839	0.6%
18	Tokyo Financial Exchange	65,675,700	83,645,956	27.4%
19	ICE Futures U.S.	63,433,647	81,715,275	28.8%
20	Turkish Derivatives Exchange	54,472,835	79,431,343	45.8%

Source: Futures Industry Institute. Trading Volume Statistics. [online], 2001-2011 [cit. 2011-01-31]. Available in WWW: <http:// www.futuresindustry.org/volume-.asp>.

3. COMMODITY AND EQUITY MARKET

When we compare financial instruments, equities and commodities, we must state that commodities are still considered an unknown group of assets, although they have been stock traded for hundreds of years. This may be caused by the fact that the commodity futures are absolutely different from equities, bonds and other conventional assets. "The stock is a security representing a share in ownership of the joint stock company. The joint stock company issues shares to raise capital for its establishment or the development of its activities."[2] The economic function of commodity futures is not as for corporate securities, to raise external resources for business investment, but rather commodity futures are derivative securities that allow firms to obtain security for their future outputs and inputs.[3]

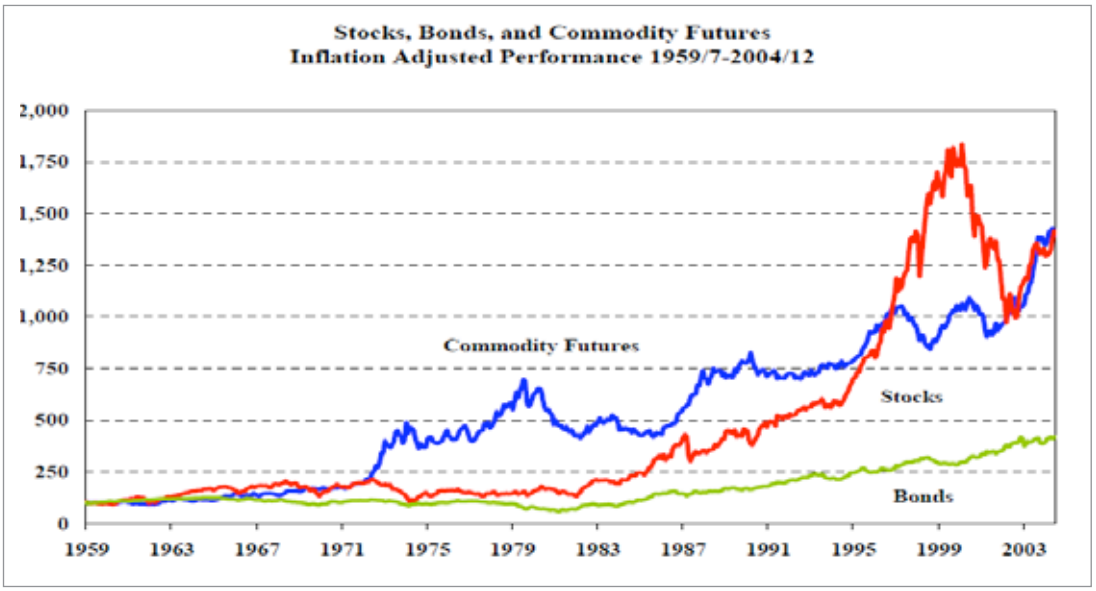
3.1. Comparison of return on shares and futures

For a comparison of share returns and commodity futures we used the study Fact and Fantasies about Commodity Futures of Yale International Center for Finance by the authors Gary B. Gorton and K. Geert Rouwenhorst.[4] In this work the authors created a weighted average commodity profitability index for the period from June 1959 to March 2004, to compare commodities as investment assets. The authors chose as the source of data for this research the database Commodities Research Bureau, which included the daily prices of individual futures contracts. The authors added data from the London Metals Exchange to it. This index was then compared with the stock index S&P 500 Total Return Index (Stocks) and the index of Ibbotson Corporate Bond Total Return Index (Bonds).
In Figure 1. we can see that for the past 45 years the average annual return on investment in commodity futures has been comparable to shares, which were however of slightly higher volatility. Both shown assets however exceeded bonds in returns. This implies that the investments in commodities are not riskier than investments in real estate, stocks or bonds.

In figure 1 we can see the comparison of stock, commodity and bond index.

[2] SVOBODA, M. How to Invest or the Anatomy of Stock Market Lies (in Czech), 2nd ed. Brno : CP Books, 2005, p. 198., p. 18, ISBN 80-251-0527-X.
[3] BARAN, D. Capital Market and Corporate Finances (in Slovak), Publ. House STU Bratislava, 2003, 169 pp., ISBN 80-227-1856-4.
[4] Yale School of Management. Published Papers [online]. 2011 [cit. 2010-11-21]. Available in WWW: <http://faculty.som.yale.edu/garygorton/published_papers.html>.

Figure 1. Comparison of stock, commodity and bond index

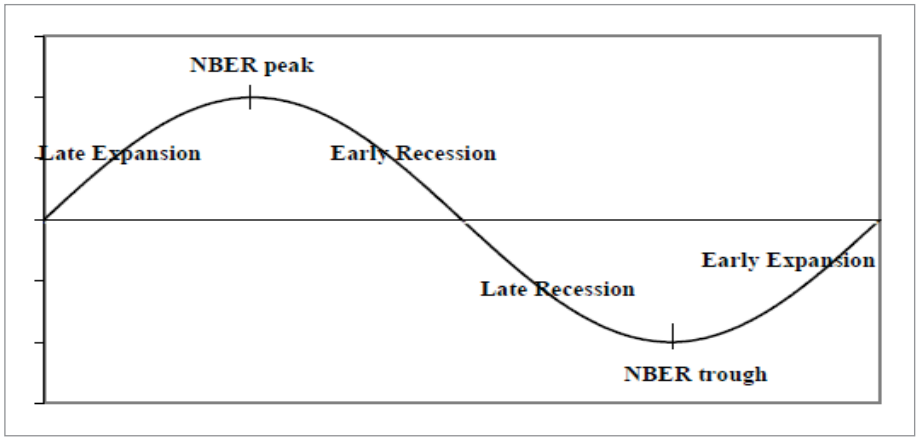


Source: Yale School of Management. Published Papers [online]. 2011 [cit. 2010-11-21]. Available in WWW: <http://faculty.som.yale.edu/garygorton/published_papers.html>.

3.2. The correlation of commodity futures with stocks

When we make the correlation of commodity futures and stocks we can state that the return on investments in commodities are negatively correlated with equity returns and bonds. The main reason is the fact that equities and commodities behave differently during the investment cycle. Figure 2. shows the individual phases of the investment cycle.

Figure 2. The phases of the investment cycle



Source: Authors from, Yale School of Management. Published Papers [online]. 2011 [cit. 2010-11-21]. Available in WWW: <http://faculty.som.yale.edu/garygorton/published_papers.html>.

Figure 2. shows the individual phases of the investment cycle, divided into particular sections. Based on the study Fact and Fantasies about Commodity Futures, equities and commodities recorded during over 1959 to 2003 a similar return of 10.8% to 10.5%. Surprisingly, equities and commodities followed a similar trend also in the phase of expansion and recession. S&P 500 Total Return Index showed an average return of 13.29%, weighted commodity index showed a return of 11.84% in the expansion phase and in the recession phase, the average monthly returns of the S&P 500 Total Return Index of 0.51% and in the commodity index 1.05%. From this comparison, the investments in equities and commodities seem to be very similar. An important difference occurs in the situation where the different phases of economic cycle are divided into two parts. During the Early Recession phase, the stock return is negative - 18.64%, on the other hand, the commodity futures return is positive +3.74%.[5]

Table 3 shows the return of stocks, bonds and commodities in different phases of the investment cycle.

Table 3. Return of stocks, bonds and commodities in different phases of the investment cycle

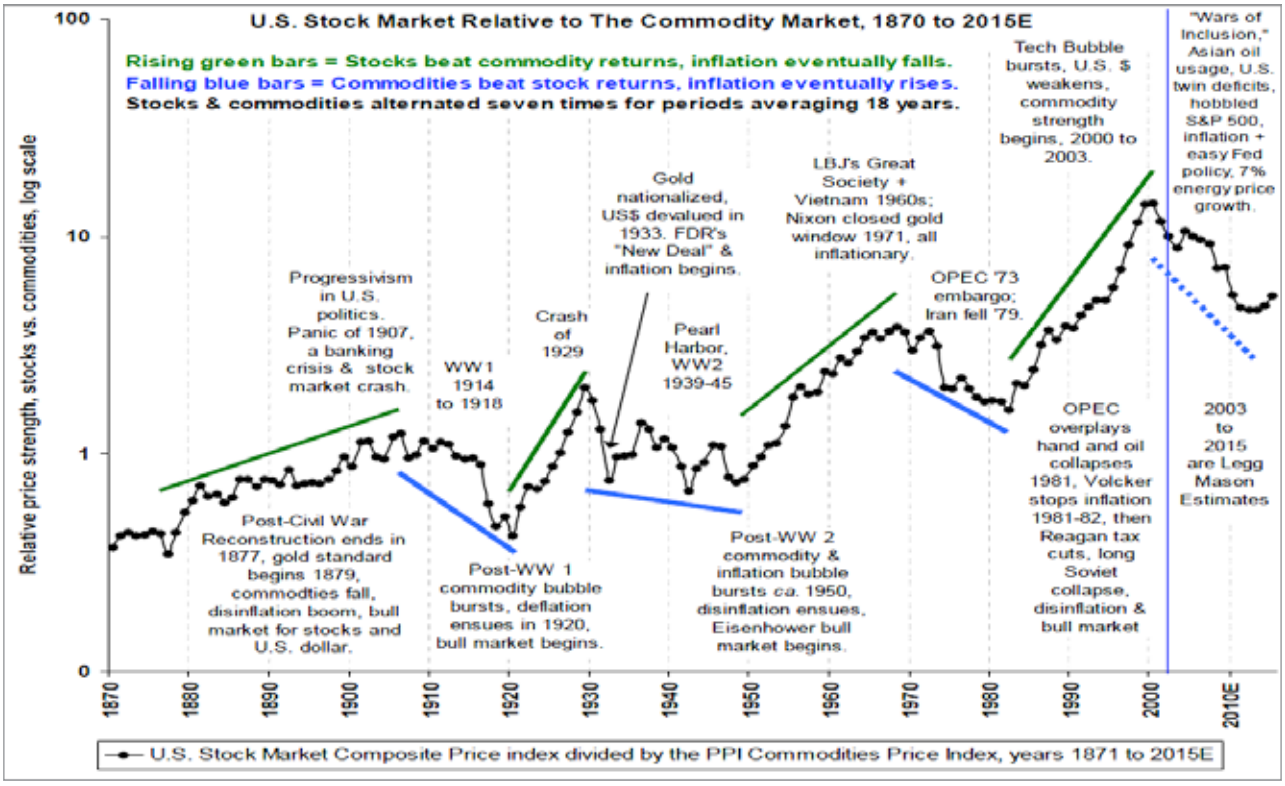
	Stocks	Bonds	Commodity Futures
Expansion	13.29%	6.74%	11.84%
early	16.30%	9.98%	6.76%
late	10.40%	3.63%	16.71%
Recession	0.51%	12.59%	1.05%
early	-18.64%	-3.88%	3.74%
late	19.69%	29.07%	-1.63%

Source: Yale School of Management. Published Papers [online]. 2011 [cit. 2010-11-21]. Available in WWW: <http://faculty.som.yale.edu/garygorton/published_papers.html>.

The theory of the stated cycles is also confirmed by the study The Inflation Cycle of 2002 to 2015 by the authors Barry Bannister and Paul Forward,[6] who have created an analysis of growth equity and commodity markets since 1880. It results from this analysis that over the past one hundred and thirty years, equities and commodities in the USA alternate in leading the market on average every eighteen years (18-year cycles), which also corresponds to deflationary and inflationary cycles. Commodities thus can be considered as one of the few asset classes which positively correlate with inflation. In figure 3 of the growth equity and commodity markets we see growing lines representing declining inflation where equity return exceeds commodity returns. Falling lines indicate rising commodity prices. Simultaneously, the inflation rises and commodity returns exceed equity returns. For the past 130 years, three bull commodity markets shifted on the market, each lasting on average eighteen years. The first bull period was in 1906-1920, the second in 1933-1948 and the third in 1968-1982. We can thus state that at present we are in the fourth commodity growth trend. If we accept the theory of repeating history, the recent growth trend should last to 2014 or 2020.

Figure 3. shows an analysis of growth equity and commodity markets in the USA since 1880

Figure 3. Analysis of growth equity and commodity markets in the USA since 1880

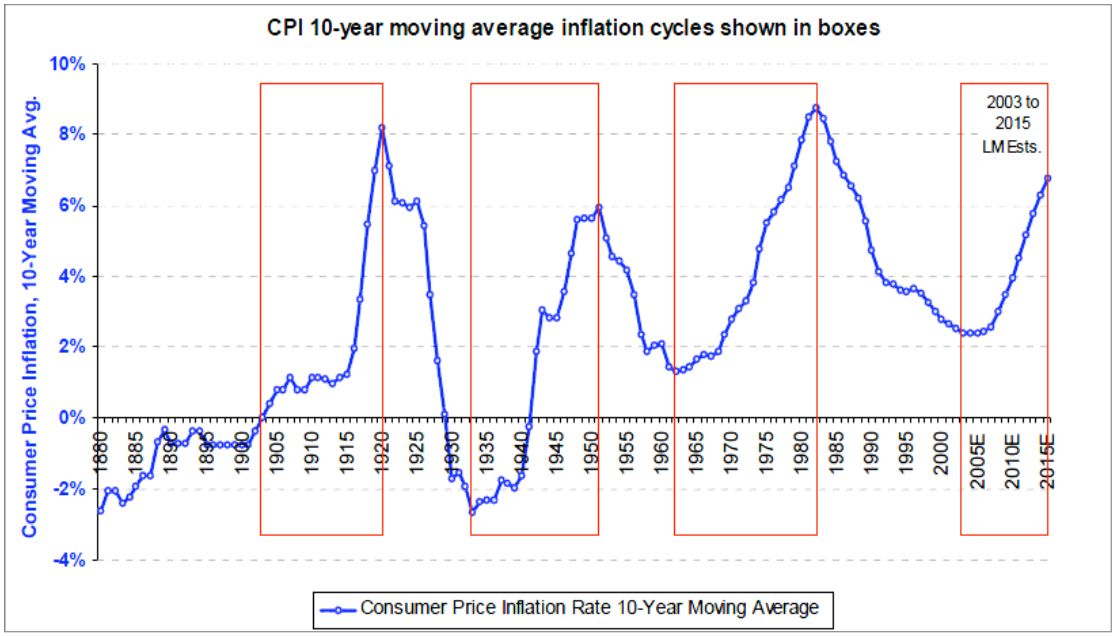


Source: War, Legacy Debt, and Social Costs. [online]. 2003. [cit. 2011-01-11]. In WWW: <http://www.rcgai.com/articles/InflationPressures.pdf>.

[5] Yale School of Management. Published Papers [online]. 2011 [cit. 2010-11-21]. Available in WWW: <http://faculty.som.yale.edu/garygorton/published_papers.html>.

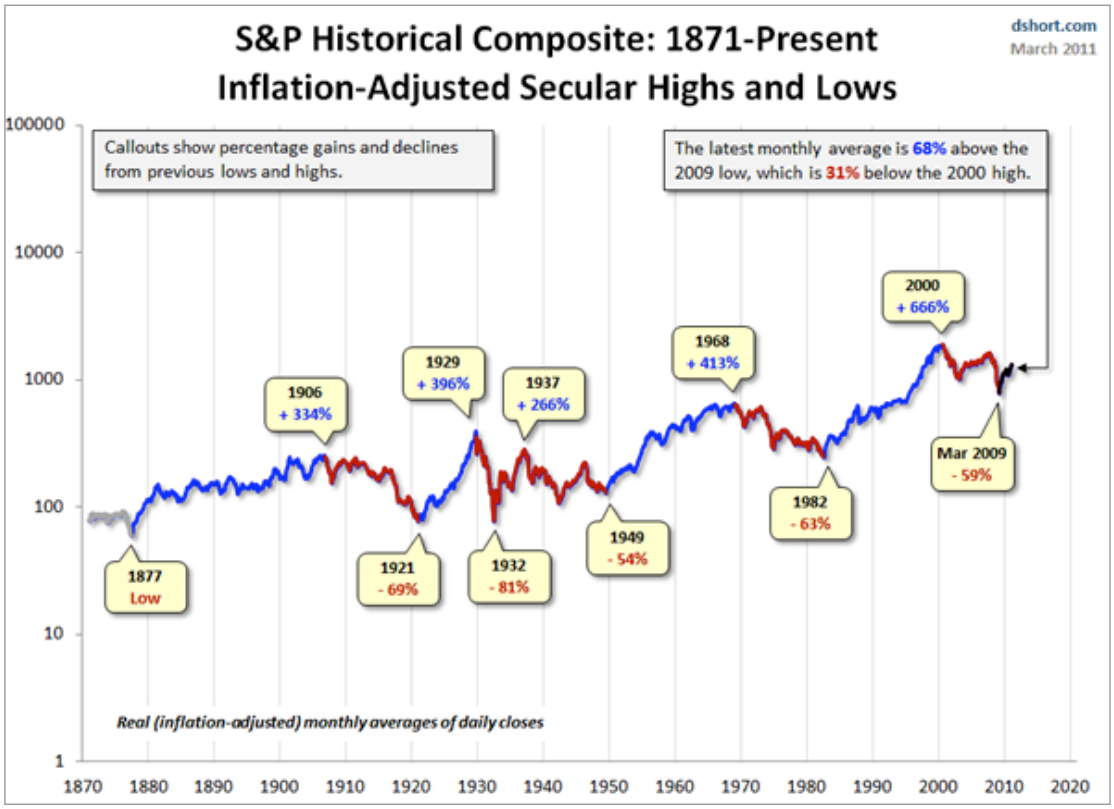
[6] War, Legacy Debt, and Social Costs. [online]. 2003. [cit. 2011-01-11]. In WWW: <http://www.rcgai.com/articles/InflationPressures.pdf>.

Figure 4. Development of inflation since 1880.



Source: War, Legacy Debt, and Social Costs. [online]. 2003. [cit. 2011-01-11]. In WWW: <http://www.rcgai.com/articles/InflationPressures.pdf>.

Figure 5. Development of the S&P index

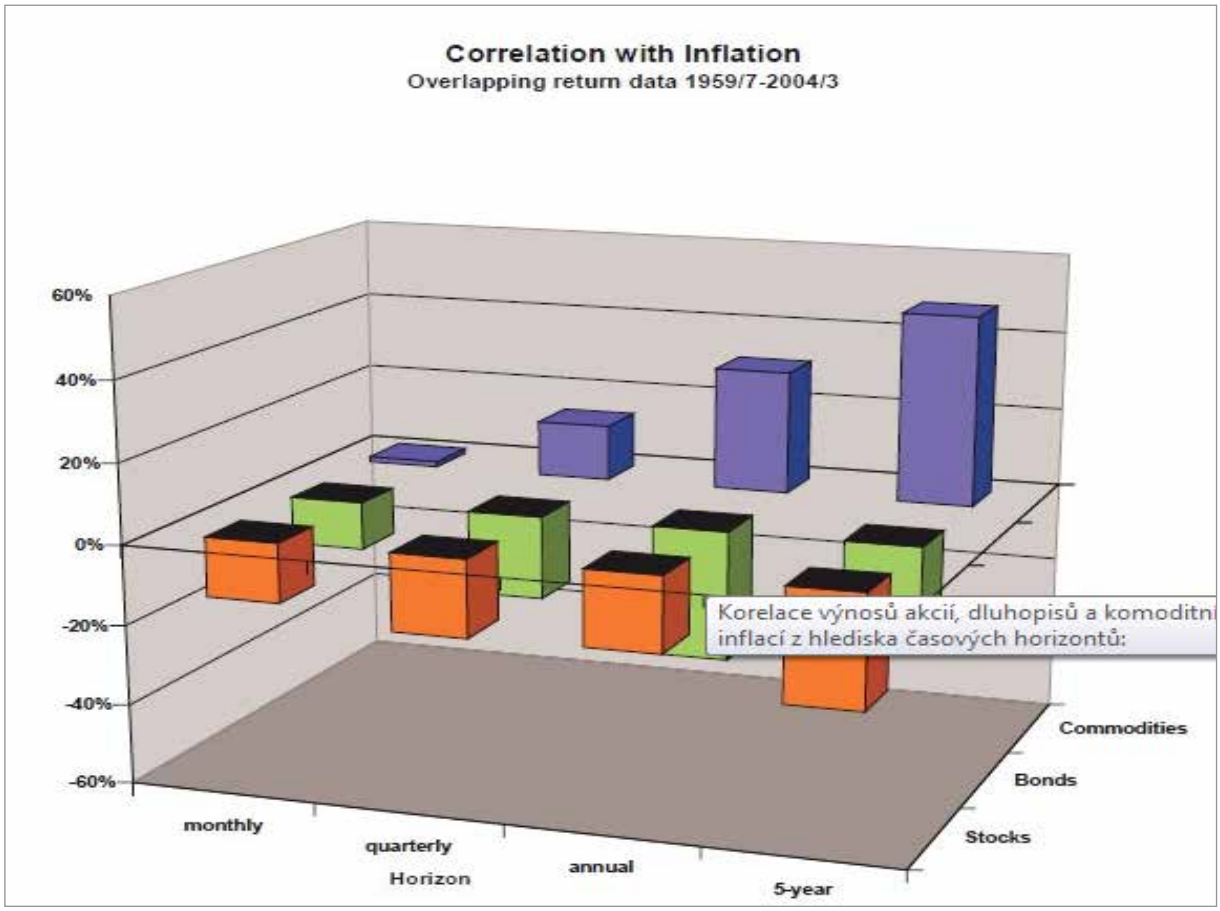


Source: Secular Bull and Bear Markets. [online]. 2011 [cit. 2011-01-07]. In WWW: <http://dshort.com/articles/SP-Composite-secular-bull-bear-markets.html>.

From the interpretation of Figures 3, 4 and 5, and Table 4. it is clear that stocks and bonds negatively correlate with inflation. This implies that commodities are thus good protection against inflation. With rising inflation, stock and bond returns fall and vice versa, and commodity futures always positively correlate with inflation. In connection with this, with rising inflation, commodity futures returns rise. We can state that inflation thus positively influences commodities in all fields.

Based on the interpretation, in Figure 6 is shown the correlation of stocks, bonds and commodity futures with inflation in terms of time horizons.

Figure 6. Correlation of stocks, bonds and commodity futures with inflation in terms of time Horizons

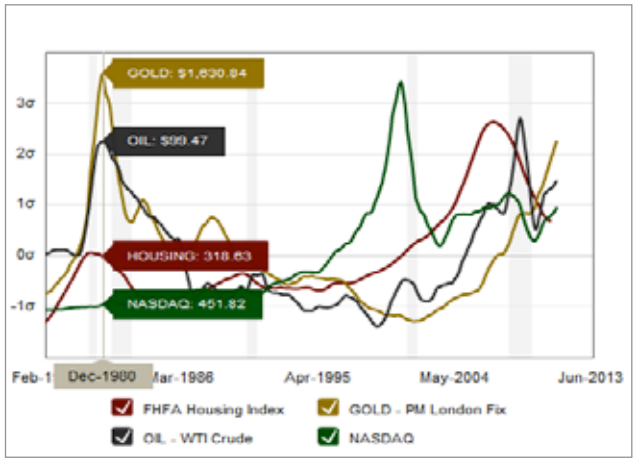


Source: Authors from, Commodity Correlations [online], 2009 [cit. 2011-01-13]. Available in WWW: <http://www.marketoperation.com/index.php?option=com_content&view=article&id=121&Itemid= 119&eec86572714ce954078ce954078c219351033410=5a548b23da5e0357abe09528ce1c01a5>.

If we look at the penultimate commodity boom over 1968-1982, it is clear that commodity prices experienced rapid growth. Many of the commodity prices reached their historic price maximums in this period. But after every boom comes a decline - failure and this period was no exception.

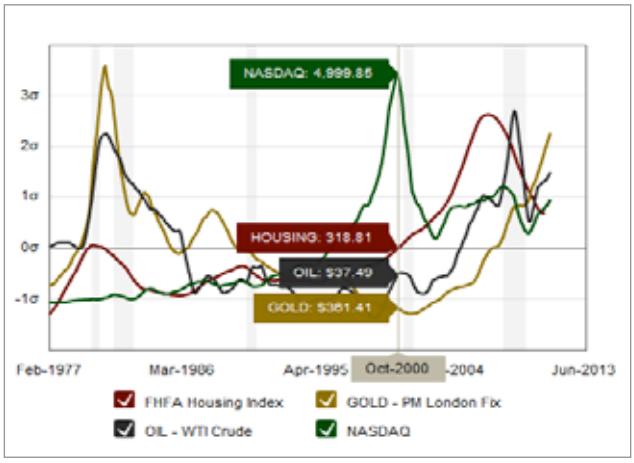
To distinguish individual cycles we use the investment bubble graph, see Figure 8. In Figures 6 and 7 for the prices of gold and oil there is a commodity bubble in the 80s, followed by a rapid fall of commodity prices.

Figure 6. Comparison of gold and oil prices, Housing Index and the Nasdaq stock index in 1980



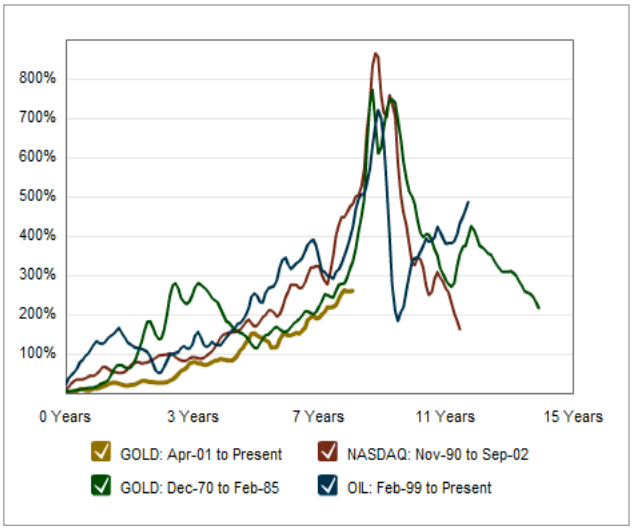
Source: Authors from U.S. Business Cycles. [online]. 2011 [cit. 2011-02-13]. In WWW: <http://www.thumbcharts.com/series/us-business-cycle-graphs-1913-2011>.

Figure 7. Comparison of gold and oil prices, Housing Index and the Nasdaq stock index in 2000



Source: Authors from U.S. Business Cycles. [online]. 2011 [cit. 2011-02-13]. In WWW: <http://www.thumbcharts.com/series/us-business-cycle-graphs-1913-2011>.

Figure 8. Comparison of investment bubbles.



Source: Authors from, U.S. Business Cycles. [online]. 2011 [cit. 2011-02-13]. In WWW: <http://www.thumbcharts.com/series/us-business-cycle-graphs-1913-2011>.

All these theories are also confirmed by the behaviour of gold precious metal. Figure 8 shows the performance of gold since July 2002 against three of the biggest bubbles in the past 40 years. When we make an analysis of the process of the previous bubbles, we can see strong but steady growth in the first seven to eight years, before they got into a hyper-growth phase lasting about eighteen to twenty-four months. According to the interpretation in Figure 8, in the current boom under the condition of repeating bubbles the price of gold could reach USD 3,000/ounce.

4. CONCLUSION

The results of technical developments in the information technology area have significantly influenced trading on financial markets. Trade on world stock exchanges is performed continuously, and individual trades in micro-second time intervals. Information about trading on stock exchanges as well as off-exchange markets and price movements is available to the general public. The preconditions for participation in the investment process are thus met for institutional investors, as well as for small investors and citizens. In the article I analysed the history of trading with commodities, stocks and bonds. From the processed analysis, we submit generalizations and development assessment suggestions in individual segments of the financial market.

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SPECIFICS OF MARKETING STRATEGY IN THE SEGMENT OF HIGH FASHION

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ABSTRACT

The success of high fashion designers is not only in a specificity of the products but also in specific and very well executed marketing strategy. Emphasis is placed on the design of very specific marketing program and marketing strategies that must concider all the characteristics of the high fashion market. Therefore, a scientific research problem is defined as follows: although the market of high fashion at first glance does not imply a completely different marketing approach than other fashion market, its needs are quite specific and require specific marketing program and strategies. The subject of research was to explore all the specifics of high fashion marketing program, and to define marketing strategies due to experts opinions. The paper used secondary and primary data sources (conversations / interviews with experts in the field of clothing industry). The scientific methods that were used are: the method of analysis and synthesis, inductive and deductive methods, methods of proof and disproof, description method and the method of compilation. This paper presents SWOT analysis of the high fashion industry and fulfills the research objectives - defines specific marketing programs on the market of high fashion and proposes marketing strategies that are prerequisite to the successful functioning of the high fashion market.

KEYWORDS: High fashion, marketing strategies, marketing mix

1. INTRODUCTION

Profitable strategy for fashion industry is in directing effort on "emphasizing the exclusivity" of their products (Amaldoss & Jain, 2005, p 40). High fashion industry success results depend on possibility to deliver their products, satisfy their very demanding customers (Brun et al., 2008, p 568), capability to "keep the fashion good exclusive" (Kort et al., 2006, p 1369) and not to be available to mass market. Factors that contribute to luxury fashion brand success are (Moore & Birtwistle, 2004. p 421): defined brand positioning (Bridson & Evans, 2004,p 410), coordinated distribution strategy, brand reputation created via media (Završnik & Mumel, 2007, p 15), flexible foreign management approach.

Numerous studies have analyzed fashion marketing program (Anic et al., 2008; Quinn et al., 2007; Završnik & Mumel, 2007; Knezevic, 2006; Kotler & Keller, 2006; Vigniali et al., 2006; Moore & Fairhurst, 2003; Birtwistle et al., 1998; Gašović, 1998; Marinac, 1997; Drvar, 1993) and fashion marketing strategies (Easey, 2009; Grilec Kauric, 2009, Okonkwo, 2007; Quinn et al., 2007; Moore & Fairhurst, 2003; Newman & Patel, 2003; Murphy, 1998).

However, there is a lack of researches of a specific marketing strategy for high fashion industry.

As part these issues, a scientific research problem is set up: although the market of high fashion at first glance does not imply a completely different marketing approach than other fashion markets, their needs are quite specific and require specific marketing strategies.

Aim of this paper is to analyze specifics of marketing program in a segment of high fashion, and to define the marketing strategy proposed by Croatian fashion experts, which would provide success in high fashion industry marketing.

2. HAUTE COUTURE THEORETICAL FRAMEWORK

The word *couture* is French word for fine, custom dress design, made to measure for a particular customer. *Haute couture* is the most exclusive *couture* and its characteristic is the best design and the highest quality of fabrics and performance. Construction of *haute couture* apparel usually takes weeks and only a few hundred women can afford to buy an *haute couture*. Designers (for example: Chanel, Gucci, Escada) introduced the concept of *semicouture* – or special order. In *semicouture* concept customers obtain semi-

fitted apparel at lower price than *haute couture* (Stephens Frings, G., 2008, p 186-188). If designer wants to be a part of *haute couture* in Paris, he has to be a member of Federation Francaise de la Couture. Membership is very expensive, it is based on high standards of performance and other special conditions.

Based on these facts about haute couture or high fashion, it is possible to set the following research objectives:
Ad 1: Investigate specific marketing programs on the market of high fashion.
Ad 2: Explore and define marketing strategies that are prerequisite to the successful functioning of the high fashion market.

3. LITERATURE REVIEW

3.1. High fashion market characteristics

Until the early twentieth century fashion market was the domain of the upper class of society (kings, queens, aristocrats and other important people). Fashion was part of elite world and it served to show off wealth and position of elite group above average people. Over the time, textile and clothing market have become an international network of supply and demand. Today's fashion market is open to everyone due to the development of technology, availability of media, cultural change and increasing globalization. The greatest impact of the media began in the early 70-ies of the twentieth century, when a variety of fashion books and magazines became available to people, allowing them to create their own fashion style (Easey, 2009, p 18,19.).

Observing the product dimension of high fashion market it can easily be said that there is a low degree of substitution between the market segment of luxury fashion products and market segments of other fashion products, while all the products within the segment of high fashion are interchangeable (Melin, 2002, p 20.). High fashion market is divided into different business segments (Okonkwo, 2007,p 131): clothing, leather goods and fashion accessories (shoes, belts, handbags and wallets), fragrances and cosmetics, watches and jewelry, sunglasses and other business segments that fall into the luxury goods (wines and spirits, textiles, gifts, hair accessories, furniture, stationary, home decoration, etc.).

If we take geografical dimension of high fashion market in consideration, it can be divided in three geografical areas: USA, Europe and Asia, and five big world towns which are considered as capitals of high fashion industry: Paris, Milan, London, New York and Tokyo (Easey, 2009, p 28). According to a study conducted in Greece (2005) the reasons for buying products of high fashion are "the status and image" and "product quality" (Kamenidou, I. et al, 2007, p 157). Main characteristic of high fashion market is demanding and knowledgeable customer, focused high-end marketing, elite sales channels and also unquestionable quality product (Vignali et al, 2006, p 81).

3.2. Specifics of high fashion marketing mix

Specifics of fashion marketing are express through the features and characteristics of the marketing mix that is defined as: "combination of product, pricing, distribution and promotion that in the greatest extent meet the needs of consumers" (Bratko et al, 2001, p 279).

High fashion industry product
Fashion products are designed to meet the needs of consumers that can be functional (for example, the need for glasses due to low vision) or intangible dimension to highlight a social statue (eg. the need for wearing glasses with the Dior logo) (Okonkwo, 2007, p 129). Luxury fashion items are often result of emotional, psychological and social benefits arising from the purchase of high fashion products that represent status symbols of prestige, wealth and influence in society of its customers.

The most important characteristics of the product in fashion industry are design, product quality, product range, price, brand, and other characteristics such as brand image, packaging, sales service, etc. (Grilec Kauric, 2009 from Drvar, 1993, p 223). Six elements that characterize the luxury fashion products are (Hines & Bruce, 2007. from Dubois et al, 2001): excellent quality, high cost, shortage and uniqueness, aesthetics and sensuality, inheritance and personal history and excess. Other specific features of luxury fashion products are attractive, soundful and creative names that fashion designers provide for their products.

Price of high fashion industry product
High fashion brands have low relationship functionality for the price and the high ratio of intangible and situational uses for the price.
Prices are much higher than the price of a product with similar material characteristics, but high quality and intangible properties of the high fashion products justify the high price. High fashion brands adopt the strategy of determining high-priced products in order to emphasize the high quality, exclusivity, brand image and differentiation from other brands at the mass market. Target group of high fashion products is not price sensitive, and for such products is expected premium price rather than determining the economic pricing (Okonkwo, 2007, p 141).

Distribution of high fashion industry product
Designers of high fashion products use exclusive and selective distribution channels. Selective distribution involves more than one agent, but still not every agent who wishes to distribute the product, and when the exclusive distribution is chosen, there is only one or several intermediaries who have the exclusive right to sell their goods (Samanovic, 2009, p 132).

Participants in high fashion industry are aware of the advantages offered by e-commerce as a distribution channel, as well as introducing a system of data management and monitoring of clients, its consumption and analysis of purchasing habits.

Promotion of high fashion industry product
Communication between high fashion brand product and consumer is carried out through the media, respected fashion magazines, sponsoring the most visited world famous events, and placing the product on exclusive places (Hines & Bruce, 2007, p 142.).

Promotional assets and means of communication in high fashion industry include (Okonkwo, 2007, p 145): advertising, sales promotion, personal selling, public relations, Internet, direct marketing, sponsorship and Celebrity Endorsement.

Public relations in high fashion marketing are important to highlight the fashion products in the fashion magazines on fashion shoots, in the editorials etc. (for example: anti-fur movement Stella McCartney). Sponsorships are often encountered in the industry of high fashion (for example, Louis Vuitton has sponsored a group of young artists). Celebrity Endorsement ensures credibility through the brand known and regarded personalities that complement particular brand with their continuous and lasting attractiveness. (Okonkwo, 2007, p 154,155,157). The risk of this collaboration is the reliance on the character of the celebrities. There are Internet sites as well, as means of promotion that are used in high fashion industry (Marciniak and Bruce, 2004).

3.3. Fashion marketing strategy

Marketing strategy can be defined as fundamental framework that includes current and planned objectives, exploitation of enterprises resources, and interacts between enterprises and market, competition and other factors of the environment (Renko, N, p 16, from Walker et al 1996).

Fashion marketing strategy is defined as a business philosophy that deals with current and potential customers of clothing, as well as products and services that are directly related to textiles and clothing in order to achieve long-term objectives, and differs from other areas in which marketing operates (Easey, M., 2009, p 7).

4. FUTURE OF HAUTE COUTURE MARKETING DEVELOPMENT

4.1. Research methodology

Secondary and primary data sources were used in this paper.

Sources of secondary data include foreign and domestic literature: books, scientific journals in marketing and textile and apparel industry, specialized business magazines, databases and Internet. Bibliography is on topic of marketing, apparel and fashion industry.

Research that includes experts (in the field of clothing and fashion industry) was carried out In primary research. The sample werw experts that included experts from the fashion industry in Republic of Croatia.

As a type of research, investigative research was used. In-depth interviews were conducted with 10 experts in the field of high fashion industry in Republic of Croatia and they answered the following questions:
• What are the main features of high fashion market?
• What are the components of specific marketing program in high fashion?
• What are the prerequisites for successful high fashion marketing strategy?
• What would be the ideal marketing strategy in high fashion?
• What are the critical factors in high fashion marketing strategies?
In the period between December 2011 and January 2012 in-depth interviews with Croatian experts in the field of high fashion were conducted. In-depth interviews were chosen for the purpose of deep, extensive and detailed analysis of this problem and for better understanding of specific marketing programs and strategies applied in high fashion industry. This type of interview allows flexibility, while respondents are unrestricted and free in their answers (Tkalac Vercić et al., 2010, p 108). When analyzing the data obtained content analysis was used. Profiles of experts who participated in the quantitative research can be found in Table 1.

Table 1. Description of sample

	Interviews
Experts from the Faculty of Textile Technology	4
Experts from other fashion educational institution	2
Experts from the fashion companies with experience in high fashion industry	4
N	10

Source: Authors

4.2. Research results

4.2.1. Specifics of marketing programs in high fashion market

Taking into consideration the history of the emergence of high fashion, it can be concluded that high fashion has always represented the inaccessible clothes for "ordinary people". As such, it acts on a specific market, and it is characterized by an exclusive product, a very high cost, specific promotions and exclusive distribution.

Specifics of high fashion market

Expensive in the making - from choice of textiles to production, perfect style and creative perfection that carry the name of fashion brands and their top creators. Customers are mainly secret and do not like to expose themselves to the media. According to the answers of respondents, currently popular high-fashion markets are Russia, Japan and China. Customers are characterized by love for luxury features, and includes jet-set, actors and nobility.

Table 2. Specifics of high fashion market

	Specifics of high fashion market
1.	Small and limited market, there is not much creations - small quantities of products, small selection of potential buyers.
2.	Meeting of an extremely costly and unique products and rich customers.
3.	High fashion market is declining, it is becoming dominant confection production.
4.	There is a lack of buyers of high fashion products and market is declining.
5.	An elite market that is reserved for customers with higher purchasing power.
6.	A very small market.
7.	The need to create a high fashion as pret-a-porter destroyed high fashion in its true sense, and it no longer exists, it extincts.
8.	The market of high fashion provides customer specific quality of the product and status symbol by a specific brand name of the product.
9.	Pressure and desires of potential customers to immediately have a finished product, puts high fashion in new market framework - where it is impossible to produce a real product of high fashion.
10.	Intended for the high purchasing power consumers.

Source: Authors

Specifics of high fashion products

High fashion product is associated with high quality workmanship and quality materials. These are special types of silk, lace, hand-woven fabrics, printed exclusive unique designs, as well as installation of precious or semiprecious stones. One respondent stated that the product of high fashion is "a sculpture that wraps around the body, without the aesthetic and technical errors". It belongs to the peak of artistic expression that can provide the designer who creates. Products of high fashion are hard to reach and visually attractive and therefore interesting to a large crowd. In high fashion, there is no production numbers; product is adjusted to the person/buyer. It is unique because it is made for a particular body.

Table 3. Specifics of high fashion products

	Specifics of high fashion products
1.	Expensive fabrics, unique products, research in the pattern and model, may not be wearable, but artistically; a lot of manual labor.
2.	Quality, originality, uniqueness.
3.	The handiwork of craftsmen is included; the product is intended for a specific person and is made of luxurious fabrics.
4.	Is generally only one time wearable - made for a special occasion and a particular person.
5.	Haute couture clothes are tailored and sewn to measure, exclusive character.
6.	This is a sculpture that wraps around the body, and must not have any aesthetic or technical error. It belongs to the peak of artistic expression that can provide the designer who creates.
7.	Product of high fashion is associated with high quality. These are special types of silk, lace, hand-woven fabrics, printed exclusive unique designs, until the installation of precious or semiprecious stones.

8.	Exclusivity is in the fact that such clothing cannot be bought by everyone are this clothing is different from industrially mass-produced clothing. Materials used in making it, are expensive and high quality.
9.	Very expensive product from the emerging and selection of specific types of textiles to minucioze production, authentic style, creative and perfection that carry the name of fashion houses and their top creators.
10.	Haute couture is exclusive clothing for special occasions that are made by certain fashion houses. Clothes are sewing manually which provides character of creation originality.

Source: Authors

Specifics of high fashion prices

In high fashion, high costs of products are necessary, partly because of the costly manufacturing and materials involved in making, and because of the image of fashion houses that produce high fashion products. High proportion of manual labor and uniqueness is one more reason for high costs. Materials used in construction, like lace, are handmade and therefore their prices are extremely high.

Table 4. Specifics of high fashion prices

	Specifics of high fashion prices
1.	Extremely high - because of the tendency everything to be unique.
2.	Equivalent quality; the name of the creators is paid.
3.	Very high.
4.	High but acceptable to extremely wealthy customers who buy it.
5.	The price includes the name of the designer, depends as famous designer is, price of materials (which are expensive), and service production that is customer-specific.
6.	Expensive production and materials justify the high price.
7.	Extremely high price justified by very expensive materials.
8.	Price is determined by the design and creation of ideas that raise the price.
9.	Price reflects the image of fashion house that separates sums of millions in the promotion to maintain its primacy in the fashion world.
10.	Very high.

Source: Authors

Specifics of high fashion promotion

Starting from the required high fashion shows in Paris and exclusive advertising in fashion magazines like Vogue, it can be concluded that the costs of promoting high fashion products are very high. Very often, high fashion dresses are given to actresses or singers, in order to connect the name of famous fashion house with the name of celebrities. Designer has a high-cost production of high fashion product, and at the same time, promotion depends on the image of celebrities that wore specific garment.

Table 5. Specifics of high fashion promotion

	Specifics of high fashion promotion
1.	Through fashion shows, fashion magazines and especially important "red carpet". There are no savings to promote a collection of high fashion.
2.	Very targeted. In the print media through discrete PR.
3.	Exclusive fashion shows for a small number of invited guests are kept in secret, and at the same time for general public fashion shows are prepared as well as promotion in fashion magazines.
4.	High fashion is only for designer's promotion.
5.	Mostly on the fashion shows.
6.	It is a participation in the haute couture shows in Paris that only take into account as prestigious.

7.	In the most cases, dresses and couture gowns are given to actresses or singers, in order to associate their name to the famous fashion house. It is mutual love without money transaction. Creating of image is mutually important.
8.	Direct in the studios through direct contact.
9.	Specifically in the Vogue in which only one side od adverts may cost 10.00,00-50.00,00 Euro. It is very expensive to promote high fashion products.
10.	An exclusive product - exclusive promotion.

Source: Authors

Specifics of high fashion distribution

The specificity of distribution is in its exclusiveness. It uses a small number of intermediaries, and sales are generally conducted in mono-brand shops and ateliers in city centers. Access to the individual customer and the product is treated very cautiously.

Table 6. Specifics of high fashion distribution

	Specifics of high fashion distribution
1.	Selling only in mono-brand stores or within exclusive department stores in separate rooms.
2.	A limited number of participants. Carefully treated product.
3.	Special attention is given to the sale - in the studios; very important personalized approach.
4.	Very important personal customer service.
5.	Through the exclusive shops - custom sews.
6.	High fashion boutiques in major centers in the world, that sells only parts of high fashion collection.
7.	Closed type shops in the luxurious parts of the city, where a client comes with announcement, and when the client is a famous person, the designer alone takes care about her/him.
8.	Characterized by selling in the studios.
9.	High fashion products are usually sold in specialized show rooms that are usually quite isolated and have nothing to do with shops and boutiques.
10.	Only in the mono-brand stores.

Source: Authors

SWOT analysis of the high fashion industry

SWOT analysis of the high fashion industry is presented in table 2.

The main strengths of high fashion company can be found in special and high quality materials made for them and in the products from renowned designers who are completely original and unique. The strength of these companies is also the fact that they are trendsetters and fashion leaders. The weakness includes rapid expansion of original products copies and breach of contract on licensing as well as high expense of maintaining fashion houses owned by the high fashion company. Business opportunities can be found in association with the cheaper fashion companies like Zara and H&M in which they can sell customized, less expensive collection, as well as cooperation with designers whose products can then be sold in the fashion houses, as well as the approaching to semicouture products. Opportunity is also on-line business that greatly simplifies arrivals to the rehearsal in the boutiques. Threats to high fashion are primarily recession and reduced consumer purchasing power, and a small number of loyal consumers, the high cost of brand promotion and the threat of substitutes.

Table 7. SWOT analysis of the high fashion industry

Strenght	Weakness
High quality products Finest fabrics and materials used Popular brand image High brand equity Fashion liders Trend setters Loyal customers Celebrities that buy and at a same time promote products Presence at international market Attractive to the workforce	Fake copies Highly paid workforce High operating cost of fashion stores Lack of presence in certain countries Non respecting the Licensing agreement
Opportunity	**Threats**
Semicouture products The possibility for on line orders of high fashion products Technological advances open up the possibility of increasing production, as well as faster distribution Cooperation with cheaper retail chains (as Zara, H&M…) Availability of luxury fashion products to the wider masses through the cooperation of world famous fashion designers and big fashion chains	Trade embargo Global recesion – decline in personal consumption Small number of loyal consumer High cost of brand image promotion Threat of substitutes - products of cheaper brands that extend their collections to high fashion brand and that connect with high fashion designers

Source: Authors

4.2.2. Specifics of marketing strategies in the market of high fashion

Marketing and high fashion are very connected. High fashion creates a visual impression of untouchability, unattainability, and expensiveness and thereby encourages the individuals to purchase it. It is the bait for the masses and that is why large investments in the image of the fashion house are made. It is represented to a customer as a "fine and elegant", so in the most cases they consume part of it, but from serial production.

Specifics of marketing strategies in the market of high fashion

One respondent stated that "propaganda material is so complexly refined and keeps fine-wrapped luxury, so even for a moment as you navigate a fashion magazine, it provokes you to fantasize about wrapping a very expensive scarf, holding a very expensive bag and carrying very expensive shoes and at the same time, you are wearing "cheep" dress." Buyers are mostly unaware why they chose Dior or Chanel sunglasses that are not high fashion, but on the edge of the frame is brand label of which Angelina Jolie wears gowns.

Table 8: Marketing strategies in the market of high fashion

	Marketing strategies in the market of high fashion
1.	Limited market with a small number of potential buyers requires carefully planned strategies of on the market. It is important to have loyal customers and they shall never be disappointed with quality. The focus is placed on the promotion with celebrities on the "red carpet". Product price must be high because buyers of high fashion like "expensive stuff".
2.	The strategy is based on a carefully elaborated promotion via celebrities and their pictures in the media.
3.	High fashion is designer promotion for itself, in order to become interesting to a wider range of customers by promoting her/his creativity.
4.	The most important thing is to find potential customers and adapt product design to them and to the trend.

5.	Addressing to target groups of customers by individual approach.
6.	Marketing of high fashion is managed by the best agencies invent a campaign, the most prestigious fashion magazines are included; the world's best photographers and models; the best hairstylists and makeup artists that together form a picture of a supernatural beauty.
7.	High fashion is bait for the masses that can not consume high fashion products, but when they will have the first opportunity, they will buy a pret-a-porter product of the same brand and satisfy a fashion desire.
8.	Through exclusive fashion shows, attract wealthy customers.
9.	High fashion is precisely what creates the visual impression of untouchability, unattainability, expensiveness and encourages the individual to want to own such a product at least once in their lifetime.
10.	Via celebrities promote their own name in the collection of high fashion, to become (designer) appealing for mass market of other collections (pret-a-porter ...).

Source: Authors

All these theories are also confirmed by the behaviour of gold precious metal. Figure 8 shows the performance of gold since July 2002 against three of the biggest bubbles in the past 40 years. When we make an analysis of the process of the previous bubbles, we can see strong but steady growth in the first seven to eight years, before they got into a hyper-growth phase lasting about eighteen to twenty-four months. According to the interpretation in Figure 8, in the current boom under the condition of repeating bubbles the price of gold could reach USD 3,000/ounce.

5. DISCUSSION

High fashion is often used by designers to present their creativity. Great promoters for the general public are the "red carpets". Designers generally borrow their gowns for the occasion and this is a major designers promotion. In the high fashion promotion there is no savings, but also, no earnings. Such creations do not make a profit, but the prestige and reputation. Many fashion houses dropped high fashion production because investments are not economically justified.

One respondent stated that the ideal marketing strategy of high fashion is to do everything to make the product seem unattainable, and to show that it is consumed only by "special and chosen" persons. In this way, a wider circle of potential buyers interest is awaken. The others mostly state that the basis of ideal marketing strategy in high fashion is to detect potential customers and access to them personally. One respondent stated that "the critical factor in the marketing strategies is creating the illusion that the luxury is a set of all that can provide the character a good man to a customer."

Elements that are stated by Hines and Bruce as a characteristics of the luxury fashion products (Hines & Bruce, 2007) are also specified by interviewed experts. The conclusion about high price of fashion products that is important for brand image and differentiation as well as Celebrity Endorsement that ensures credibility through regarded personalities is in the accordance with research made by Easey and Okonkowo (Easey, 2009; Okonkwo, 2007). Mrketing strategies that were imposed by experts were harmonized with high fashion strategies researched by Easey (Easey, 2009).

6. CONCLUSION

In the world of high fashion, there is a large number of fashion designers whose primary objective is to step out from the mass of competing fashion creations, and ensure the sale of produced fashion collections and survive in highly turbulent fashion market. The success of designers of high fashion lies in high fashion products' characteristic but also in specially planned and very well executed marketing strategy, characterized by many peculiarities. Special emphasis is placed on design of marketing mix that includes high quality and special product, very thoughtful prices allocation, carefully selected channels of distribution and promotion of precision, which must take into ac count all the characteristics of high fashion market. There is no profit from high fashion production. It promotes the designer's ingenuity and creativity. To show a collection of high fashion is very demanding, in the last two or three years only a few fashion houses managed to do it. That is a great creative challenge where you have to justify the enormous financial investment from the initial sketches to the realization of the show.

Through SWOT analysis the main strengths were defined as high quality materials that are used in high fashion production; as weakness - rapid expansion of fake products;

as opportunity - on-line business and as threats - recession and reduced consumer purchasing power.

From the conducted interviews, it can be concluded that the specificity of high fashion products are quality design, uniqueness, and very high price. Specifics of promoting are in the individual approach to a very small number of potential clients as well as exclusive promotion via Celebrity Endorsement. Distribution of high fashion products is exclusive with a small number agents and at the same time, salling is very specific in mono-brand shops and luxury ateliers in the luxury neighborhoods with very discrete and individual approach to clients.

The aim of the marketing strategies of high fashion is to do everything to make the product seem unattainable and perfect in its execution, carried by the known person and in the same time desirable to many customers. Then a broad demand for other products of high fashion designers are created and purchase of "pret-a-porter" collection is increased in order to satisfy customers fashion needs, even in the "lower" version.

By the conducted research the objectives of the research were met and it is concluded that high fashion market requires a specific marketing program and that specific marketing strategies on the high fashion market are condition for the successful functioning of high fashion market.

7. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The study has a limitation because it was conducted on a small sample of ten experts who can not give a completely accurate picture of the situation in the marketing of high fashion. Also, the research is largely based on the subjective experience of high fashion marketing given by experts, while managers with real experience in marketing of high fashion are only partially represented (20%).

Future research could be focused on changing high fashion strategies in a recession with regard to company size and sector in which the high fashion company operates. Also, this type of research can be conducted only on a sample of managers of high fashion enterprises, and can be compared due to the impact of recession on marketing strategies in high fashion companies.

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FOSTERING SUSTAINABILITY THROUGH ENTREPRENEURSHIP IN SOUTH AFRICA: SELECTED CASE STUDIES

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ABSTRACT

Sustainable tourism development has political, economic, socio-cultural and environmental dimensions, and is concerned with the protection of the environment, respect for the local community, and long term economic benefits for all stakeholders involved. Within this context the emerging and/or survivalist entrepreneur exists and must be empowered to create partnerships and alliances within South Africa. In both urban and rural areas small entrepreneurs urgently need market access, capital and opportunities to upgrade, invest and expand.

To encourage sustainable entrepreneurs the increase of local linkages and partnerships are investigated. Also the sourcing of new networks and suppliers to enhance business; the development of a reliable range of products with a 'made local' brand or part of a themed event to increase tourist appeal; the creating of positive destination image; the generating of employment opportunities and synergies in terms of business support; transport, eco-friendly energy sources, and the development of skills are investigated.

Focus groups and in-depth interviews from a number of fair trade tourism business enterprises are discussed in terms of enabling entrepreneurs to operate successfully. To foster sustainability within the South African context from an entrepreneurial perspective, it remains imperative to look towards the opening of new markets, both locally and regionally.

KEYWORDS: Tourism entrepreneurs, sustainability, South Africa

1. INTRODUCTION

Climate change and environmental conservation have been the topics of many debates and discussions, with the various COP conferences since the signing of the Kyoto Protocol in 1997 and enforced in 2005 (-2012), the 18th Global Warming International Conference and Expo in 2007, culminating with the last COP 17 conference in Durban in November 2011. With the world's human population increasing at a rapid rate and commanding a growing demand for natural resources; greater than which the earth can provide for (Reid, 2006:208), the importance of conserving the earth's resources is far greater than before. People the world over are more environmentally aware and concerned about their carbon footprint that can be owed to increased media coverage and exposure on this topic (Dickson & Arcodia, 2010:236).

Sustainability has become a worldwide concept that addresses the issue of global warming and the degradation of natural resources, and pressure is on organisations, governments and communities to minimise harmful impacts on the environment and increase environmental protection (Dickson & Arcodia, 2010:236). Studies have been carried out concerning tourism, climate change and sustainability (Budeanu, 2005:89-97; Hunter & Shaw, 2007:46-57) and the role of the tourism industry in these as well as in the depletion of the natural environment has been scrutinised (Dickson & Arcodia 2010:236).

Within this context the emerging and/or survivalist entrepreneur exists and must be made aware of and empowered to sustainability function within this fragile and constantly diminishing natural and cultural environment. This paper attempts to address ways in which to assist such entrepreneurs with coping strategies and skills to survive in a sustainable manner.

2. DEFINITIONS

2.1. Sustainable development defined

A well-known and widely accepted definition of sustainable development is that of the World Commission on Environment Development's (WCED's) Brundtland Report in 1987, which states that sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED in Queiros, 2003:74).

The human population is increasing at a substantial rate, which consequently leads to an increasing demand for natural resources; much greater than which the ecosystem can provide for (Reid, 2006:208). This increased demand causes the destruction of the natural environment, exploitation of natural resources, pollution, loss of habitat of fauna and flora (Queiros, 2003:74) as well as the compromising of the authentic existence of intangible cultural heritage. The concept of sustainable development originated from this scenario, as governments, organisations and individuals attempted to start practising development that could potentially avoid or improve the environmental crisis (Queiros, 2003:74), therefore the World Commission on Environment Development's definition promotes careful use and conservation of the natural environment and its resources.

Sustainable development is a process that must be made reliable for, and consistent with future needs as well as present needs (WCED in Wight, 2004:48). Wight (2004:48) argues that there are five interrelated elements of sustainable development, namely:

- *Economic*: The generation of wealth and employment opportunities and the enhancement of material life.
- *Political*: The political stability of a destination, safety and security and human rights.
- *Social*: The well-being of the local community in terms of education, health, nourishment and shelter.
- *Cultural*: The acknowledgment of and respect for heritage and traditions, as well as the support of cultural identity.
- *Ecological/Environmental*: The recognition of the importance of conservation of all natural resources and environmental enlightenment and understanding.

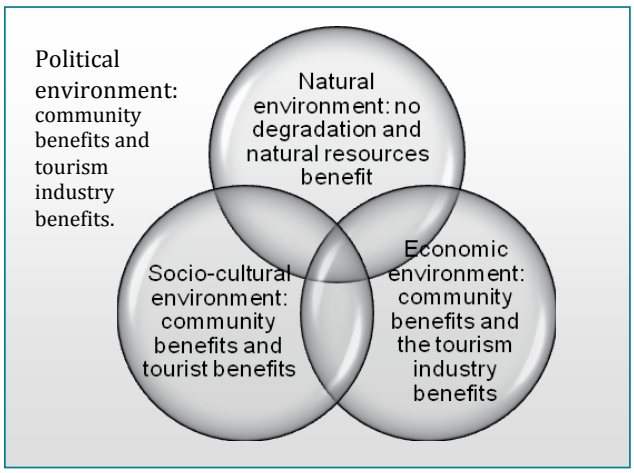
Sustainable development therefore has political, economic, socio-cultural and environmental dimensions, and is concerned with the protection of the environment, the well-being of the local community and respect for their culture, and the long term creation of economic benefits for all stakeholders involved. As mentioned, within this context the emerging and/or survivalist entrepreneur exists and must be empowered to form partnerships and alliances with suppliers and networks in South Africa. In both urban and rural areas small entrepreneurs urgently need market access, capital and opportunities to upgrade, invest and expand.

2.2. Sustainable tourism defined

Specifics of fashion marketing are express through the features and characteristics of the marketing mix that is defined The tourism industry is largely dependent on the environment and its resources, both natural and cultural. For tourism to occur, tourists must be present at the destination and/or attraction/event and may largely impact on the environment and the host community. To reduce negative impacts and create positive results and opportunities (Queiros, 2003:74), tourism must be developed with the support and for the benefit of the local community, and implemented and managed with the buy-in of relevant stakeholders.

In essence sustainable tourism is the application of the concept of sustainable development within the tourism industry. "Sustainable tourism development meets the needs of the present tourists and host regions while protecting and enhancing opportunities for the future" (The World Tourism Organisation in Dickson & Arcodia, 2010:237). The manner in which resources are controlled guarantees the satisfaction of social and economic needs whilst preserving cultural and natural diversities (The World Tourism Organisation in Dickson & Arcodia, 2010:237). According to Queiros (2003:74), sustainable tourism development is tourism that is established and preserved in such a way that it is economically viable over the long-term, while at the same time does not deplete, destroy or change the natural and socio-cultural environments on which it depends. Sustainable tourism development is essential to ensure that the interactions and relationships between the natural, socio-cultural and economic environments are in a constant state of balance (i.e. where the three environments overlap, refer to Figure 2; although these three environments exist within a macro-political environment that is imperative for the continued existence of all the environments.

Figure 1. Sustainable tourism development



Source: Adapted from Queiros (2003:75).

3.METHODOLOGY

3.1 Problem Statement

This research aims to identify and examine the challenges/threats that exist in the marketplace that prevent (selected) emerging and/or survival entrepreneurs from sustainably running their own businesses.

3.2. Research Objectives

The objectives of this research project are:

- to determine the challenges or threats that exist in the marketplace for (selected) emerging/survival entrepreneurs.
- to determine the weaknesses of (selected) entrepreneurs that with hold them from success.
- to determine the opportunities for entrepreneurs in the marketplace.
- to determine the strengths of selected entrepreneurs.
- to determine the needs of emerging/survival entrepreneurs within the marketplace.
- to create a checklist/guideline for emerging/survival entrepreneurs to allow them access to the marketplace.

3.3. Target Population And Context

The target population for this study are emerging and/or survival entrepreneurs within the South African context that were not able to sustainably run their own businesses. No particular demographic or socio-graphic population parameters exist within the units of analysis. The study includes all individuals that aim to become or are entrepreneurs regardless of age, gender and experience (du Plooy, 2009:56).

Cases are randomly selected from a number of Fair trade business enterprises, making use of the Fair Trade website and discussions with their management that are aware of instances where entrepreneurs have initially not been able to operate successfully.

For purposes of this paper, (five) cases of emerging/survival entrepreneurial endeavours are discussed in detail, which are the units of analysis, and a few in less detail but with interesting business concepts.

3.4. Data Collection Methods

The data collection method used is a qualitative study that involves an in-depth interview schedule. Since the research pertains to emerging/survival entrepreneurs, pre-testing of the interview schedule as a data collection instrument will occur within an environment relevant to the entrepreneurs. Keyton (2011:177) refers to pre-testing as; "...the researcher tries the survey or questionnaire with a small group of participants who are similar to those individuals who form the population."

The pre-testing of the qualitative interview schedule will occur at two emerging/survival entrepreneurs' businesses which the researcher identified through local street vendors (only two persons were interviewed). However, since the majority of emerging/survival entrepreneurs are previously disadvantaged individuals, and not necessarily proficient in English, a colleague fluent in most African languages assisted throught the study with translation.

3.5. Data Collection Methods And Instrument

Two data collection methods are used:

- in-depth interviews for sole/individual emerging entrepreneurs of businesses consisting of only one (male) entrepreneur (i.e. SpierLeisure)
- focus groups, for enterprises comprising more than one emerging entrepreneur; which was in the majority (i.e. Jan Harmsgat Country House (5 female), Kraalbos (2 male), Heiveld (4 male) and "Working for" (5 female)

The data collection instrument was an Interview Schedule with questions that aims to address the research objectives. The same interview schedule is used for both the in-depth interview and the focus group discussions.
After the pre-test, the questions are refined and reformulated for clarity and simplicity as most of the selected entrepreneurs have a low level of literacy and cannot understand some questions correctly. Care is taken to remove or rephrase sensitive questions, for example, why do you think your business has not been a success, rephrased to: what are the things, do you think, that have not been good for your business. Some questions are repetitive to ensure that the respondents understand what is being asked. No rating scales are included.

In terms of demographic profile, the respondents range from 25-45 years of age; seven males and ten females; of black and coloured race.

3.6 Data Analysis

For the data analysis, content analysis is used where each category is defined with accuracy to allocate each statement to the correct category. Sub-categories are also defined clearly using thematic analysis to ensure that most applicable statements can be allocated to one category each. If a statement is irrelevant they are added to a diverse category.

To ensure validity and reliability in the data analysis, objectivity is maintained during data collection and during data analysis. Accurate categories and clear definitions are important factors.

4. RESULTS AND DISCUSSION

For emerging entrepreneurs to sustainably run their businesses, and as stated in section 3, it is essential that from a macro-environmental point of view this is only possible if the four environments: natural, socio-cultural, economic and political are in a state of equilibrium and that where they overlap (see figure 2) is the most conducive context for such an emerging/survival entrepreneur to succeed.

Therefore, based on the literature and the empirical fieldwork in terms of the research objectives:

- the threats/challenges (research objective 1) identified by emerging/survival entrepreneurs are the lack of partnerships; lack of suppliers and networks;
- the weaknesses of entrepreneurs (objective 2), are the lack of product development and lack of specialised skills to function as an entrepreneur within a certain field;
- possible opportunities for entrepreneurs (objective 3), are to form partnerships with suppliers; to find local suppliers for sourcing and form new networks; to develop a 'made local' brand; to find niche markets for their products;
- strengths of entrepreneurs (objective four), are specialised skills (wood carving, beadwork) and creativity to develop new products:
- needs of emerging entrepreneurs (objective 4): , coincides with all of the above;
- development of a checklist of critical success factors that, should an emerging entrepreneur take heed of them, he/she should have a fair chance of attaining success and running a sustainable business: Therefore, within the above-mentioned environments, the sustainable (and emerging/survivalist) entrepreneur must attempt to:

4.1. Create and form partnerships and alliances

Emerging/survival entrepreneurs must be encouraged to develop different types of local linkages, such as procurement from local enterprises/suppliers (i.e. subsistence farmers can be supported and encouraged by entrepreneurs in the food business to plant seasonal vegetables throughout the year, and not rely on only annual harvests of one product); local staffing ('restaurant' entrepreneurs can source staff locally; training semi-skilled staff; developing local cultural heritage products (an 'artistic' entrepreneur can start by developing local cultural heritage products – e.g. Tintshaba, a Swazi-based group of 800 women creating jewellery from silver and sisal; building local partnerships with non-competitive businesses, such as NGOs to generate business and share customers (e.g. Wildlands Conservation's "world bicycle relief" project that started with the 2004 Tsunami, and now produces 1,000 bicycles a month, with assembly plants in South Africa, Zambia and Zimbabwe; and by delivering social and economic benefits in a sustainable way. Partnerships can be formed between tourism businesses and local communities for mutual benefit with both partners sharing risks and benefits; with the tourism sector providing a direct market and support for emerging entrepreneurs.

Case study: *Creating partnerships*
"Jan Harmsgat Country House" is a 5* hospitality establishment in a rural area in South Africa. All staff are locally recruited from the surrounding deprived areas. The lodge established a partnership with staff to run the Old Gaol Coffee Shop, which the owner, Jan Harmsgat owned initially, employing four women. After having gained skills and confidence, the women took a 30% equity in the coffee shop in 2004. This partnership and other aspects of Jan Harmsgat's local linkages have been based on a substantial investment in training.

4.2. Use new networks and find new suppliers (local sourcing)

Emerging entrepreneurs can source new networks and suppliers to enhance their businesses by asking staff to introduce new suppliers from their own networks; by contacting local business associations and chambers of commerce; by tapping into local networks, church networks; and by asking one local supplier to recommend another. Various approaches can be used to increase local sourcing, such as the *strategic approach*, where top management must revisit procurement policy and procedures; the *ad hoc, product-led approach* that entails setting up of contracts with one/more suppliers in response to an opportunity; the *destination-wide approach*, where several companies, and stakeholders working together can help develop new businesses and boost the local economy. Government can arrange expo's for local suppliers to "meet the buyers'. Travel agents, transport operators and booking agents can procure from local suppliers; and the *"appoint a champion/driver" approach*, that grasps what top management wants to achieve and having the mandate and resources to implement it.

Case study: SpierLeisure: *Helping local entrepreneurs enter the supply chain*
Spier actively went searching for new local suppliers and, when they couldn't find established ones, sought out potential ones. The facilitator visited townships, community projects, local SMME development agencies, local business associations and craft centres.

The process has been intensive, involving a champion at director level, and a part-time facilitator. As much effort has gone into changing how operational staff work, as on developing emerging suppliers themselves. While the demands of the process have been high, the business benefits have also been high, including cost saving and local support. Existing suppliers are reporting to Spier on how they are changing. New suppliers are expanding, and operational staff is looking at procurement options in a new light.

When Spier put out a tender for a new laundry service in mid-2004, several operational details were designed to facilitate a new entrepreneur. For example, the tender specified:

- the use of previously unemployed people to staff the operation;
- an eight hour operating shift period with no night shift to reduce costs relating to transport;
- the contractor would receive payment before month end in order to facilitate staff salary payments and payments to creditors;
- the contract was based on an anticipated wash volume for which a set fee was to be paid.

As Spier owned the equipment, they would take responsibility – on condition of good management practices – for maintenance and servicing. Once the contractor was selected, he was given an extensive service level agreement detailing all expectations, conditions, regulations and procedures. The service level agreement outlined roles and responsibilities of all parties, and formed the basis of all aspects of the supply relationship.

Shortly after the opening, one of the machines broke down. There was a risk that this would prove that such a new enterprise couldn't provide the reliable service required. But, due to the determination of the newly appointed contractor, who "made a plan" the clean items were delivered on time. This success actually reinforced the relationship and reduced concerns over delivery.

Informal daily interactions were complemented by regular structured meetings. Over several months, as issues were resolved, and capacity developed, demand from other parts of Spier increased. The business volumes have doubled, and further expansions have been made.

4.3. Develop and repackage products (tangible)

Specific local products should be identified that could involve a local supplier. The focus should be on reliability in peak season, identifying products with a theme, and the marketing of several products together, that are likely to succeed; for example, a range of craft or food products with a 'made local' brand or part of a themed event. This increases tourist appeal and generates synergies in terms of business support, transport, marketing and skills development.

Case study: Jan Harmsgat Country House: *Invest in training of local staff*
Jan Harmsgat Country House is located in a very rural area in the Western Cape Province where many local people have never been to school. Through a process of careful recruitment and intensive training, local women now hold key jobs in the enterprise. Apart from the owners, the staff numbers ten – 8 from local farms and 2 from a nearby village (Barrydale). The chef, Lena Verboten, started 17 years ago learning how to make jams. She now creates her own menus and receives rave reviews in the media, and accolades from guests. Training techniques include bringing in visiting chefs for short periods, taking the staff to restaurants in Cape Town, and sending them to workshops at Food Shows.

4.4. Undertake bio-prospecting and become bio-entrepreneurs

The importance of biodiversity for our survival has given rise to the notion of bioprospecting. Traditional knowledge has helped to preserve and maintain biodiversity through sustainable utilization and has increased the variety of biodiversity over centuries through the use and specific cultivation of indigenous species for agricultural purposes and food security. Traditional knowledge is of particular value for bio-prospectors or users of genetic resources who use it to guide them to plants and animals that are known to have useful properties. In many instances the same properties that made genetic resources useful to local communities are now used by industry to develop products (e.g. cosmetics, medicines, crop protection). Such companies using biodiversity in their products must abide by the Nagoya Protocol that is a legally binding agreement outlining terms of how one country will gain access to another country's genetic resources and how the benefits will be shared.

The use of and trading in indigenous plants and raw animal material for bio-prospecting by so-called bio-traders or bio-entrepreneurs contributes to job creation, poverty eradication, skills development and technology transfer.

Case study: *Community members harvest Kraalbos (Galenia Africana)* in Komaggas, Northern Cape. Kraalbos is known for its medical properties, including an antifungal agent.

South Africa ranks amongst the top three in the world's most bio-diverse countries and is home to about 24,000 plant species with an entire floral kingdom within its borders. These resources underpin a large proportion of the economy and many rural and urban people are directly dependent on them for employment, food, shelter, medicine and spiritual well-being. The WHO indicates that 80% of people in Africa depend on traditional medicines for health care, and that 1 billion people worldwide depend on drugs derived from forest plant for their medicinal needs. Many of these plants are indigenous and endemic to South Africa. Clearly such medicinal plants need to be cultivated on a large scale if wild populations of these plants and biomes where they occur are to be conserved. In Komoggas the opportunity for commercially cultivating indigenous medicinal plants has been taken, in order to meet the increasing demand and pressures from non-sustainable harvesting, as well as the importance of traditional knowledge of medicinal plants that will make a significant contribution to sustainable development. The role of holders of traditional; knowledge as natural resource managers with their skills and techniques provide a useful model for medicinal plants management as evidenced in Komoggas where the

provincial government has joined forces with the District Municipality and the Local council to support the community to sustainable manage this important, Kraalbos, a yellow-green soft woody shrublet of one meter, that is a resource for the benefit of all. It grows naturally in the Northern Cape and in Namaqualand. The Kraalbos is an active invader and especially abundant in areas around kraal, along roads and on trampled veld. It is not only an indicator of disturbance, but is also a pioneer plant, being the first perennial to regrow after soil disturbances. A mixture of Kraalbos is used as a lotion for healing wounds in humans and animals by the local communities. Historically the Khoisan people chewed the plant to relieve toothache, skin and eye diseases. Legislation provides for fair and equitable sharing of benefits arising from the Kraalbos Project which is in line with the government's 'Green Economy' objectives of pro-poor, pro-development and pro-job creation. The first bio-permit was handed over in 2012, and in July 2012, with an additional seven bio-prospecting permits handed over by Minister Edna Molewa of Environmental Affairs to the Komaggas community that comply with various regulations. The product (Zembrin, marketed as Elev8with) that has been developed from Kraalbos has been approved by the Medicines Control Council and reduces stress, elevates moods and improves concentration (Department of Environmental Affairs, 2012).

Emerging Komoggas entrepreneurs (tenants and owners) will be reimbursed per kilogram of Kraalbos harvested that will result in an amount of 2 million Rands being paid directly to the access providers as upfront payment. The Khoi Heritage Foundation and its role as holder of traditional knowledge about Kraalbos will receive 1% of all distributable cash reserves after costs at the end of each financial year.

Accompanying the permits the applicants will be issued copies of the SA's Bio-prospecting, Access and Benefit Sharing Regulatory Framework: Guidelines for Providers, Users and Regulators. These guidelines as well as the associated traditional knowledge will assist the different stakeholders to understand the legal requirement in terms of the law.

4.5. Create niche markets for biodiversity-compatible products

To create markets for biodiversity-compatible products, retailers need to be made aware of them, understand their value and market them appropriately. Procurement advice, consumer awareness campaigns, eco-labelling and certification systems are all tools that can be used to create markets for these products.

Eco-labelling and certification can be used to secure market share and price premiums as it is assumed that consumers who are environmentally and socially aware are more likely to purchase products at higher prices that are certified to comply with established codes of good practice as denoted by eco-labels such as Fair Trade. In cases where local producers, such as the wild-harvested rooibos tea sold by communal farmers in the Bokkeveld district of the Northern Cape, have been able to secure such certification, it has enabled them to penetrate international niche markets in which consumers prefer to buy certified products.

Where markets are not yet demanding sustainably-produced goods, it is difficult to interest producers in adopting new production or harvesting methods that lead to certification. Although there are many South African business and biodiversity initiatives, the move towards introducing industry-related certification systems for compatible production is still in its infancy.

Case study: *Sustainable rooibos – The Heiveld case*
There has been an expanding market locally and globally for tea made from the 'rooibos' or red bush plant because of its health giving qualities, which only grows in a small region in South Africa.

Wild rooibos has been harvested for domestic use for many generations by rural communities living in the Cedarberg and Bokkeveld regions of the Western and Northern Cape. In an effort to combat desertification and support sustainable agriculture in marginalized communities, the government of the Northern Cape provided assistance to a group of small-scale entrepreneur-farmers in the Heiveld district who produced wild rooibos teas through a combination of cultivation and wild-harvesting. In 2001 the product was certified an organic and in 2002 these farmer-entrepreneurs started marketing wild rooibos as a distinctive product and achieved notable success. In 2004 the product received Fair Trade, Ecocert and Naturland certification as it benefits. Currently the Heiveld Co-operative supplies a niche market of consumers in nine European countries who are willing to pay a premium price for organic, fairly traded products. Forty member farmers are now working with scientists to increase the yields from wild rooibos. A sustainable guideline for sustainable wild-harvesting of rooibos has also been produced although on-going research and monitoring are needed to assess the impacts of harvesting using these harvesting methods.

4.6. Develop intangible cultural products

Local traditions and cultures (intangible heritage) should be authentically offered by entrepreneurs to attract tourists. Cultural events that are managed in a sustainable way can create a positive destination image; generate employment opportunities and benefits. Communities should be actively involved in the planning and decision-making of a cultural event, otherwise alienation and cultural disrespect may result. Sustainable event practice can also encourage development of environmentally-friendly transport systems and infrastructure, waste management and recycling, alternative eco-friendly energy sources and potentially enhance the environment.

Socio-cultural sustainability: A successful event rejuvenates a destination's cultural traditions, promotes its characteristics and renews the local community's pride and confidence (Tassiopoulos, 2005a:3). According to Getz (in Gursoy et al., 2004:171), events play an important role in locals' lives, as they offer essential activities and spending channels for locals and tourists, and improve the local community's image. Events are the catalysts of a local community's well-being and improvement (Getz in Derrett, 2004:32) and the success of events depends greatly on the involvement, passion and support of the local community (Gursoy et al., 2004:171). Therefore, positive social benefits of events must be generated and encouraged. Festivals and events are interactive experiences and build social cohesion and togetherness and strengthen the community as a unit (Gursoy et al., 2004:173). Events offer a chance for cultural exchange, which raises cultural awareness and understanding between event tourists and locals (Gursoy et al., 2004:173). Socially sustainable events establish trust and create a sense of belonging among community members and also help to preserve local traditions and heritage (Allen et al., 2008:64; Bowdin et al., 2006:38; Gursoy et al., 2004:171-175). However, should sustainable event practice not be implemented, crowding, congestion and crime rates could increase, which may lead to a negative event experience for tourists and the local community. Local traditions and cultures may also be exploited for the purpose to attract tourists. This could decrease cultural authenticity and cause locals to resent tourists. If communities are not actively involved in the planning and decision-making of the event, they may feel alienated and cultural disrespect may result. Ultimately, the destination will develop a negative image (Allen et al., 2008:64; Getz, 2008:412; Gursoy et al., 2004:175).

Environmental sustainability: Events and environmental impacts have seldom been the topic of discussion, and when they have been considered as one topic, only the negative impacts of events on the environment have been examined (Dickson & Arcodia, 2010:237). Events and festivals usually entail a large number of people in a restricted geographical area for a specific period of time, which cause congestion, pollution, wastage of water and resources and noise (Collins et al., 2009:829). If not managed properly, events can negatively impact ecosystems through utilisation of non-renewable natural resources and contribute to carbon emissions and eventually climate change (Collins et al., 2009:829). However, events can also be a medium to promote environmental awareness, responsibility and understanding among event tourists, the local community, and the rest of the tourism sector as well as other business sectors (Collins et al., 2009:829). Also, sustainable event practice can encourage development of environmentally-friendly transport systems and infrastructure, waste management and recycling, alternative eco-friendly energy sources and potentially enhance the environment (Allen et al., 2008:64; Collins et al., 2009:830).

4.7. Make use of alternative revenue models

Alternative revenue models can be used to assist emerging entrepreneurs. Volunteers can help at an event, in exchange for the experience; survivor packages can be offered in townships/favellas for tourists to 'experience" co-creation. Events, conferences and exhibitions can offer services in return for publicity and for trading one service for another. Agricultural goods (food and beverage) make up 30% of tourist expenditure, which, if spent locally could transform the local economy, however problems include seasonality, health and safety regulations, inadequate transport, small volumes, unfamiliarity with the formal market. Alternative business models also exist within the realm of social networking channels.

4.8. Make use of alternative employment models and skills development

Over the last few years the South African government's environmental public works programme has explored models for creating job opportunities at a higher wage over a longer duration to lift more people above the poverty line. Such a model is the "Working For" programme that sets out to create short-term work opportunities for people who have few other opportunities for earning a living, by involving them in paid work associated with maintaining the ecological stability of the country.

Case study: *The "Working for" programmes*
These programmes are funded by National treasury and have clear social, economic and environmental gains, making it a 'win-win-win' model. These programmes require few skills at entry level, are extremely labour intensive activities and well suited to rural communities who are the beneficiaries of the programmes.

The first government-led public employment programme with a specific focus on environmental rehabilitation was "Working for Water", which aimed to address two political priorities: job creation and water scarcity. The programme uses labour intensive methods to clear invasive alien plants that help with maintaining rehabilitated or restored ecosystems on an ongoing basis. Other "working for" programmes based on the 'Working for Water model' include: Working for Wetlands, Working for Land, Working for Coast and Working on Fire, the last that focuses on women. www.workingonfire.org [get online brochure]. With this programme the entry level is: fire fighter>Type 2 crew leader>Type 1 crew leader> Base manager>Regional manager. This programme enables rural women with potential and drive to educate themselves on a continuous basis. Two new programmes dealing with Energy and Waste are currently in development. The "Working for" model makes a conscious effort to benefit the most marginalized communities and to target the employment of women, young people and people with disabilities. Training is provided to programme beneficiaries in the technical skills associated with restoration as well a a range of life skills (also entrepreneurial) that are intended to assist workers with exit opportunities beyond the programme.

5. CONCLUSION

Focus group discussions and selected in-depth interviews from a number of fair trade business enterprises are discussed in terms of enabling entrepreneurs to operate successfully, e.g. *Spier Leisure* embraced sustainability in 2004 and chose to prioritise local and SMME and BBE, focusing on local procurement; the investment in the training of local staff at *Jan Harmsgat Country House* in a rural area; Kraalbos, where community members harvest the herb for medicinal purposes; the Heiveld case where wild rooibos is cultivated and harvested for export to Europe; and the *"Working for"projects"* where the South African government is exploring job creation models; also programmes that are boosting local business and developing a 'made local' brand. Most of mentioned businesses have retrained staff and revisited their procurement policy to prioritise local, small, medium and micro entrepreneurs.

The research identified a number of critical success factors that emerging/survival entrepreneurs should strive to attain to encourage the success of their new ventures, and that should assist in their sustainable success, namely: creating and forming partnerships and alliances; using new networks and finding new suppliers for local sourcing; developing and repackaging tangible products; bio-prospecting and investigating in becoming bio-entrepreneurs; creating new niche markets for biodiversity-compatible products; developing intangible cultural products; using alternative revenue models; and using alternative models for skills development and employment. Should emerging/survival entrepreneurs strive towards these critical success factors, sustainable success should be within reach.

However, sustainability is a double edged sword: on the one hand we are looking at protecting the environment for future generations; but in a poverty stricken society this is a near impossible task to fulfil, as people harvest the land to survive – chop trees for firewood, hunt wild animals for food. The answer lies in education and the empowering of people to learn skills, to create jobs and live a decent life. One cannot expect people living in the poverty cycle at the bottom the of Maslow's needs hierarchy to be concerned about the environment.

To foster sustainability within the southern African context from an entrepreneurial perspective it remains imperative to look towards the opening of new markets, both locally and regionally, and to embrace skills of cross-border entrepreneurs and immerse them locally.

Today, society realises the significance of sustainability, and that it is the way of the future. In order to grow and succeed in business and enhance their image and reputation, government on all levels and tourism role players must understand the meaning and importance of sustainability and the great deal of benefits associated with sustainable practices.

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PATIENTS' BEHAVIOURAL INTENTIONS AND THE INFLUENCE OF SERVICE QUALITY PERCEPTIONS AND CUSTOMER SATISFACTION IN THE ALBANIAN HEALTHCARE INDUSTRY

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ABSTRACT

The primary objective of this study was to measure patients' perceptions of service quality and customer satisfaction with a private hospital experience and to estimate the effect that each of these constructs will have on future behavioural intentions. More specifically, the present study was an attempt to assess empirically the most important dimensions of service quality and transaction-specific customer satisfaction dimensions that drive both patient loyalty and 'overall' or cumulative satisfaction in the Albania private hospital industry.

For the purpose of this study, buying intentions was used as a surrogate measure of loyalty as measured by willingness to reuse the hospital and/or willingness to recommend it to others (word-of-mouth endorsements). Initial exploratory research was conducted with the aim of assessing the views of three private hospital stakeholder groups, namely former patients, doctors and management about what the quality of service and customer satisfaction meant to each individual interviewed.

The study was conducted nationally at private hospitals owned by one of Albania's three major hospital groups. Five private hospitals in capital of Albania, Tirana were selected on a non-probability convenience basis to participate in the study. The hospital group's senior management and the management at each selected hospital gave their full commitment to ensure that the survey was successfully conducted in their hospital wards.

Data were collected by means of a quantitative study using a selfadministered, structured questionnaire. Patients had to meet certain qualifying criteria which included being of adult age, in the hospital for an operation and at least one overnight stay. A total of 300 questionnaires was distributed to patients on a random basis in selected wards at the five hospitals by senior hospital staff designated for this task. From this distribution, 285 questionnaires were returned of which a final sample of 300 could be statistically analysed.

KEYWORDS: Service quality, Customer satisfaction, 'Overall' cumulative satisfaction, Loyalty, Buying intentions, repurchase, Private hospitals, Albania

1. INTRODUCTION

Healthcare today has become a competitive industry, not only locally, but on a global level as well. In the Albanian economy the healthcare sector presently offers healthcare seekers two options to satisfy their healthcare needs – either through private business enterprises in the private sector or public enterprises in the public sector. Likewise, in the healthcare sector's hospital environment, patients can receive treatment from either private or public hospitals.

As private business enterprises offering a relatively 'pure', but generally unsought-after service, private hospitals compete aggressively to attract patients. Patients are a hospital's lifeblood and they rightfully expect a high standard of customer service throughout the stay. With today's consumers being better informed, more sophisticated and more demanding than in the past, experts agree that the key to survival in the service industry today, almost without exception, is the quality of the service. The cornerstone of the service industry is without doubt the ability to deliver

superior service quality that results in customer satisfaction. And the healthcare industry is no exception.

Most consumers will experience a need for healthcare services at some time in their lives, but in Albania, escalating medical costs in general and private hospitals in particular, have made private healthcare increasingly more expensive for the majority of the country's healthcare seekers. This situation raises the question of customer service in the private hospital industry and how patients' perceive service quality and evaluate customer satisfaction after a hospital stay.

There studies shows that service quality and customer (patient) satisfaction positively influence patients' behavioural intentions to reuse the hospital or recommend it to others (word-of-mouth endorsements). However, in Albania, empirical studies to investigate these relationships have not been adequately addressed. This study was therefore an attempt to address the lack of scientific evidence and debate in the area of patient satisfaction.

2. RESEARCH DESIGN AND METHODOLOGY

A study of this nature is comprised of two components, namely primary data and secondary data, the collection of which are undertaken in order to adequately address the research objectives. Primary data are original data collected specifically for the purpose of solving the current research problem (Hair, Babin, Money & Samouel 2003:72; Van Wyk 1996:99).

Secondary data, on the other hand, are existing data that have already been collected for previous research purposes, but may be used to help solve the research problem at hand (Hair et al. 2003:72; Van Wyk 1996:99). In order to realise the objectives of the study and test empirically the hypotheses that had been formulated for this purpose, the primary and secondary research will form the two main sources of data.

Secondary sources of data

A comprehensive literature search was undertaken to collect sufficient information on the influence of the two constructs, namely service quality and customer satisfaction and their influence on future behavioural intentions in the same service industry. The search was initially widened to include generic topics in the general service literature, but subsequently narrowed to the healthcare industry and as far as possible, to patients in private, or at least for-profit hospitals.

An overlap with other healthcare providers or public hospitals was unavoidable during the literature search and the information generated was not included in the study unless mentioning it was absolutely necessary.

Publications covering academic report writing were consulted as well. Anecdotal literature such as the domain of customer service, customer relationships, branding, selected stories of successful business leaders and managing for the future were also consulted.

Primary sources of data

Preceding the empirical study to test the theoretical model, information was solicited from three groups of stakeholders primarily to gauge the feelings of different role players regarding their perceptions and opinions of the patient as a customer and their understanding of the concepts quality service and customer satisfaction. Two of the groups were hospital management and medical practitioners and some of these individuals also evaluated the preliminary questionnaire. Feedback offered by these individuals was incorporated into finalising the research problem and questionnaire design.

In addition to the informal discussions with all three stakeholder groups, pre-testing of the questionnaire was carried out on the third group, a small number of former, but recent, private hospital patients to determine whether any difficulties existed in understanding the wording of the questionnaire, or in the design itself. No major difficulties were found. The pre-test also estimated that the length of time required to complete the questionnaire took approximately 10-15 minutes.

Once the recommendations and minor adjustments from the pre-test had been made, the questionnaire was ready for the next phase of the primary research process, namely finalisation.

The sample

Five hospitals were selected on a non-probability convenience basis to participate in the study. Each of the five hospital managers served as the main contact person together with the assurance that designated senior staff would take responsibility for the distribution of questionnaires in the relevant wards. Each hospital manager provided suitable dates when the hospitals could be visited to brief staff. Also, it was important that the survey did not lose momentum, as questionnaire distribution had to be spread over several weeks. Weekly telephone calls to monitor progress and offer encouragement were made to each contact person who had been nominated to handle the distribution in the wards.

Respondents first had to meet certain qualifying criteria, after which questionnaires were distributed to patients on a random basis in selected wards at the participating hospitals. This was done just prior to discharge.

Once the self-administered questionnaire had been completed, it had to be mailed back to the addressee. The package included an outer envelope, covering letter (including incentive-to-respond details), A5 questionnaire booklet

and reply-paid envelope. From a total distribution of 300 questionnaires, 275 were returned of which 223 could be statistically analysed. Because anonymity of respondents was guaranteed, it was not possible to carry out any telephonic follow-ups to obtain missing data.

The measuring instrument

The measuring instrument consisted of an eight page self-administered, structured questionnaire divided into three sections which totalled 117, statements in all, including biographical data. It was printed as an A5 booklet. Ten dimensions of service quality related to the patient's hospital visit were measured using 54 items (statements). For the purpose of this study, the original ten dimensions of service quality conceptualised by Parasuraman, Zeithaml and Berry (1985) rather than its subsequent reduction to five dimensions (Parasuraman et al. 1988) were utilised on account of their being a stronger predictor of customer satisfaction (Green & Boshoff 2002:4).

On the other hand, the 48 items (statements) used to measure customer satisfaction were based on a thorough literature review (Bowers et al. 1994; Fisk et al. 1990; John 1991, 1992; Jun, Peterson & Zsidisin 1998; Reidenbach & Sandifer-Smallwood 1990; Taylor & Cronin 1994; Woodside et al. 1989; Zimmerman et al. 1996). The exploratory research that was mentioned in section 1.6.2 and in-depth interviews conducted with some individuals who had been recent private hospital patients at the time of questionnaire design were also included.

Because of the dilemma of not being able to refer to customer loyalty in the private hospital industry in the same manner as, for instance, in the retail industry like the grocery store or the bank, future behavioural intentions of patients, namely buying intentions were used as a surrogate measure for loyalty (Shaw-Ching, Furrer & Sudharshan 2001). Five items (statements) were used to measure loyalty, that is willingness to reuse the hospital or recommend it to others.

The 102 items used to measure service quality and customer satisfaction were linked to a 7-point Likert scale, ranging from strongly agree (7) to strongly disagree (1). Overall cumulative satisfaction was measured using three semantic differential-scaled items (statements) containing bipolar 'satisfaction' adjectives to describe the hospital experience.

The survey was only partly a mail survey on account of the questionnaires being distributed by hand to qualifying patients in various wards. Using the reply-paid envelope, respondents were then required to mail back the completed questionnaires.

The data were subjected to an exploratory factor analysis in order to identify the underlying relationships and create a clear factor structure. Cronbach alpha coefficients for each set of factors were calculated to confirm the reliability of the measuring instrument. This was followed by regression analysis to measure the strength of the relationships between the service quality and customer satisfaction dimensions (the independent variables) and 'overall' cumulative satisfaction and loyalty (the two dependent variables).

Service quality

Service quality arose out of the need for a concept which described how customers perceived the quality of a service, with particular reference to the service industry. It was believed that once the service provider knew how customers evaluated the quality of its service, it would be in a better position to not only influence these evaluations in a desired direction, but also to relate the service to customer benefits.

In this study, the concept of service quality is based on the early work of Parasuraman et al. (1985, 1988), and refers to the customer's judgement of the overall excellence or superiority of the service. It is distinct from customer satisfaction in that service quality is a global judgement, formed over a period of time, but nonetheless related to satisfaction since the outcome of incidents of satisfaction over time give rise to service quality perceptions.

The perception of service quality by consumers refers to a comparison of customer expectations of a particular service provider with customer perceptions of its actual performance. Furthermore, that only the customer can be the judge of service quality, irrespective of the service provider.

Previous research found that customers used the same general criteria to arrive at an evaluative judgement about service quality, regardless of the type of service. The multiple-item scale to measure consumer perceptions of service quality, SERVQUAL, was the result of initial research that reduced the dimensions of service quality to just five dimensions. The ten original dimensions first proposed by Parasuraman et al. (1985) were named tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding/knowing the customer and access.

The five dimensions that remained after the reduction were similarly named tangibles, reliability, responsiveness, assurance and empathy (Parasuraman et al. 1985, 1988).

However, several problems and criticisms of SERVQUAL experienced in later studies determined that the original version of SERVQUAL, which measures the ten dimensions of service quality outlined above, would be used in the present study. A further reason not to use the reduced five dimensions was that the original ten dimensions of service quality are a stronger predictor of customer satisfaction.

Customer satisfaction

Unlike the global judgement of service quality arrived at over a period of time, customer satisfaction is transaction-specific, that is, it is the outcome resulting from a particular consumption experience, such as a hospital visit.

In addition, customer satisfaction is viewed as uniquely personal, in other words, satisfaction stems from the interaction of perceptual interpretations of the service and customer expectations of that service. This will result in different consumers having varying levels of satisfaction for an experience, which is essentially the same in delivery. The transaction-specific dimensions of customer satisfaction to be empirically tested in this study.

The dynamics that combine to create the service experience – perceptual, evaluative and psychological processes and the unique characteristics of services – suggest that customer satisfaction of a service encounter is more complex than satisfaction after consumption of a physical product.

Multiple encounters with the same service provider will result in multiple experiences for the customer, which over time, will lead to an overall level of satisfaction. In the present study, both transaction-specific customer satisfaction at the attribute level and 'overall' cumulative customer satisfaction of the hospital stay will be measured.

Loyalty

Two aspects related to the private hospital/patient relationship need to be considered when attempting to predict patient loyalty. Firstly, since it is often the referring doctor who makes the choice of hospital, or at least strongly influences the choice, loyalty to a particular hospital in the private healthcare environment was considered more difficult to measure than the alternative of willingness to reuse the same hospital again in the future or recommend it to others. And secondly, to have to go into hospital is not normally a sought-after service and in many cases, may not occur too frequently. Nonetheless, even a single encounter with a service provider includes elements by which a loyal relationship can be built (Grönroos 2000:7).

Keeping customers loyal is not an easy task (Grönroos 2000:34), yet many hospitals today are increasingly finding profitable opportunities to establish and build loyal relationships with their patients (Schiffman & Kanuk 1994:591-597). In fact, relationships with customers are central to loyalty and loyal customers are normally, but not always, profitable customers (Grönroos 2000:7,131).

Thus, the importance of customer loyalty, and in this case, patient loyalty, can hardly be overstated. Consumer loyalty has even been described as the marketplace currency for the 21st Century (Singh & Sirdeshmukh 2000:150).

Definitions of customer loyalty point to probability of repurchase to proportion of purchase (Sivadas & Baker-Prewitt 2000:79). Customer loyalty is typically viewed as having a positive propensity toward a certain store or brand on the one hand (East, Hammond, Harris & Lomax 2000:308), and both a cognitive construct (attitude) and shopping behavior on the other (Dick & Basu 1994); Mellens, Dekimpe & Steenkamp 1996).

Because customer loyalty to a particular hospital is likely to differ from other service providers or even brand or store loyalty in a retail context, future behavioural (buying) intentions were used to measure loyalty in this study. In particular, willingness to reuse the same hospital in the future or recommend it to others was taken into account.

Thus, for the purpose of this study, customer loyalty will refer to two specific repeat purchase behaviours, a private hospital patient's willingness to reuse the same hospital again in the future (should the need arise), or recommend it to others (positive word-of-mouth endorsements).

Regardless of the service industry in question, studies have shown that customer loyalty increases profitability (Heskett, Sasser & Schlesinger 1997; Reichheld 1996); it serves as a barrier to entry for competitors (Aaker 1991) and is a key determinant in predicting market share (Baldinger & Rubinson 1997; Jacoby & Chestnut 1978).

Marketing implications for private hospitals

According to Zeithaml and Bitner (1996:21), because services are often produced and consumed at the same time, mass production is difficult if not impossible. Moreover, the authors believe that the quality of service and customer satisfaction will be highly dependent on what happens in 'real time'. This must be true for the private hospital environment. While surgical procedures for carrying out certain operations might be similar (caesarean section, hernia or heart bypass), no two patients are alike in their conditions for which they sought diagnosis, treatment and in due course, a return to good health, in the first place. This outcome will result from the production process between service provider (private hospital) and customer (patient).

In the view of Grönroos (1990:29) it is the visible part of the production activities of the service that matters in the mind of the customer and it is these visible activities that are experienced and evaluated in every detail. For the patient in the hospital, the visible aspect of the service production is particularly relevant. For example, how would the postsurgical removal of tubes, apparatus, sutures, dressings and the like, matter to the patient? The patient is normally awake for these necessary, but sometimes unpleasant, procedures if done by rough hands and which are both felt and evaluated by the patient.

REGRESSION ANALYSIS RESULTS

The multivariate statistical technique, multiple linear regression analysis, or regression analysis for short, was per-

formed to assess the strength of the relationship between the dependent (criterion) variables and two sets of independent (predictor) variables. Firstly, regression analysis was performed to predict the influence of the service quality and customer satisfaction dimensions (the independent variables) on loyalty and 'overall' cumulative customer satisfaction (the dependent variables). And secondly, regression analysis was performed to determine the statistical significance of the independent variables on loyalty and 'overall' cumulative customer satisfaction.

The results of the regression analysis on the four hypotheses of the present study are presented in this section. From these results, The t-value (also t-statistic) is a measure of the statistical significance of an independent variable in explaining the dependent variable (Levine, Stephan, Krehbiel & Bereson 2005:525). Leamer (1999:2) indicates that in regression analysis, for each independent variable, three sets of numbers, namely an estimated coefficient (beta), a standard error and a t-value are calculated, but it is the t-value that can be compared across all the independent variables. The t-value is merely the estimated coefficient (beta) divided by the standard error (Leamer (1999:6) and measures how many standard errors the coefficient is away from zero (Levine et al. 2005:525). Levine et al. (2005:525) suggest that any t-value greater than +2 or less than -2 is generally acceptable. Alternatively however, Leamer (1999:6) argues that in certain situations, the choice of number as the t-value is entirely a matter of choice. The author suggests that while a large t-value implies a strong inference, 'large' should be compared with the other independent variables in the equation. Levine et al. (2005:526) point out that the higher the t-value, the greater the confidence a researcher can have in the coefficient as a predictor on the dependent variable, while low t-values are indications of low reliability of predictive power of the coefficient in question.

Service quality and loyalty In this section, the following hypothesis was considered:
H1: There is a positive relationship between perceived service quality at the dimensional level (ten dimensions) and loyalty, as measured by patients' willingness to reuse the same hospital in the future or recommend it to others (buying intentions).

Multiple regression results shows the impact of the seven service quality dimensions (the independent variables) on loyalty (the dependent variable). It shows that four of the seven service quality dimensions influence the dependent variable Loyalty, namely Empathy of nursing staff (t-value 5.81 p<.001), Tangibles (t-value 2.97 p<0.01), Assurance (t-value 4.01 p<.001) and Security (t-value -2.15 p<0.05). Having determined statistical significance (F-value = 63.56; probability level = 0.0001), the next step is to evaluate the R2 to determine if it is large enough. It can be seen that the R2 of 58.5% reveals that the modelled independent variables explain 58.5% of the variation in the dependent variable.

The direction of the relationship between service quality and loyalty is positive for three independent variables and negative for one variable. Empathy of nursing staff, Assurance and Tangibles impact positively on loyalty as hypothesized. However, the impact of Security on loyalty is negative.

The results suggest that the greater Empathy of nursing staff is perceived, the greater patients' feelings of Assurance and Security are during the hospital stay, and the more positively they evaluate the Tangible elements of the service (i.e. physical environment), the more likely patients are to remain loyal to the hospital, that is, they will be more willing to reuse the same hospital in the future or recommend it to others. However, it must be pointed out that the negative relationship between security, both inside and outside the hospital, and the dependent variable, imply that the overt presence of too much security will reduce loyalty.

Hypothesis 1 is thus accepted in terms of the independent variables, Empathy of nursing staff, Tangibles, Assurance and Security, but rejected for Communication, Responsiveness of administrative staff and Physician responsiveness.

Service quality and cumulative satisfaction
In this section, the following hypothesis was considered:
H2: There is a positive relationship between perceived service quality at the dimensional level (ten dimensions) and cumulative customer satisfaction. 'Overall' cumulative satisfaction was the dependent variable in this case.

It is shown the impact of the seven independent variables for service quality on cumulative satisfaction. Only two service quality dimensions influence cumulative satisfaction, namely Empathy of nursing staff (t-value 5.64 p<.001) and Assurance (t-value 0.653 p<.001).

The R2 of 60.3% reveals that the modeled independent variables explain 60.3% of the variation in the dependent variable, suggesting that the strength of association between the variables can, as with Hypothesis 1, also be described as moderate.

The direction of the relationship between service quality and cumulative satisfaction is positive for the two independent variables Empathy of nursing staff and Assurance. Therefore, the results suggest that the dimensions of service quality most likely to influence patient satisfaction will be that the more patients perceive Empathy of nursing staff and the greater their feelings of Assurance, there is an increased likelihood of 'overall' cumulative satisfaction, a better predictor of loyalty, occurring.

Hypothesis 2 is thus accepted in terms of the independent variables, Empathy of nursing staff and Assurance, but rejected for Communication, Tangibles, Responsiveness of administrative staff and Physician responsiveness.

Customer satisfaction and loyalty

In this section, the following hypothesis was considered: H3: There is a positive relationship between customer satisfaction at the dimensional level (seven dimensions) and loyalty, as measured by patients' willingness to reuse the same hospital in the future or recommend it to others (buying intentions).

It is shown that four of the seven customer satisfaction dimensions influence the dependent variable loyalty, namely Satisfaction with meals (-tvalue 4.50 p<.001), Satisfaction with the nursing staff (t-value 11.99 p<.001), Satisfaction with fees charged (t-value 2.77 p<0.01) and Satisfaction with the television service in wards (t-value 2.67 p<0.01). R2 of 68.3% reveals that the modelled independent variables explain 68.3% of the variation in the dependent variable, suggesting that the strength of association between the variables, as with the first two hypotheses, can also be described as moderate.

The direction of the relationship between customer satisfaction and loyalty is positive for the four independent variables, namely Satisfaction with meals, Satisfaction with the nursing staff, Satisfaction with fees charged and Satisfaction with the television service in wards. Therefore, the dimensions of patient satisfaction most likely to influence patients' willingness to reuse the same hospital should they need to return in the future, or recommend it to others, will be the quality of the meals served, the calibre of the nursing staff employed by the hospital and the manner in which they treat the patients assigned to their care, the reasonableness of the fees charged and the provision of television sets in the wards.

An important finding emanating from the study is that satisfaction with the nursing staff (estimate 0.386), is shown to be the strongest predictor of loyalty.

Hypothesis 3 is thus accepted in terms of the independent variables Satisfaction with meals, Satisfaction with the nursing staff, Satisfaction with fees charged and Satisfaction with the television service in wards, but rejected in the case of Satisfaction with admission process, Satisfaction with ward arrival and Satisfaction with the theatre experience.

Customer satisfaction and cumulative customer satisfaction

In this section, the following hypothesis was considered: H4: There is a positive relationship between customer satisfaction at the dimensional level (seven dimensions) and cumulative customer satisfaction. As with the second hypothesis, cumulative satisfaction (the overall assessment) was the dependent variable and the seven customer satisfaction dimensions, the independent variables. Table 8.20 shows the impact of these seven independent variables for the customer satisfaction dimension on cumulative satisfaction.

The three customer satisfaction dimensions influence cumulative satisfaction, namely Satisfaction with meals (t-value 3.03 p<0.01), Satisfaction with the nursing staff (t-value 11.00 p<.001) and Satisfaction with fees charged (t-value 5.71 p<.001). R2 of 66.0% reveals that the modelled independent variables explain 66.0% of the variation in the dependent variable, suggesting that the strength of association between the variables can be described as moderate.

The direction of the relationship between customer satisfaction and overall cumulative customer satisfaction is positive for the three independent variables, Satisfaction with meals, Satisfaction with the nursing staff and Satisfaction with fees charged. Therefore, the individual dimensions of customer satisfaction will be satisfaction with the quality of the meals served, satisfaction with the calibre of nursing staff and satisfaction that the fees charged are reasonable.

Hypothesis 4 is thus accepted in terms of the independent variables Satisfaction with meals, Satisfaction with the nursing staff and Satisfaction with the fees charged, but rejected in the case of Satisfaction with admission process, Satisfaction with the ward arrival, Satisfaction with the theatre experience and Satisfaction with the television service in wards.

3. CONCLUSION

The theoretical model proposed to predict future behavioural intentions of private hospital patients based on their perceptions of two consumer-owned judgements, namely service quality and customer satisfaction, were empirically tested by means of the multivariate data analysis technique, multiple regression analysis. More specifically, the study aimed to determine which dimensions of service quality (an overall or global judgement) and customer satisfaction (a transaction specific judgement) would be most likely to improve patient loyalty should a return visit to the hospital ever become necessary.

Ten independent variables for service quality and seven independent variables for customer satisfaction were selected to measure which dimensions exerted the stronger influence on the study's two dependent variables, namely loyalty (measured by willingness to reuse the hospital or recommend it to others) and customer satisfaction (measured as 'overall' or cumulative satisfaction. The entire matrix of responses to the service quality and customer satisfaction variables was subjected to an exploratory factor analysis.

The empirical results of the exploratory factor analysis revealed that seven distinct factors emerged for each of service quality and customer satisfaction. Thus, the factors most likely to influence loyalty and overall cumulative customer satisfaction are as follows:

- Service quality
  - Communication
  - Tangibles
  - Empathy of nursing staff
  - Assurance
  - Responsiveness of administrative staff
  - Physician responsiveness
- Customer satisfaction
  - Satisfaction with meals
  - Satisfaction with fees charged
  - Satisfaction with the nursing staff
  - Satisfaction with the admission process
  - Satisfaction with the theatre experience
  - Satisfaction with the television service in wards
  - Satisfaction with the ward arrival

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THE MARKETING OF HIGH-TECH INNOVATION: RESEARCH AND TEACHING AS A MULTIDISCIPLINARY COMMUNICATION TASK

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ABSTRACT

Economically successful high-tech innovation is one of the driving forces for global welfare. Like innovation half-life, break-even time to market or technology acceptance, effective multidisciplinary communication between engineering and marketing is a critical success factor. This paper aims to show the requirements of multidisciplinary communication in B2B marketing of high-tech innovation and methodical approaches in research and academic education:

1. Requirements in high-tech innovation marketing as an ongoing dialogue between technology, finance and marketing.
2. Experimental method of marketing test beds for innovative high-tech start-ups based on a multidisciplinary approach
3. Results of a multidisciplinary education scheme conducted by three universities that cooperate in high-tech innovation marketing by setting up workshops in pharmacy and health, agricultural and bio products, and information and communication technology (ICT).
4. Requirements of a multidisciplinary network spanning the triangle of science – education – business.

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KEYWORDS: High-tech innovation marketing, multidisciplinary communication and education, marketing test bed, student teams, multidisciplinary education, pictures as communication device, CEE universities, topic group

1. REQUIREMENTS OF HIGH-TECH INNOVATION MARKETING AS AN ONGOING MULTIDISCIPLINARY COMMUNICATION

Many business decisions in marketing and sales, R&D, purchasing, manufacturing and storing involve different knowledge disciplines. Multidisciplinary research has received increasing attention by bridging and combining the viewpoints of different disciplines [45: p. 11]. The multidisciplinary approach as a cognitive style is analyzed in the case of multidisciplinary creativity [38]. Operational teams and management teams often consist of members from different knowledge disciplines. Each knowledge domain has its own domain language. Multidisciplinary communication (MDC) deals with content and communication partners who belong to different knowledge disciplines (domains), and exchange their views on content from different disciplinary viewpoints (see [25]: fig. 4, The relationship between disciplines and MDC).

Although MDC is an everyday phenomenon, the field of MDC in high-tech innovation marketing shows a knowledge map with many blank spots. The purpose of this paper is twofold:

A) To show the requirements of MDC in business-to-business (B2B) marketing of high-tech innovation;

B) To show methodical approaches in research and academic education to cope with MDC challenges.

High-tech innovations are characterized by attributes that require multidisciplinary communication (MDC) [1]; in medicine, for example, see [18: MD rounds in medicine], [26: p. 716]. Marketability strongly depends on the communicability of the innovative features which are demanded by the addressed customer target group. Since high-

tech innovations result from natural science and technical engineering disciplines, their linguistic representation uses mostly syntactic forms, semantic meanings and pragmatic patterns originating from the natural science disciplines. Innovations are considered successful if their market entry [10] and their market presence result in a positive commercial yield, usually measured by business ratios such as return on sales (RoS) or return on investment (RoI). Hence marketability is a basic requirement for economically viable high-tech innovation.

1.1. Criteria of High-Tech Innovation Marketability

High-tech attitude implies nearness to natural scientific basic and applied research. From a business viewpoint, high-tech innovations are judged as a high-risk, high-profit business.
The criteria C1 to C6 (similar approach in [21]: table 3) of high-tech innovation can be described by the features below:

(C1.) Innovativeness:
The degree of innovativeness can be described by:
- the level of invention;
- the competitive position of the innovator with regard to the estimated time span of
- innovation half-life in relation to the best competitor known to the innovator;
- the degree of comprehensibility within the MDC.

(C2.) Testability:
The degree of testability can be described by:
- the ability to perceive failures, caused by malfunctions of the innovative system;
- the availability of compliant sensors with adequate detection limits to measure the errors;
- the ability to understand error causality and to take correcting measures within the required time limit. The performance ratios include mean time between failures (MTBF) and mean time to repair (MTTR).

(C3.) Controllability:
The ability to sustain system stability by efficient failure management.
The efficiency criteria expressed by:
- minimal amount of system downtime in a specified period of time;
- sufficient variety of actuating variables to compensate failures;
- temporal functional availability of the system.

(C4.) Compatibility:
The ability of the high-tech innovation to seamlessly interoperate with the existing, functionally designed modules in compliance with industrial standards and legal regulations. The degree of modularity and interface standardization has a direct impact on the quality of multidisciplinary comprehension. Modularization contributes to the reduction of complexity and reduces the risk of poor understanding.

(C5.) Implementability:
The ability to implement the high-tech innovation in the organizational environment in line with corporate culture, technological requirements, and social and environmental standards.

(C6.) Assimilability:
The ability to assimilate the high-tech innovation in the working environment, seamlessly understanding its functional behavior, and to work with the sustainable assimilation of the innovation in a specified working environment.

1.2. Innovation Acceptance

Innovation acceptance [8], [9] and innovation resistance [29] are drivers of and barriers to an economically successful market entry within George Day's "window of opportunity" [10] to conquer the market. In the case of technology innovation, the models and methods of technology acceptance may be used to evaluate the degree of acceptance of and the degree of resistance to innovative technology. This paper focuses on high-tech innovation in business-to-business (B2B) marketing.

In B2B marketing, the evaluated criteria C1 to C6 heavily influence companies` purchasing decision behavior. The case of B2B marketing requires understanding the purchasing behavior of a buying center (buying group). A buying center can be seen as a cross-functional project team [30]. Cross-functionality is a proven economic success factor in high-tech innovation and implies cooperation between different knowledge disciplines. It means a specific organizational form of multidisciplinary cooperation [30: p. 213] for problem solving, therefore also MDC in a problem-solving context. The buying center is represented by a multidisciplinary buying team, through which the required knowledge for evaluation of C1 to C6 is used for the buying decision. Each member of the buying center shows a domain-specific knowledge and experience profile. The member's profile of technology acceptance or technology resistance before and after the decision to buy or not buy reveals important information. In general this information is not completely known to the innovator in detail. The available information may be used by the innovator in designing and fine-tuning marketing communication, thereby minimizing the risk of misunderstanding or rejection of the selling offer. The articulated expression of enduring innovation resistance after a company's buying decision is a steadily growing assimilation gap (see [15]).
Technology acceptance [8], [9] is explained by two variables:
- Perceived usefulness (PU);
- Perceived ease of use (PEoU)

Since the technology acceptance/rejection decision is a buying center group decision, MDC communication to evaluate the content of the aforementioned criteria C1 to C6 requires an MDC rule system. From the semiotic viewpoint, the buying/selling process for high-tech inno-

vation turns out to be an articulated MDC process. Since the marketing process deals with buying/selling decisions, perceived usefulness (PU), perceived ease of use (PEoU), and perceived risk, the semiotic dimension of communication (syntax, semantics and pragmatics) play a decisive role in the MDC game between innovator and B2B customer (see Chapter 3: Empirical Results in Multidisciplinary Education).

1.3. Selected Semiotic Aspects of MDC

The predominant aspect of MDC in this context is MDC-data quality. The data quality approach of G. Shanks and B. Corbitt [35: p. 786] also considers the extrinsic characteristics "usefulness" and "usability." Based on this structural affinity with technology acceptance models, data quality can be defined as "fitness for purpose." From a risk analysis viewpoint, the five intrinsic data quality problems are: "incompleteness, meaninglessness, ambiguity, redundancy and incorrectness." The semiotic framework recommended in [14: p. 9] is a valid model to analyze MDC. In addition to the three semiotic layers (syntactic, semantic, pragmatic), it considers the physical layer, the empirical layer and the social layer [14: p. 54, fig. 3.5-2]. Applying this "semiotic ladder" to the analysis of MDC in the technology acceptance context enables us to distinguish different quality layers for efficient MDC.

MDC deals with content and communication partners who belong to different knowledge disciplines e.g. [29] and exchange their views on content from different disciplinary viewpoints [25: fig. 4: The relationship between disciplines and MDC]. Content diversity of terminologies implies the risk of communicative non-understanding or misunderstanding [34]. Hence members of multidisciplinary teams incur the risk of non-efficient communication. This fact raises the question "Which strategic options exist to lower the risk of non-efficient communication to the MDC partners?"
There are several strategic options:

- **Option A**: "Learn how to go into detail in a non-familiar knowledge discipline"
  Option A is time-consuming and not applicable in the context of high-tech innovation marketing because of scarce time resources within the sub-goal "minimizing time to market!" Taking into account the aspect of competitiveness requires highly specified, multidisciplinary knowledge to convince the early customer to trust in an innovative technology.

- **Option B:** "Tentative acceptance of discipline-black boxes"
  Option B is less time-consuming but entails:
  (a): The risk of partial non-understanding caused by different semiotic lacks (see [16]: multi-functionality implies multidisciplinary; [43: chapters 3, 4], [44]: "misunderstanding," "accidental relevance" of "cautiously optimistic hearer");
  (b): The chance to focus the communication process on the pragmatic communication target by applying the cognitive principle of relevance (see [44]).
  (c): The principle of "accepted black boxes": This communication option entails the temporary admittance of so-called syntactic, semantic and pragmatic black boxes for all communication partners in the MDC process. Those semiotic parts that are pragmatically considered to have less relevance at a specific point in time are suppressed and treated as "accepted pragmatic black boxes". Knowledge-based engineering approaches (e.g. [7: p. 7340, Design and Engineering Engine] seem to offer a viable framework for MDC and multidisciplinary engineering. The importance of tacit knowledge influence on communication efficiency varies depending on the granularity of distinguishing knowledge disciplines. It seems that the finer the granularity, the higher the knowledge affinity between different but similar disciplines, but this also implies lesser influence of tacit knowledge. Tacit knowledge is only a problem if it is not shared between the communication partners, but nevertheless referenced in communication. Fine granularity in distinguishing disciplines generally will ensure that tacit knowledge is shared within a discipline. For MDC tacit knowledge must be enclosed into the black boxes in order to avoid the problem.

- **Option C**: "Decomposition and modular MDC":
  Decomposition reduces complexity and therefore increases comprehensibility. We make the distinction between decomposition and modularity [16: p. 5]: "modular systems differ from decomposable systems; while decomposability requires a full decomposition of a complex system into subsystems, modularity requires a system architecture in which subsystems are still connected via interface standards." We consider the design structure matrix (DSM) approach [3: p. 295] a viable approach to model information flow and communication tasks of multidisciplinary teams in a decomposable, modular organizational environment. The application of the DSM approach to multidisciplinary team building shows sustainable improvement of MDC [3: p. 296: "simply building the Design Structure Matrix encourages disparate people and teams to increase mutual awareness and understanding"]. The selection of modularization criteria is driven by the below-mentioned cognitive and communicative principles of relevance in semiotic research. A modular MDC is communicatively efficient if each module:
  a) applies the principle of cognitive and communicative relevance;
  b) supports the communication via interface standards between the modules.
  There is a strong relation between principles of relevance and multi-criteria decision making. The buying decision for a high-tech innovation is a multi-objective, hence multi-criteria decision task to find a

non-empty compromise set over partially overlapping preferences of the participating MD team members (deciders, buyers, users, influencers, gatekeepers).
Option C reduces complexity by decomposing the MDC object into modules, and by applying the principles of cognitive and communicative relevance to the MDC-process. Modularity lowers the risk of misunderstanding and reduces complexity by offering oversight in multidisciplinary domains. The cognitive principle of relevance [44: definition (15): "Human cognition tends to be geared to the maximization of relevance"] and the communicative principle of relevance [44: definition (18): "Every utterance (or other act of overt communication) communicates a presumption of its own optimal relevance"], which are applied by all MDC partners, result in a pragmatically controlled and efficient MDC process. In an ongoing MDC process the degree of relevance is time-wise non-stationary. It may shift when formerly accepted black boxes transform into currently highly relevant and understood white boxes, requiring additional semiotic capacity of the involved MDC team members. The time-wise, non-stationary attributes of a multi-stage communication process for an entrepreneurial decision of market entry with an innovative high-tech product consist of an increasingly specified degree of precision of questions and answers. However, a non-stationary team structure requires a three-dimensional approach for DMS application [3, p. 295]. Matrix of semiotic dimensions of MDC applied to an example of electrical energy storage using Vanadium Redox Flow Battery Technology:

Table 1: Example of semiotic dimensions in the Electrical Energy Storing Development Project

Electrical Energy Storage Innovation Project				
Multidisciplinary Know How		Electrochemistry	Electronics & electrical engineering	Innovation Marketing
Know How Type		A	B , C	D
Semiotic dimension	Syntactics	Stoichiometry	IC-Logic, rule set of electrical engineering, non-linear charging rules	Market response function model, social percolation
	Semantics	V_2O_5: Divanadium pentoxide; electrolyte concentration of sulfur acid, graphite surface attributes, fluid dynamics, etc.	Charging/discharging, electrolyte lifetime, heating behavior, environmental conditions (external temperature, risk of corrosion)	TAM,[2] willingness to pay, price model, business model,
	Pragmatics	Self-discharge => Min.! Power density 500mW/ cm^3	Availability > 99,99% Charging time < 3 hrs. DoD[1] > x%	Optimize ROI! Optimize ROS! Maximize PU![3] Maximize PEoU![4]
		How to design MDC?		
		How to cope with mutual goal conflicts?		

There is a trade-off between mutual personal trust between MDC partners and the required degree of semantic specification. The higher the mutual trust the lower the perceived semiotic uncertainties.

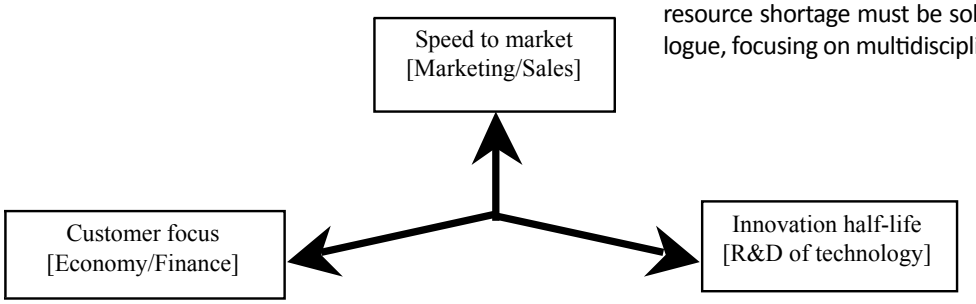
Tacit knowledge [28] cannot easily be communicated between individuals. Consequently, when black boxes need to be opened during the MDC process (thus becoming white boxes), tacit knowledge gets exposed to other members of the MD team. Given the usual lack of time, tacit knowledge needs to be accepted due to personal trust. The validity of the issue to be decided may never be questioned. Real semiotic uncertainties may be much larger than the perceived uncertainties. Additional risks, which cannot be discussed here in detail, emanate from tacit knowledge during the phase of transfer of knowledge to the customer. Moreover, the communication process itself depends, in addition to a formal framework, as explained above, on communication skills, which are a prime example of tacit knowledge.

[1] Degree of discharge
[2] Technology acceptance model
[3] Perceived usefulness
[4] Perceived ease of use

2. DECISION CRITERIA FOR MARKET ENTRY OF HIGH TECH INNOVATION

According to Chakravaty [6], the management decisions for market entry in high-tech marketing are positioned in a three-dimensional decision space:

Figure 1. Decision Space of Innovation Marketing



Between these three dimensions trade-offs exist:

- The higher the speed to market (= the lower the time to market), the lower the innovation lead.
- The higher the speed to market (= the lower the time to market), the lower the customer focus.
- The relation between customer focus and innovation lead is ambiguous and depends on the type of customer and on the half-life of the innovation lead [19]. If the customer is a launching customer who is actively involved with the extent of the innovation lead, then there exists a complementary relation between usefulness of innovation, as perceived by the launching customer, and the innovation lead of the supplier.

The entanglement of technology, marketing and finance is easily shown by the management ratios expressing the decision stress for market entry projects in innovative high-tech markets.
We distinguish, in conformance with the dimensionality of the decision space, three ratios of resource capacity. Each ratio measures the relation between resource requirement to attain the project (sub-) goals and the resource availability. If this ratio >1, then it signals a shortage of capacity, which can be interpreted as a symptom of stress with regard to goal attainment:

(1) Break-even time to market (BE-TTM) =
[Required TTM for BE / Available TTM for BE]:
If BE-TTM >1
=> Break-even time to market stress

(2) Competitive innovation lead (R&D-CIL):
[Required time for CIL / Available time for CIL]:
If R&D-CIL > 1
=> Innovation half-life stress

(3) Profitability of innovation return on sales (ROS-INN):
[Required ROS-INN / Achievable ROS-INN]:
If ROS-INN >1
=> Profitability stress

The entanglement of the different knowledge disciplines is obvious for each ratio. Enumerator and denominator show the amount of time of technical, commercial, legal or other resources ("man-days," "man-months") that are the required (enumerator) or the available (denominator) input for goal attainment. Causal relations for these industrial ratios have multidisciplinary origin. Hence the management communication process in this context shows a quite complex multidisciplinary structure. The conflicts in goal attainment caused by resource shortage must be solved by a multidisciplinary dialogue, focusing on multidisciplinary resource usage.

2.1. Marketing Test Bed: A Multidisciplinary, Experimental Approach to Market Entry of High-Tech Innovation

In an ongoing research project [13] on high-tech innovation that focuses on "how to support market entry through efficient marketing mix measures," we develop an experimental approach by setting up "marketing test-beds (MTBs)." MTB is a methodical support for market entry of innovative high-tech products or services [20]. It differs from a technical test bed (TTB) [e.g. 2] by focusing on customers' technology and product acceptance in terms of PU and PEoU, willingness to pay (WtP), and formation of marketing mix per market segment. As an experimental approach in B2B marketing, MTB supports the critical phase of market entry in innovation marketing, based on qualitative market research procedures such as problem-centered interviews and focus groups. Only a few MTBs are described, mostly for mobile communication products and services (see, for example, [39]). A comprehensive approach of MTB is given in [21]. In the "Cross-Border Hi-Tech Center" research project [13], different aspects of MTBs for high-tech innovation [27] are analyzed and validated using real examples:

Example 1: MTB for medical care robot for post-operation rehabilitation: testing a continuous compliant passive motion device for shoulder rehabilitation.
Example 2: MTB for hazard detection robot in fire-fighting and underground coal mining.
Example 3: MTB for auto-adaptive temperature regulation by phase change material in building materials applications.
Example 4: MTB for collaborative computing software in knowledge management.

All four MTBs are characterized by a challenging need for efficient MDC [40]. Looking at MDC in greater detail, one finds a hierarchy of disciplines and sub-disciplines of

knowledge within natural science, socioeconomic science for example [4: p. 10, with MD discussion] and algorithmic science [41]. A convincing example of multidisciplinary understanding in teamwork can be found in [42: p. 3]: "multidisciplinary team-working requires mutual understanding between professions. Good communication is only one aspect of multidisciplinary interaction." The following features of MTB show the different aspects compared with TTBs:

- Innovation near to market: "functional proof of concept prototype stage";
- Market segmentation criteria, e.g. technological affinity, strain of bottleneck ("economic strain due to lost opportunity to increase productivity"), but also [5] for mobile communication;
- Type of scale: qualitative vs. quantitative market research;
- Segment-focused specification of marketing mix (McCarthy's 4Ps).

The MTB configuration uses community-based innovation (CBI) and open innovation (OI) approaches [19], and applies technology acceptance/resistance models [15], with PU and PEoU [8], [9], as key variables of the respective technology. In a follow-up MTB stage, the applicability of social anti-percolation [12] as a possible model for technology resistance will be under study.

From the viewpoint of European Network of Living Labs (ENoLL) [32], MTBs can play an important role as a multidisciplinary experimental approach of testing the efficiency of community-based innovation and user-driven innovation as manifestation of open innovation, as well as being a feasible source of experimentally controlled MDC.

3. THE CASE FOR MULTIDISCIPLINARY ACADEMIC EDUCATION

3.1. The Starting Point

Universities originally covered all fields of knowledge and were usually structured into four faculties. With the rapid expansion of knowledge starting in the 18th century, this system came to be seen as inadequate. Specialized universities were founded, devoted to subjects such as economics, technology, agriculture or mining.

In some Central and Eastern European (CEE) countries, universities have moved from their traditional monothematic orientation towards a polythematic system that integrates natural science, technological science and socioeconomic science.

Under monothematic-oriented academic education we identify natural science- and human science-oriented universities (Comenius University in Bratislava, Charles University in Prague, and the University of Vienna, even if these universities have a classic structure, covering many fields of science); technological universities (the Slovak University of Technology in Bratislava, the Czech Technical University in Prague, and the Vienna University of Technology); and economics- and social science-oriented universities (the Economic University in Bratislava, the University of Economics in Prague, and the Vienna University of Economics and Business).

Other CEE countries, namely Hungary, Poland, and Slovenia, now have multidisciplinary universities offering a combination of natural and socioeconomic science. For example, at the Budapest University of Technology and Economics, formerly known as the Technical University of Budapest, which dates back to 1782, the Faculty of Natural Sciences and the Faculty of Economic and Social Sciences were established in 1998. Slovenia's University of Ljubljana comprises six different faculties: art, economics, philosophy, medicine, technology, and natural science.

3.2. Innovation Marketing Aspects

Product and technology innovation is the driving force behind current socioeconomic trends, national economic growth and increased competition between enterprises. Exploitation of innovation for economic growth requires the ongoing education of new experts as well as leading-edge management methods that have an impact on the reform of academic education and research. From the viewpoint of industry, the focus of academic education [11] requires multidisciplinary design by applying rules of multidisciplinary teamwork [23], proactive project design and international networking. These trends necessitate the generation of organizational units in the academic environment that can control current social and business processes and stimulate new technological trends and their commercial implementation. This raises the question of whether the conventional catalog of knowledge disciplines at a monothematic university correlates with current business rules and expectations regarding the qualifications of new alumni. Business and commercial units will increasingly work with cross-disciplinary [31] and multidisciplinary management methods [46], professionally mixed teams, and projects [24] that focus on innovative business process concepts. Academic education systems must reflect these trends, which create new challenges for academic structures.

3.3. Multidisciplinary Teaching: The New Challenge

Although new teaching methods allow by default the didactic application of teamwork within the learning process (e.g. project seminar or laboratory studies), a new problem arises when searching for multidisciplinary solutions in the entrepreneurial context. Marketing education itself requires multidisciplinary teaching skills that cover different knowledge domains such as psychology, communication, art, mathematics and logic. Even so, marketing today is regarded as mono-disciplinary knowledge. Yet under closer examination marketing is not such an isolated mono-discipline. The conventional 4P marketing shows explicit overlapping with other knowledge disciplines, primarily with information and communication technology (ICT) [22], social media, cloud computing. Moreover multidisciplinary trends like on-line

marketing, viral marketing, mobile marketing and neuromarketing have emerged. Marketing experts now have to be familiar with much more than economics.

This emerging reality presents a challenge for a monothematic-oriented economic university which, given the demand for real business marketing solutions, faces a structural mismatch due to self-imposed intellectual limitations on mono-disciplinary knowledge. Although the professional background of the teaching staff may be partially multidisciplinary, the most serious problem is that the students probably will not be able to form a multidisciplinary working team. In that case a multidisciplinary education would be confined to theoretical, pencil-and-paper case studies rather than reflecting business reality, and produces inadequately qualified graduates. In addition to explicit knowledge communicated to students, tacit knowledge is formed in seminars, laboratory exercises, etc. Tacit knowledge consists mainly of skills, such as the optimal way to approach a problem or communicate in a professional group. Therefore, the tacit knowledge needed to cooperate efficiently in a multidisciplinary group can only be formed if multidisciplinary group work occurs in the course of the curriculum.

We recognize the fact that economic disciplines, particularly in management and business administration, marketing and innovation management, will increasingly have to interface with applied natural science. While many production plant managers claim to be able to turn an engineer into a marketing expert but not vice versa, such transformations cannot be the overall objective of a multidisciplinary education. Multidisciplinary education must be geared to preparing professionally trained students to create and work in and with multidisciplinary teams. The creation of such teams, which are capable of solving multidisciplinary tasks and communicating the solutions to all stakeholders, is the proper target of multidisciplinary education [41].

It is a tough job to create a multidisciplinary education scheme [40] under the current restrictions of monothematic-oriented universities and curricula. We can look enviously across the ocean to Mexico's Tecnologico de Monterrey (TMU), which is offering a standard education scheme under which attractive projects are successfully assigned to multidisciplinary student teams. At a joint workshop with the Economic University in Bratislava a group of visitors from the TMU presented teaching methods for project management and innovation management. The teacher assigns a project for the development of a new product to a team of students who come from marketing, IT, design and mechatronics. If the multidisciplinary team completes the task within six semester-weeks, its next project is to create a business model for the newly developed product.

A similar working design is applied by the new start-up teams, participating in a Start-Up contest offered by Plug-and-Play Ltd. in California. The teams design an ICT product with a realistic business model and defend their results in a five-minute pitch to a jury. The success of a pitch is based on efficient analytics, solid IT and marketing expertise, and excellent training in pitch communication. For the past five years a similar education design has been applied by TU Wien and WU Wien for technology marketing.

Common introductory education for several or all university curricula, such as the 'tronc commune' at France's 'grands écoles', is another approach aimed at narrowing the MD communication gap.

3.4. First Results with Multidisciplinary Teaching at the University of Economics in Bratislava

We have carried out several experimental projects at the University of Economics in Bratislava (EUBA) focused on multidisciplinary design in academic teaching. Two of the projects are described below:

3.4.1. The "Creative Business" Project

The project brought together EUBA marketing students and design students from the Academy of Applied Arts Bratislava (VSVU), who were assigned to revitalize a health and wellness village in Slovakia [42: p. 2]. This is a problem-solving approach starting from two diametrical viewpoints – art and business – with a very clear assignment from the client: "What measures shall be planned and carried out by the local village administration to ensure the wellness services for new target groups?" During the one-year process, both the advantages of multidisciplinary solutions and significant organizational obstacles became clear.

- The advantages lay in the solution procedure: Marketing students analyzed the market potential of the new target group and defined the qualitative attributes and needs for modern wellness services. Based on these results the design students added design concepts of new furnishings, architectural designs for the wellness village, and an internal information system. These design concepts generated an added value because they focused on the needs profile for the new target group which had been worked out by the marketing students. This example shows a successful application of the variables PU and PEoU for health and wellness services. So far the project was successful.
- When it came to the project implementation, several obstacles arose as a result of the separated university structure:

  a) Syntax/semantics. We found that students from the two universities used different terminology for problem solving, and this caused misunderstandings with the local wellness administration at the final presentation. The client's management used its own terminology, which led to the creation of a "communication dictionary" tool for bridging different semantic content and pragmatic views [37]. For a possible approach, see [33: p. 62].

  b) Pragmatics. Design students produced their own solutions without "how to put into reality" implementation

plans and relied on the marketing students. The decisive impact came from the available management budget. As a result, some of the design concepts were not applicable due to higher quality levels of material or shortage of regionally available supply of services (missing material, unavailable technology or resources). This reflects the physical and social layer of data quality dimensions (see Chapter 1.3).

c) Timing. Each university has its own time schedule for diploma work, which hinders the synchronization of the students' team work. Some work sections require synchronously working in parallel, while other work sections require serially shifted execution of work. An important organizational and legal barrier is the legal restriction, that a diploma work can be presented and defended only by one student, thus formation of teams impeded and depends on the modularity of the project order.

3.4.2. Multidisciplinary Interegio Project: A Picture as a Means of Communication

The multidisciplinary project "Interegio" was carried out by architecture students and economics students to solve the reconstructing of communal infrastructures. In this case the multidisciplinary approach had a very high impact.

Local councils show a complex formation of opinion. Representatives of different political parties predominantly defend their own political concerns or even private interests, both of which reduce the chances of finding a political compromise. Whenever we participated with our project management students in communal assembly meetings, we were always confronted with a group of hostile council members who tended to quarrel over a virtual problem due to the lack of a realistic visualization. To accomplish anything in this environment we had to use a new medium for communication [17: p, 9]: "one picture instead of thousands of words." We tasked the architecture students with developing sketches of possible alternatives for the reconstruction work. At the next communal assembly meeting all the hostile council members were peacefully united because they were confronted with practical pictures. It was no longer about defending political interests. Instead, the discussion focused on "Which of the two pictures is the right solution for the wellness village?" The subsequent steps for implementation were much easier and faster because the improvement and further development of the visible, illustrated alternative was the goal. The picture proved to be a highly efficient communication device for solving conflicts, and it also facilitated the budgetary planning argumentation and the allocation of funding in 25 villages.

4. CONCLUSION

4.1. Multidisciplinary Education

We base our future conclusions on our numerous experiments with multidisciplinary student teams. We connect the focus of a marketing curriculum with technology-oriented teaching content that would offer our future marketing experts a suitable and realistic environment. To achieve this aim we developed a structure of technical and professional "theme clubs" where the matching between innovation and marketing can take place. The following theme clubs were set up in the summer 2012 semester at the Faculty of Commerce at the University of Economics in Bratislava:

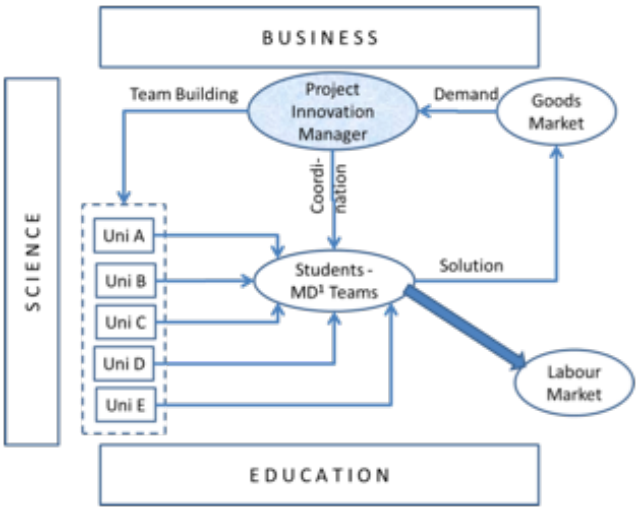
- Pharmarket Club. Includes pharmacological and medical R&D of products and technologies, health technology assessment, and micromarketing studies for improved analysis of consumer behavior of prophylactic and therapeutic products and services.
- Agro-bio Club. Sets up a special marketing test bed for B2C enterprises by developing a procedure for high-speed sensor-based product analysis of innovations in the food and nutrition sector, as well as marketing studies for a majority of innovations in the agricultural sector, e.g. plant nutrition and plant-protecting agents.
- Online Club. A platform for further development and studies of online marketing methods, hardware and software innovation, mobile applications and robotic-oriented studies.
- Mat-in Club. For marketing studies of innovative materials predominantly in the B2B market as automotive, electric product and construction material.

The club structure offers an open meeting space where experts from the different disciplines can come together and help one another surmount the inherited barriers for MDC in the diversified Slovak university landscape. The next step will be the implementation of multidisciplinary curricula for innovation and marketing at the University of Economics in Bratislava.

4.2 Requirements of a Multidisciplinary Network of Science – Education – Business

The network of science – education – business requires multidisciplinary players for generating an added value to MD Innovation Management. The chart below presents one MD approach as a flow system between science, education and business:

Fig. 2 Flow System of Science, Education and Business



The first empirical results in MD education in Slovakia and comparable results with Austrian MD academic education at the TU-Wien and WU-Wien, as well as at Campus 02 in Graz/ Austria show the importance of MD projects in the innovation marketing context. The project innovation manager (see Fig.2) is the most important interface between Business, Science and Education.

There are weak signals that efficiency in MDC can be achieved by applying at least two of the three MDC options: "accepted black boxes" (Option B) by applying the cognitive principle of relevance, and "modular MDC by applying a design structure matrix" (Option C). Future research will show the applicability of these efficiency criteria in the context of high-tech innovation marketing.

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ETHICAL CONSUMER BEHAVIOUR IN MARKETING

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ABSTRACT

Over the past few decades, marketing theory and practice have paid increasing attention to the phenomenon of ethical consumer behaviour. There is no doubt that the modern consumers are sophisticated and prepared for different types of actions to protect rights which are considered to belong to them. On the other hand, numerous reports on sales trends of so-called ethical products and services do not record significant growth and participation in the total consumption. As this issue still contains many controversies as to whether declarative nature of ethical demands of consumers in the market are supported with their actual behaviour and purchase decisions, this article attempts to point out some directions of thinking and future research, based on experience from the Republic of Serbia.

KEYWORDS: Ethics, ethical consumer, consumer behaviour, consumer activism

1. INTRODUCTION

Turbulent changes of technological, economic, political, legal, sociologic and cultural nature, which continually occur in the market on a daily basis, result in significant changes in consumer behaviour. Regardless of how hard theory and the practice of marketing try to proactively generate these changes, they are still faced with the necessity of constant adaptation to the changed business environment, both in terms of application of their tools, methods and techniques, and in terms of their own definitions.

The evolution of marketing definitions (Brenkert, 2011, p. 25) moved back and forth between two approaches. The first one considered marketing solely as a business concept, i.e. as a vast number of interrelated business activities involved in delivering goods and services to the consumers from the manufacturer – specifically, activities related to distribution, promotion and transfer of property. However, the practice has identified this approach as too constricted, henceforth came the development of the second – general approach to marketing, as the application of marketing functions and techniques in both economic (commercial) and social (non-commercial) processes. The famous Phillip Kotler, who is considered to be one of the creators of this approach, argues that the essence of marketing concept is the transaction, i.e. the exchange of value between two parties, whereas value is not limited only to money, goods and services (Brenkert, 2011, p. 25). With the adoption of such approach to marketing, it is no longer distinguished by merely economic exchanges that are motivated solely by profit, but by a wide array of transactions in which different values are transferred from one party to another, for the purpose of satisfying more than just economic goals, needs and wants.

Within this broad general understanding of marketing, in parallel with the development of consumerism as a worldwide consumer movement, theorists and practitioners became interested in studying the phenomenon of ethical consumer and his behaviour.

Numerous experts in the field of social and humanitarian sciences believe that consumerism triumphed in the ideological battle of the 20th century, ahead of democracy and capitalism, and as such, represents the fundamental characteristic of modern societies and nations (Flavin, 2004, p. xvii). Consumerism can be defined as a social movement seeking to augment the rights and powers of consumers and buyers in relation to manufacturers and sellers (Kotler, 2000). Consumerism proved to be equally useful to an individual consumer and the economy and state as a whole. Growing interest in issues and practical application of marketing ethics is the outcome of the

worldwide development of consumerism. Marketing ethics are concerned with the moral assessment of corporate and individual marketing-related behaviour in commercial activities. In market economies, corporate marketing behaviour is strongly associated with consumer behaviour; therefore, many social critics believe that every enterprise has the consumers it deserves and vice versa (Brinkmann & Peattie, 2008, p. 22).

Over the past years, there has been a proliferation of research on ethical consumer behaviour, which has, on one hand, progressively been surpassing solely cultural aspects of observation and become more multidisciplinary in its nature on the other. Researchers have put significant efforts into identifying the model of consumers' ethical behaviour, so that it could be fully understood, predicted and influenced. Majority of these models are based on Ajzen's Theory of Planned Behaviour (TPB) (Carrington, Neville & Whithwell, 2010, p. 139), which states that purchase intentions of ethical consumers are motivated and generated by personal value systems, moral norms, intrapersonal ethics and other similar factors. In reality, however, one inconsistency with the above stated stands out. Although there is a noticeable rise in consumers' interest and demand for ethical products and services for the reason that their overall behaviour is governed by ethical factors to a greater extent, it is not followed by the actual purchase of demanded products and services.

Since the actual consumer behaviour in purchasing does not change with the same intensity as their intended behaviour, there is a so-called gap in ethical consumer behaviour. Hence, the goals of this article can be stated as follows:

- to research and highlight shortcomings of the previous research on the phenomenon of ethical consumer behaviour
- to raise comprehension of incongruities between actual and intended ethical consumer behaviour
- to highlight some of possible future challenges in researching ethical aspects of consumer behaviour
- This paper is intended to invite scientists for further research and discussion in this area

2. CONSUMER ETHICS AND ETHICAL CONSUMPTION

Among many definitions of the term consumer ethics, one stands out for its simplicity and comprehensiveness. It states that consumer ethics is "the moral principles and standards that guide behaviour of individuals or groups as they obtain and dispose of goods and services" (Muncy & Vitell, 1992, p. 297). Consumer ethics is basically deals with rectitude or incorrectness of certain actions of individuals or groups as potential or actual customers, during the search for and purchase of products and services.

Any debate on consumer ethics necessitates delineating consumers' ethical conduct guided by respect for moral principles of good one the one hand and rectitude and consumer ethics that rooted in consumers' personal interests, that is, the calculation of benefits and costs from the prospective application of moral principles on the other. Many authors highlight the 'morality vs. prudence' dilemma as significant, because they believe that a motive for an action is essential for distinguishing an action as ethical, and that this can be applied to both enterprises and individual consumers (Beauchamp, Bowie, Arnold, 2009, page 3). Essentially, this dilemma can be observed in the light of the everlasting debate on the theory of science and ethics between the consequentialists and deontologists.

Research into ethics in consumer behaviour is further burdened with problems of divergence in use and meanings of terms such as 'ethical behaviour', 'ethical shopping' and 'ethical consumption'. Since many studies were rated as overly subjective concerning interpretations by the authors, most of them however agree that the term 'ethical consumer behaviour' is the most extensive one, and that it encompasses the following two. Ethical consumer behaviour can be interpreted as "decision-making, purchases and other consumption experiences that are affected by the consumer's ethical concerns" (Bray, Johns & Kilburn, 2011, p. 597).

Analogous to this definition, 'ethical consumption' can be understood as "the purchase and use of a products and services chosen freely by an individual consumer that concern a certain ethical issue, such as human rights, labour conditions, animal well-being, environment, etc." (De Pelsmacker, Driesen & Rayp, 2005, p. 363). Some forms of ethical consumption contribute to the improvement of natural environment, while others are focused on benefits for people.

Since the first decades of the 21st century can be distinguished by the growing significance of the application of ethics, not only in business, but also in consumers behaviour and purchases, it is necessary to highlight the fact that the term 'ethical consumption' relates to a wide array of activities – from ethical investments, that is, ethically motivated purchase of shares securities, to purchases of fair-trade products and organized consumer boycotts. Despite being very complex and diverse, ethical consumption can be classified into five groups shown in Table 1.

Table 1. Types of ethical consumption

Type:	Product-oriented purchasing	Company-oriented purchasing
BOYCOTTS	Aerosols; timber from unsustainable forestry	Philip Morris, Nike, Nestle
POSITIVE BUYING	Fair-Trade mark; Blue Angel Eco label; Green Apple	Body Shop against animal testing
FULLY SCREENED-ethical ratings across whole product area	Green Consumers Guide	Ethical screening of investments
RELATIONSHIP PURCHASING-consumers seek to educate sellers about their ethical needs	Community Supported Agriculture USA, UK	Individual consumer building relationship with shopkeepers
ANTICONSUMERISM / SUSTAINABLE CONSUMERISM	Avoiding unsustainable products (cars)	Adbusters

Source: Harrison R., Newholm T. & Shaw D., THE ETHICAL CONSUMER, London: Sage Publications Ltd., 2005, p 3.

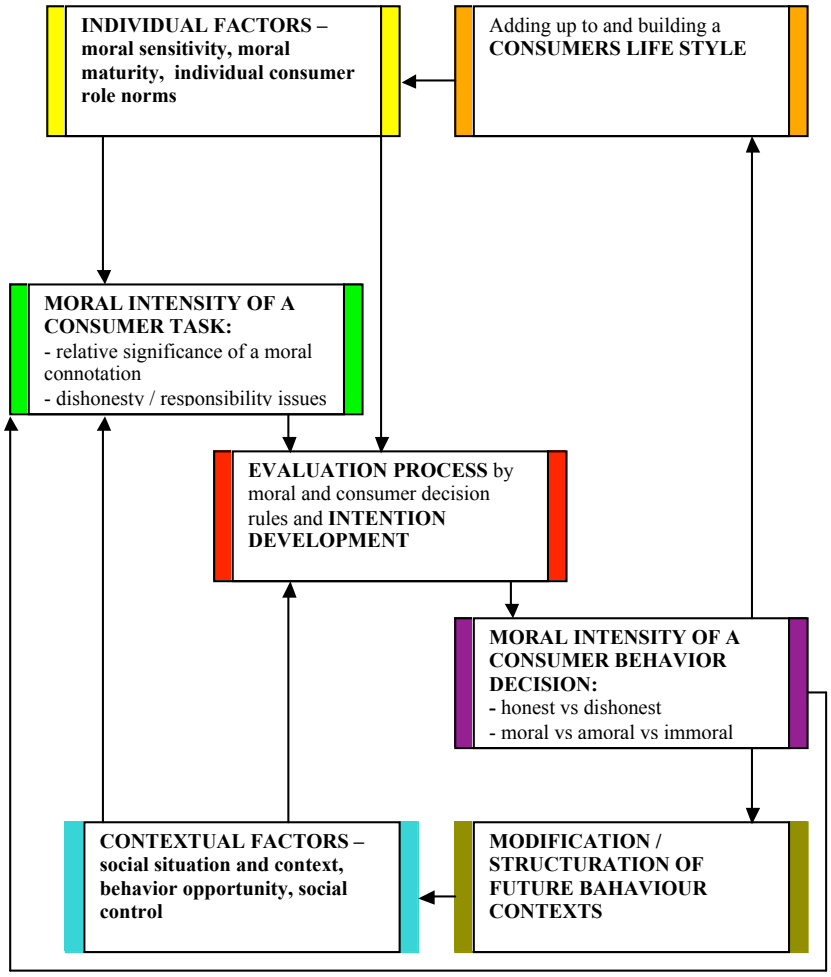
Many researchers into ethics of consumer behaviour invested substantial efforts into their attempts to identify causal factors which influenced the proliferation of ethical consumer behaviour and the increase of ethical consumption worldwide. Harrison, Newholm & Shaw (2005, p. 56) provided the most comprehensive overview, where they identified seven complex factors that are more or less correlated:

1. Globalisation of the markets and the weakening of national governments – there has been a rapid globalisation of markets in the second half of the twentieth century. One consequence of this is that the ability of national governments to regulate company behaviour has weakened. This weakening occurs: a) directly – through ceding rights to regulate markets to supranational institutions (WTO, EU, NAFTA); b) indirectly – through competitive pressures of FDI – governments offering fewer regulations to be able to attract greater levels of capital investments.
2. The rise of transnational corporations – profit seeking businesses have grown to become dominant global institutions, with financial resources far exceeding those of national governments in many instances. Despite their great financial power, those companies with brands in consumer markets are both highly visible and vulnerable to attacks from organisations objecting to particular activities.
3. The rise of single-issue pressure groups – in the past, analysts viewed pressure groups as seeking primarily to promote their members interests. Such groups have been described using variety of terms including 'cause groups', 'public interests groups', 'promotional pressure groups', 'NGOs', 'expressive interest groups', and usually 'single-issue pressure groups'. These groups are trying to pursuit quality of life concerns as well as to address new issues resulting from globalisation and technological change.
4. Technological change – this factor is moving at its own pace, independent of other factors. The introduction of powerful new technologies can yield enormous benefits and, at the same time, threaten social relationships, environments, animal welfare and human health. In modern societies, it is quite right that public debate should focus on the extent to which new technologies benefits the common good. And where technologies-such as human cloning-are found to be generally unacceptable, it is inevitable that societies will reject and prohibit their use.
5. A shift in market power towards consumers – it has been commonly recognised that there has been a tilt in market power from producer to consumer over the last three decades or so. Ironically, perhaps, the very forces of economic globalisation and deregulation which are disempowering national governments have significantly increased choice and competition, which, in turn, is shifting the balance of power away from companies toward consumers. Digital technology also plays a part in accelerating this power shift by providing consumers with comprehensive and instantly available information about products, services, companies, prices etc.
6. The effectiveness of market campaigns – one reason for the increase in market campaigning has been its demonstrable effectiveness in achieving campaign goals. Pressure groups can observe other groups wresting significant concessions from corporations and can identify the potential for similar actions in their sphere of interest. The modern consumer is primarily characterized as a well educated and informed (Žnideršić, Marić, 2007., pg. 211.).
7. The corporate accountability movement – the corporate accountability movement has not only been able to share information quickly on specific campaigns against specific companies, but also to marshal and develop powerful intellectual arguments for corporate responsibility generally. All activities within the

corporate accountability movement help to provide an intellectual framework for ethical consumer action and further help to encourage its use.

Every study of the phenomenon of consumer ethics and ethical behaviour involves proposing various models of ethical consumer behaviour and decision-making processes, within which effects of many factors, such as freedom of choice, access and flow of information, criteria for the selection, lifestyle, etc. are explained. One of the more complex and comprehensive models, proposed by Brinkmann & Peattie (2008, p. 25) is shown in Figure 1.

Figure 1. Model of ethical consumer behaviour



Source: Brinkmann J. & Peattie K., CONSUMERS ETHICS RESEARCH: REFRAMING THE DEBATE ABOUT CONSUMPTION FOR GOOD, EJBO Electronic Journal of Business Ethics and Organization Studies 2008, Vol. 13. No 1, p 25

The key problem that burdens the researchers into the phenomenon of ethical consumer behaviour and ethical consumption does not lie entirely in providing an answer to the question: "Is ethical consumption, that is, consumption of goods and services recognized as ethical in rise, stagnation or decline?" The answer to this question is very simple and positive. It is furthermore supported by very specific figures from the various reports. One of the most comprehensive and most frequently analyzed reports on the development of ethical consumption is definitely The Ethical Consumerism Report, which has been produced and published since 1990 by two highly credible institutions – The Co-operative Group and ECRA (Ethical Consumer Research Association). According to their report for 2011, some of the most interesting facts concerning the United Kingdom market, as the representative sample, are:

- Despite the prevailing economic crisis, sales of ethical products and services continue to rise at a yearly rate of 9%;
- Average ethical consumption per household has risen from 291£ in 2000 to 868£ in 2010;
- The following figures illustrate the trends concerning five basic categories of products and services observed in the report:
  - Food and drinks – increase in consumption by 5.07%, within which recorded sales of products labelled 'fair-trade' exhibits the biggest rise (36%), while sales of organic food continues to decline by 10% for three consecutive years;
  - Environmentally friendly dwelling, the so-called Green Home – increase in consumption by 13.91%, with the decline in consumption of rechargeable batteries by 17.07%;
  - Eco Transport – increase in consumption by 17.87%, with the decline in use of public transportation by 6.96%, but an increase in purchases of ecological vehicles by 128.65%;
  - Personal ethical products – increase in consumption by 7.76%, with a decline in consumption of clothing labelled as ethical of 7.76% and a decline in consumption of clothing fabricated from recycled materials by 17.05%;

- Ethical Money – recorded growth in consumption by 9.29%,
- Despite all positive trends regarding the increase in ethical consumption, its participation in overall consumption remains very low, just about 6%.

What analysts of ethical consumption find worrying, that is, the key problem of its slow growth rests in the trends in the behaviour of consumers, who, as is noted in the Report, reduce their activities regarding:

- recycling activities,
- providing recommendations and positive word-of-mouth for companies that operate in accordance with ethical principles,
- stagnation in choosing products and services based on criteria concerning corporate ethical reputation,
- stagnation regarding the feel of guilt for purchasing unethical products or services.

Such trends in ethical consumer behaviour can be aptly explained by the '30:3 phenomenon' (Bray, Johns & Kilburn, 2011, p. 597), which is related to the fact that 30% of consumers declare themselves as ethically-motivated shoppers, while 'fair-trade' labelled products make up just 3% of overall consumption. It is this incongruity between intentions and actual purchases that represents the most interesting topic for the theory and practice of marketing, regarding the application of ethics in consumption.

3. GAP BETWEEN THE ETHICAL PURCHASE INTENTIONS AND ACTUAL BUYING BEHAVIOUR

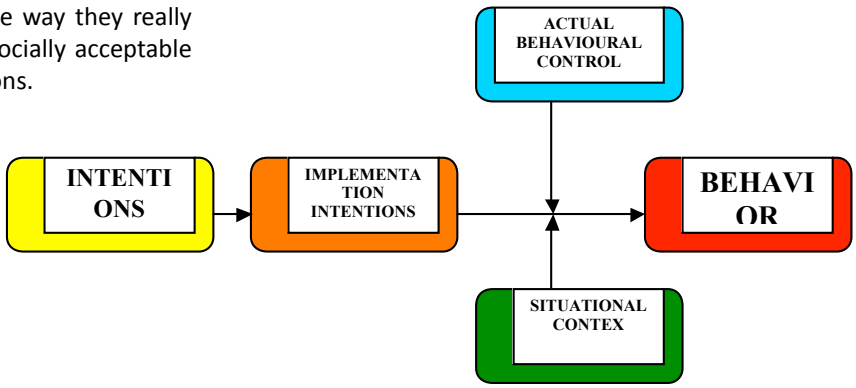
Inconsistencies between declarative statements on purchase intentions and actual purchasing decisions and choices have drawn attention of numerous researchers from various fields, such as marketing, psychology, sociology, and of course, ethics. Companies that experience repercussions of any inconsistencies between the behaviour of their consumers and their statements during marketing research activities, in terms of business performance, increase in sales and market growth, find this phenomenon particularly interesting.

A situation where actual consumer behaviour differs from their previously stated intentions is referred to as 'the attitude-behaviour gap', 'the intentions-behaviour gap', or 'the word-deed gap' in professional literature. (Carrington, Neville & Whitwell, 2010, p. 141). Explanation of the origin of the behaviour gap is based on two contemplations (De Pelsmacker, Driesen & Rayp, 2005, p. 364). The first one states that consumers' attitudes and perceptions unquestionably determine their intentions and purchase behaviour. Accordingly, a certain number of ethical behaviour models were proposed. The second states that it has been confirmed on numerous occasions that attitudes and statements on consumer intentions represent very unreliable sources for predicting their actual purchases, especially in the domain of social marketing. The latter is an outcome of the so-called 'consumer dissonance', which reflects the situation where consumers do not make statements on their behaviour, preferences or intentions the way they really feel, but the way they consider to be socially acceptable and presents themselves as better persons.

At present, an increasing number of consumers refuse to purchase products with any unethical attributes. However, most consumers in the market make their purchase decisions based on the overall analysis of all relevant product qualities, not just ethical. Price, quality, availability, brand, service, terms of payment etc. are still dominant factors in deciding on a purchase, compared to ethical factors. Sometimes, the reasons for not purchasing ethical products, although that was the original intention, are trivial in nature and include: insufficient amount of money at the time of purchase, shortage of the wanted ethical product at the particular retail outlet, or substantial discounts and aggressive proportion of competing unethical products present at the particular retail outlet.

The above stated implies the importance and the complexity of understanding the gap between intentions and actual behaviour. Carrington, Neville & Whitwell (2010) provided one of most comprehensive holistic approaches to the explanation of the 'intentions-behaviour gap', using all advantages and avoiding all shortcomings of three previous, most frequently used concepts for explaining these inconsistencies – 'implementation intention', 'actual behaviour control' (ABC), and 'situational context' (SC).

Figure 2. Intention-behaviour mediation and moderation model of the ethically minded consumer



Source: Carrington, M.J., Neville, B.A. & Whitwell G.J. (2010.), WHY ETHICAL CONSUMERS DON'T WALK THEIR TALK: TOWARDS A FRAMEWORK FOR UNDERSTANDING THE GAP BETWEEN ACTUAL BUYING BEHAVIOUR OF ETHICALLY MINDED CONSUMERS, Journal of Business Ethics 2010, Vol. 97. No 2., p. 144

Almost all models for understanding and analyzing the decision-making process and overall behaviour of ethical consumers provided by this theory, as stated by Carrington, Neville & Whitwell (201, p. 142), are based on the foundations of the Reasoned Action Theory and Planned Behaviour Theory. As such, most of these models are essentially based on cognitive progression:

- Beliefs determine attitudes,
- Attitudes lead to intentions,
- Intentions influence behaviour.

This reasoning should be complemented by the fact that social norms, as well as individual behaviour control, influence the ethical consumer behaviour.

Criticism directed at the presented models of ethical consumer behaviour was mostly concerned with insufficient distinction between the attitudes-behaviour gap and the intentions-behaviour gap. Additionally, the criticism was directed towards the belief that purchase intentions are often not transformed into actual purchases, although extensions of proposed models encompassed the analysis of the impact of consumer's personal value system and their internal ethics.

However, the greatest criticism was directed at the complete disregard of the influence of external factors and situational context (physical environment of the purchase, social environment, objectives of purchase, time of purchase and antecedent states) on ethical consumer behaviour, as well as for the influence of consumer's individual control of their own behaviour and decision-making in the course of purchasing. This control refers to individuals' skills and capabilities to direct their behaviour and control it, as well as to their moment of will, disposable time, financial position, other people's support, knowledge, habits, dependencies and weaknesses that impact the purchasing decision.

Model presented by the authors, shown in Figure 2, represents an innovated, integrated and holistic approach to analyzing the issues of ethical consumer behaviour, which upgrades all mentioned shortcomings of present models of behaviour. This model incorporates and displays the combined simultaneous influence of all factors that cause the gap in the behaviour of ethical consumers, that is, the inconsistency existing primarily between intentions and actual ethical behaviour.

The model points out that the purchase intention, as an individual's single deliberation, is generated under the influence of various factors, such as attitudes, beliefs, social norms etc. However, if a consumer is under the influence of situational factors, and/or consumer behaviour control factor that differ from their attitudes and intentions in terms of direction and intensity, these factors can often prevail and result in consumer's adaptation to these factors, that is, divergence of actual behaviour form the intended behaviour.

4. ETHICAL CONSUMER BEHAVIOUR – SOME SERBIAN EXPERIENCES

Following the practices present within developed market economies, ethical consumer behaviour captures more interest within academic and business milieus of transition countries like Serbia. Economic crisis (although crisis has been a normal state of living and doing business in Serbia for 20 years now) and painful social and economic reforms implied by the transitional period have caused significant changes in consumers' value systems, attitudes, intentions and (un)ethical behaviour. Data provided by the Association of Serbian Insurers stating that the yearly value of frauds, that is, false damage reports and claims, surpasses 4 million euros seems both disturbing and alarming (Retrieved from http://www.reosiguranje.com/vesti/1483-prevare-u-osiguranju-u-ekspanziji.html 10.07.2012, 10:15), as well as the fact that there is an increase in thefts at convenience stores at a yearly rate of 10%. (Retrieved from http://www.economy.rs/vesti/17275/U-porastu-broj-kradja-u-trgovinama-u-svetu-i-kod-nas.html 20.07.2012, 12:00). Problem concerning deviant and inappropriate (unethical) consumer behaviour are also present in developed countries, which adds to the severity of this issue.

Research conducted at the University of Novi Sad, Faculty of Economics Subotica and its Novi Sad branch attempted to determine general attitudes towards ethical behaviour in purchasing and particular intentions related to purchasing a product recognized as ethical, depending whether the survey is public or anonymous. Research included 120 respondents from the student population, divided into two equal groups. One group filled out an anonymous questionnaire, while the other had to state their name. It was assumed that there were no significant differences between two observed groups and that student were randomly divided into these groups. On only parts of the conducted research are presented, due to conference limitations.

Q1: To what extent would you describe yourself as an 'ethical consumer'?

GROUP 1– Anonymous

	Number of respondents	%
Great deal	4	7%
Fair amount	12	20%
Not very much	28	47%
Not at all	9	15%
Don't know	7	11%
∑	60	100%

GROUP 2– Identified

	Number of respondents	%
Great deal	9	15%
Fair amount	19	32%
Not very much	22	37%
Not at all	2	3%
Don't know	8	13%
∑	60	100%

The structure of given responses emphasized the obvious problem concerning the lack of awareness on ethical consumer behaviour. The problem is additionally deepened by the fact that these were students, who represent the intellectual potential of each country. Divergences between structures of answers by the two groups are also evident – the anonymous group provided much more negative answers. This can be ascribed to a greater level of sincerity, but also to the greater level of indifference to the survey. The issue of respondents' comprehension of the term 'ethical consumer' also remains open.

Q2: As a consumer, can I make a difference to how responsibly a company behaves?

GROUP 1– Anonymous

	Number of respondents	%
Strongly agree	6	10%
Tend to agree	19	32%
No opinion	8	13%
Tend to disagree	20	34%
Strongly disagree	7	11%
∑	60	100%

GROUP 2– Identified

	Number of respondents	%
Strongly agree	10	17%
Tend to agree	24	40%
No opinion	11	18%
Tend to disagree	9	15%
Strongly disagree	6	10%
∑	60	100%

The analysis of respondents' answers has exposed a tendency of growth in positive answers within the group of identified respondents, which can be interpreted by the fact that respondents feel that they are expected to be aware of their role and power as consumers. Answers given by anonymous respondents were clearly diverged and fairly balanced. It can be concluded that respondents do not make use of their consumer power over the corporate conduct, since they themselves do not behave ethically enough.

Q3: Do you find ethical consumption and ethical consumer behaviour very important and good for:

GROUP 1– Anonymous

	YES	NO	∑
My own sake	60 / 100%	0 / 0%	60 / 100%
My family	58 / 97%	2 / 3%	60 / 100%
The environment	60 / 100%	0 / 0%	60 / 100%
Generally good for my country	60 / 100%	0 / 0%	60 / 100%
Only companies that produces such products	18 / 30%	42 / 70%	60 / 100%

GROUP 2 – Identified

	YES	NO	∑
My own sake	60 / 100%	0 / 0%	60 / 100%
My family	60/ 100%	0 / 0%	60 / 100%
The environment	60 / 100%	0 / 0%	60 / 100%
Generally good for my country	60 / 100%	0 / 0%	60 / 100%
Only companies that produces such products	11 / 18%	49 / 82%	60 / 100%

The question was formulated with the purpose of revealing respondents' general attitudes towards the importance and benefits of ethical consumption and ethical behaviour. The structure of answers confirms that their attitudes are nearly identical – affirmative. This further emphasizes the issue of the gap described above, that is to say, disparity in behaviour and consumer attitudes and intentions, which is typical for both transition and highly developed countries. A significant number of answers suggesting that respondents believe only certain companies receive benefits from ethical consumption must not be overlooked. This may be the partial reason why consumers do not transform their attitudes and intentions into actual purchases of ethical products.

Q4: How often, if at all, have you done each of the following in the last 12 months?

GROUP 1– Anonymous

	Done at least once	Done 5+ times	Haven't done	∑
Recycled waste	23 / 38%	6 / 10%	31 / 52%	60 / 100%
Bought primarily for ethical reasons	21 / 35%	32 / 53%	7 / 12%	60 / 100%
Actively campaigned about an environmental / social issue	4 / 7%	0 / 0%	56 / 93%	60 / 100%
Recommended a company because of ethical reputation	29 / 48%	16 / 27%	15 / 25%	60 / 100%
Avoided products because of a company's ethical reputation	34 / 57%	21 / 35%	5 / 8%	60 / 100%
Returned damaged products when the damage was your own fault	16 / 27%	0	44 / 73%	60 / 100%
Said nothing when a waiter miscalculated the bill in your favour	23 / 38%	0	37 / 62%	60 / 100%
Got too much change and not say anything	19 / 32%	0	41 / 68%	60 / 100%
Lied about your age or status in order to get a discount	21 / 35%	12 / 20%	27 / 45%	60 / 100%
Tested food and drinks in supermarket and not bought anyway	19 / 32%	24 / 40%	17 / 28%	60 / 100%

GROUP 2 – Identified

	Done at least once	Done 5+ times	Haven't done	∑
Recycled waste	31 / 52%	13 / 22%	16 / 26%	60 / 100%
Bought primarily for ethical reasons	23 / 38%	33 / 55%	4 / 7%	60 / 100%
Actively campaigned about an environmental / social issue	7 / 12%	1 / 2%	52 / 86%	60 / 100%
Recommended a company because of ethical reputation	30 / 50%	24 / 40%	6 / 10%	60 / 100%
Avoided products because of a company's ethical reputation	35 / 58%	21 / 35%	4 / 7%	60 / 100%
Returned damaged products when the damage was your own fault	13 / 22%	0	47 / 78%	60 / 100%
Said nothing when a waiter miscalculated the bill in your favour	19 / 32%	0	41 / 68%	60 / 100%
Got too much change and not say anything	17 / 28%	3 / 5%	40 / 67%	60 / 100%
Lied about your age or status in order to get a discount	23 / 38%	13 / 22%	24 / 40%	60 / 100%
Tested food and drinks in supermarket and not bought anyway	17 / 28%	14 / 23%	29 / 49%	60 / 100%

By analyzing the structure of responses associated with performing and forbearing ethical actions in situations when a conditional justification for such forbearing exists, since the action was not initiated by the consumer, it can be noticed that, with an already present divergence between groups of anonymous and identified respondents, many of the anonymous decide not to take action if the circumstances suggest that they can benefit from such forbearing. This can be ascribed to mindsets of respondents, who recognize actions in such situations as resourcefulness. The data suggesting respondents' impassiveness towards ecological behaviour and waste recycling also appears alarming, since this can be a source of a large amount of savings, and is therefore exceptionally important for weak economies, as is Serbian.

Q5: Are you planning to behave ethical in future and buy primarily ethical products?

	No	I shall do my best	Certainly
Group 1 – Anonymous	1 / 2%	38 / 63%	21 / 35%
Group 2 – Identified	0	32 / 53%	28 / 47%

The structure of responses to the question on future intentions associated with ethical behaviour and consumption further supports the acknowledged assertion that consumers have clearly devised, predominantly affirmative, attitudes towards ethical behaviour that they translate into positive purchase intentions and behavioural intentions in general. However, these intentions are frequently not transformed into their actual ethical behaviour.

4. CONCLUSIONS

Contemporary trends in the business environment, technological development and general human existence address many issues concerning sustainability of economic and overall social development. Challenges of intensive growth in the world's population amid limited natural resources have led to the widespread affirmation of problems related to environmental protection and sustainability, specifically, the role of economy in this process. On the other hand, market globalization and intensive competition for each consumer have developed consciousness among consumers that their voice can be heard on the market, and that their bargaining position becomes more powerful, as a result of consumer organization in the consumerism movement. Growing demands imposed on companies by consumers not only reflect the satisfaction of their personal needs and wants, but also increasingly address general needs of the society. Under such circumstances, ethical issues of business and marketing are becoming more significant. However, the subject of research is expanding to the consumers, that is, ethical attributes of their behaviour. Present discoveries have identified different models of ethical consumer behaviour, as well as the incongruity of their attitudes and intentions on the one hand, and their behaviour on the other. The future brings challenges associated with improving the understanding of causes of the behavioural gap and, above all, preventing it from occurring, or reducing it substantially.

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AN OUT-OF-SAMPLE ASSESSMENT OF THE EFFICACY OF CURRENCY BOARDS IN EUROPEAN TRANSITION ECONOMIES

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ABSTRACT

We assess the contribution of the new-generation currency boards (CB) in European transition economies to macroeconomic performance (growth and inflation). Focusing on more recent data to exclude the volatile effects around the launch of the currency board arrangements, we identify the long run contribution of currency boards to growth. This fills a major gap in the literature as previous studies cannot exclude post-launch effects and results driven by colonial currency boards. We find a (borderline) significant positive (negative) effect of CBs on growth (inflation).

KEYWORDS: Currency boards, macroeconomic performance, European transition economies.

1. INTRODUCTION

Assessing costs and benefits of alternative exchange rate regimes has been one of the key questions in international finance. However, empirical literature on ex-post evaluation of the contribution of exchange rate regimes, in particular currency boards (CB), is fairly limited. We are aware of only two papers that aim at measuring the efficacy of CBs: Ghosh et al. (2000), Levy-Yevati and Sturzenegger (2002), which cover a long period of post-Bretton Woods era and CBs across the world including colonial currency board arrangements. However, the currency boards in Eastern Europe differ in many respects, as discussed below. The present paper offers an out-of-sample test of the efficacy of currency boards, free from volatile post-launch effects, focusing on European transition economies.

European transition economies offer an ideal set-up to assess the efficacy of the CB regimes, as they are a group of small and similar economies among which there is sufficient variety in terms of exchange rate regime. This enables us to identify what difference a currency board makes in terms of growth and inflation performance. Our sample covers 14 countries. Three of them have currency board regime: Bulgaria, Lithuania, Estonia. By choosing a recent sample period 1997 - 2011, we abstract from effects as such broken trade dependencies (former Soviet republics), initial conditions, the volatile period just prevailing around the launch of the CB and post-launch rebound in growth ("catch-up growth").[1]Thus, the current study aims at documenting the long term performance of CB regimes, in particular to assess whether the stabilization brought about by CB regimes translates into achieving the ultimate goal of fostering growth. Our sample period includes a substantial global crisis, which offers a good test of any macroeconomic policy's efficacy robust to business cycle variation.

CB's credibility effect on inflationary expectations is the main theoretical argument to establish a link between CB regimes and growth performance. Even though much has been written about CBs institutional and organizational aspects, only two papers systematically test whether the hypothesized ultimate benefit of CBs on growth and inflation materializes. Ghosh et al. (2000) find that countries with currency boards have experienced lower inflation and higher growth compared to either floating regimes or simple pegs. However, their growth results do not account for the rebound effect from depressed pre-adoption levels. Accounting for those rebound effects might significantly change their results. The findings of Ghosh et al. (2000) are consistent with the descriptive analysis of Gulde and Keller (2000), who claim that Bulgaria, Lithuania and Estonia have experienced lower inflation and higher growth than those EU accession economies with other regimes. Levy-Yeyati and Sturzenegger (2002) find, however, lower inflation at the cost of lower growth for both conventional pegs and currency board countries. Korhonen (2000) discusses the anecdotal evidence: he concludes that while favorable effects of currency boards in the Baltic countries[2] is more difficult to find, a comparative

[1]In Bulgaria, CB was launched in July 1997. We exclude this period for Bulgaria with a dummy.

[2] Latvia's intitial peg in February 1994 to the IMF special drawing right's (SDR) basket renders it as having had a regime very similar to that of a currency board. This is why the three Baltic countries are often considered together when investigating the impact of fixed pegs on macroeconomic performance (De Haan et al. 2001). However, for the purposes of the current paper, we treat Latvia as having a fixed peg for the 1997-2002 period.

analysis shows that currency boards have not produced worse economic performance.

An interesting common characteristic of European CBs is the unorthodox nature which allows temporary deviations from the one-to-one relationship between H (high-powered money) and foreign exchange (FX) reserves. This is achieved by a buffer of over-backed H (i.e., a smaller H than FX reserves, which creates some room for the CB to play the role of lender of last resort in cases of emergency. (Nenovsky and Hristov, 2002). In addition, there are some atypical items in the balance sheet of the quasi currency boards and the monetary institution can employ a number of monetary policy instruments. Last, but not the least, under the quasi-CBs the monetary authority can vary reserve requirements hence conduct monetary policy. These atypical items and monetary policy tools differ among the CB countries Bulgaria, Lithuania and Estonia (Nenovsky et al. 2001). Our results will reveal the effect of these unorthodox CB arrangements.

Section II reviews the literature on currency boards in general, and those in European transition economies in particular. It also presents the main ideas from the literature on growth determinants, which will guide our selection of controls in our empirical specificadtion. Section III describes the data employed in this study and empirical strategy implemented. Section IV presents the results and Section V concludes.

2. LITERATURE REVIEW

Currency Boards

For a general introduction on currency board regime see Hanke (2001). In an orthodox CB, the home currency is pegged at an official parity to a foreign currency that is deemed reliable. The monetary base (H) is 100% covered by gold and foreign exchange reserves (FX). H follows any changes in FX. CBs in their orthodox form evidenced a strong record of ensuring stabilization and domestic currency credibility in colonial regimes before World War I. After World War II and with the fall of colonial regimes, however, the newly independent countries largely abandoned their CBs.

Currency Boards in European Transition Economies

Nenovsky et al. (2001) compare the institutional and organizational aspects of quasi currency boards in Bulgaria, Lithuania and Estonia and find some noteworthy differences. As a quasi CB-type discretionary tool, the monetary authority in all three countries can manipulate reserve requirements, responding to inflows or outflows of foreign exchange in a flexible manner without an impact on the exchange rate. However, the presence of the government fiscal account on the liabilities section of the central banks' balance sheets in Bulgaria and Lithuania is an additional monetary tool available to these countries. For Bulgaria, **Nenovsky and Hristov (2002)** find that the inclusion of the government fiscal account on the liabilities section of the balance sheet weakens the cointegration relationship between the monetary base and foreign reserves and introduces macroeconomic instability.

Minea & Rault (2011) investigate whether the adoption of the currency board in Bulgaria has helped towards a differentially better integration with the European Monetary Union (EMU) and meeting the Maastricht criteria. They find that the responses of Bulgarian variables to ECB interest rate fluctuations are less persistent and less significant than what the literature has suggested for other CEE economies with more flexible exchange rate regimes. Their result still holds when accounting for different sources of cross-country heterogeneity. **Ivanova (2009)** argues that the introduction of the currency board in Bulgaria enhanced the confidence of foreign creditors and facilitated borrowing from international markets. Thus, the currency board in Bulgaria has significant implications for both growth and inflation in the country.

Purfield and Rosenberg (2010) look at the impact of the global financial crisis of 2008-09 on the Baltics, which, despite bringing per-capita income in these countries back to 2005-6 levels, fuelling inflation, and forcing a devaluation with huge fiscal and nominal wage adjustment, did not destroy confidence in the exchange rate or cause a banking system crisis. However, this result by itself does not speak in favor of currency boards as the study does not compare the performance of flexible or other pegged regimes' performance over the period of the crisis as control groups. **De Haan et al. (2001)** finds that Estonia has been the most successful Baltic country in reducing inflation, which was partly due to its initial choice of a pegging currency in line with Estonia's output and inflation characteristics. At the same time, the author claims that Latvia's less appropriate peg, and Lithuania's inadequate peg are consistent with their worse inflation performance compared to Estonia. Once again, since the study does not compare Baltic countries' performance in reducing inflation to that of alternative exchange rate regimes, it is not indicative of the performance of the currency board in macroeconomic stabilization.

Using SVAR methodology, **López (2007)** casts light to the growth performance of alternative exchange rate arrangements. The author finds that the exchange rates of Czech Republic and Hungary have propagated shocks during the period 1995-2005, whereas the exchange rate of Poland has been used as an output stabilizer. Additionally, the author finds that demand and monetary shocks account for most of the variability in both nominal and real exchange rates in the Czech Republic and Hungary. The somewhat disappointing performance of alternative exchange rate regimes in bringing macroeconomic stability could be wrongly interpreted as evidence in favor of a currency board. However, **Lakchieva (2003)** finds that the volatility of the euro-dollar exchange rate in Estonia and Bulgaria,

both of which with currency boards, implies currency risk to these countries. As both countries fix their exchange rates to the euro in the framework of a currency board, the findings of Lakchieva (2003) are an argument against the stabilizing impact of a currency board regime.

Using a standard growth equation with a current account reversal impulse dummy, **Melecky (2005)** investigates the direct impact of current account reversals on growth in CEE countries. According to theory, a current account reversal must have a significantly negative impact on growth. The author finds that after a current account reversal, the growth rate declines by 1.10 percent in the current year and the negative impact of the reversal subsides in 3.3 years , when the actual growth rate is back at its equilibrium level. Unfortunately, in the analysis, results are interpreted on the basis of the whole panel, and no differentiation among the performance of alternative exchange rate arrangements has been made.

Sohinger (2005) explores the impact of foreign direct investment (FDI) on growth and convergence of the CEE and Baltic economies to the European Union, arguing in favor of a differentially positive impact of FDI on institution building. Because of the endogeneity problem between growth and FDI and because the author does not differentiate between countries with different exchange rate arrangements, it is impossible to determine the contribution of both FDI and currency boards to growth for the transition economies. **Staehr (2010)** finds evidence for concurrent real and nominal convergence among the CEE countries in terms of growth and inflation performance. This suggests that despite the presence of alternative exchange rate regimes in CEE countries, their macroeconomic performance does not significantly differ.

Growth Determinants

There is no consensus in the literature about the variables significantly and robustly affecting growth. Therefore, different model specifications employ a different set of variables with only very few consensus variables appearing in all models. In order to identify which variables are related to growth by being the ones showing significance most of the time in combinations with other variables, **Sala-i-Martin (1997**) runs two million regressions. In his regressions, the author combines a couple of consensus variables each time and combinations of all the rest of the variables proposed in the literature. He is able to identify a set of 65 variables that are important to growth in the general case.

It is imperative to employ a comprehensive set of carefully-selected control variables. Synthesizing the findings of Sala-i-Martin (1997) and a large body of literature on determinants of economic growth (see **Barro, 1991; Murphy et al. 1993; Acemoglu, Johnson and Robinson 2002**), we abstract from certain variables generally employed in growth regressions, as we believe that these are either irrelevant to our transition economies and observation period (war, tropic, disease), do not exhibit significant country-specific differences (religion, crops), or are endogenous to other important variables (e.g, FDI is endogenous to growth). At the same time, we consider variables proposed as impacting growth in transition economies (**Falcetti et al. 2002, 2006; De Melo et al. 1996, 2001; Levy-Yeyati and Sturzenegger 2002; Gulde et al. 2000; Havrylyshyn et al. 2003**).

Sala-i-Martin (1997) proposes variables accounting for country-specific initial conditions as important for growth in the general case. In their growth studies of transition economies, De Melo et al. **(2001)** and Falcetti et al. **(2006)** employ an index of initial conditions[3]. The initial conditions index incorporates the extent of prior reforms for each country in its initial value. I employ this index as it lowers endogeneity among different initial conditions variables.

Since we abstract from the first post-transition years, we are not interested in the initial conditions at the beginning of the period, but rather, in the interaction of this variable with time. Initial conditions can be broken up into two principal component clusters, the first of which positively and the other - negatively related to growth (**De Melo et al. 1996**). Therefore, the expected sign of the variable is undetermined. Most studies find that different starting points matter for growth, yet their impact decreases over time (e.g., **Berg et al. 1999; De Melo et al. 2001**). At the same time, the effect of policies on growth should increase (**Korhonen 2000**).

Romer (1990) and **Barro (1991)** consider education as a major variable affecting growth in general. **Senhadji (2000)** and **Rapacki**, & **Próchniak (2009)** find that changes in TFP are the most important determinant of growth for transition economies. Although in their study of transition economies, **Falcetti et al. (2006)** dismiss education on the claim that data on education is of doubtful quality, the newly available dataset by **Barro and Lee (2011)** provides the needed information.
Following the discussions in the wider economic literature about the importance of ethnic fractionalization on growth, we furthermore consider the interaction with time of initial level of ethnic fractionalization as a proxy for equal access to participation in economic activity. The rationale for including the interaction terms of education with time and ethnic fractionalization with time as separate variables in the growth regression is that albeit important to growth, neither variable has been included in the

[3]Developed by **De Melo et al. (1996)**, the initial conditions index captures a variety of variables at their initial levels, like income at PPP, urbanization, overindustrialization (typical for transition economies), geographical proximity to thriving market economies, natural resource endowments, prior economic growth rates, repressed inflation, trade dependence on other communist economies, black market exchange rate premium, change in the state structure (new nation states versus members of the decentralized economy), prior economic growth rates, and familiarity with market economy at the beginning of transition.

computation of the initial conditions indicator developed by **De Melo (1996)**. I do not believe that re-computing the initial components indicator to include education and fractionalization would render the results significantly different, as neither education, nor ethnic fractionalization are much correlated with any of the component variables of the initial conditions index. Therefore, the separate inclusion of initial conditions, education time- interaction term, and ethnic fractionalization time-interaction term should not be a problem.

Campos and Coricelli (2002) propose liberalization as important to growth in transition economies. To account for liberalization, I use the liberalization, or the so-called structural policy reform index computed as the weighted average of all EBRD transition ratings. **Radulescu et al. (2002)** and **Havrylyshyn et al. (1999)** find that this weighted average has a better explanatory power on growth than any of the individual ratings alone. According to **Falcetti (2006)**, the impact of structural policy reforms on growth is strong and robust. De Melo et al. (2001) claim that whereas the contemporaneous liberalization step is expected to have a negative sign, the accumulated stock of reforms is expected to show a positive sign. Using alternative specifications but the same liberalization index, **Fischer et al. (1996)** and **Selowsky and Martin (1997)** confirm these claims. In their studies, **Heybey and Murrell (1999)** and **Wolf (1999**) allow for a feedback of growth to structural reforms and **Berg et al. (1999)** and **Ghosh (1997)** do likewise by adopting an instrumental variables approach. Finding a significant feedback effect from growth to reforms, **Falcetti et al. (2002)** suggest a simultaneous equation estimation. I follow Falcetti et al. (2006) in considering the lagged value of structural policy reform to enter the growth model instead of both the current-and lagged values, in order to avoid endogeneity.

North (1991), **Acemoglu, Johnson and Robinson (2002), Glaeser et al. (2004) and Fisher and Sahay (2004)** propose institutions as important to economic growth. **Havrylyshyn et al. (2003) and De Melo et al. (2001)** consider the impact of institutions on growth in transitional economies. **Faia et al. (2008)** finds that with a higher quality of institutions, the effects of political pressures on the exchange rate are lower. Following **De Melo (2001**), I use an institutional proxy based on the EBRD transition indices[4].

A consensus variable I employ to model growth is the size of the fiscal balance relative to GDP, whereby its expected sign is negative in the growth regression. As Beck and Laeven (2005) suggest, not all variables are robust to controlling for additional variables. Therefore, my final model discards some of the abovementioned variables.

Together with the excess coverage of monetary base with foreign exchange, quasi-CB are peculiar with that they include the government fiscal account in the liabilities section of the balance sheet. For the case of Bulgaria, Nenovsky and Hristov find that this inclusion distorts the perfect cointegration relationship between the monetary base and foreign exchange (Nenovsky and Hristov 2002) and destabilizes the Bulgarian economy. Thirdly, under the orthodox CB, the monetary authority can manipulate reserve requirements and thereby respond to inflows or outflows of foreign exchange in a flexible manner without an impact on the fixed exchange rate.

Control Variables

In selecting the variables to consider for our out-of sample study on growth and inflation, we abstract from some of the variables employed in growth regressions by other authors, such as FDI, war (Sturzenegger 2002), and religion (Sala-i-Martin 1997). Specifically, we do so as we believe that FDI is endogenous to growth. In addition, there were no military conflicts in our sample of countries over the transition period. Finally, we exclude religion as the religious make-up of our countries is rather homogenous (Christian or non-religious).

At the same time, we consider variables proposed by Sala-i-Martin as important to general growth, as well as such proposed by De Melo et al. (1996, 2001 and Falcetti et al. 2006) as important to growth in transition economies. Whereas Sala-i-Martin also uses variables to proxy initial conditions in his growth regressions, De Melo et al. (1996, 2001) and Falcetti et al. (2006) compute an index of initial conditions with the help of principal component analysis, thereby eliminating endogeneity among the variables. The initial conditions index of De Melo et al. (1996) captures a variety of variables at their initial levels, like initial level of income at PPP, urbanization, overindustrialization (typical for transition economies), geographical proximity to thriving market economies, natural resource endowments, prior economic growth rates, repressed inflation, trade dependence on other communist economies, black market exchange rate premium, change in the state structure (new nation states versus members of the decentralized economy), prior economic growth rates, and familiarity with market economy at the beginning of transition. The initial conditions index incorporates the extent of prior reforms for each country in its initial value.
Since we abstract from the first post-transition years, we are not interested in the initial conditions at the beginning of the period, but rather, in the interaction of this variable with time. It is not possible to determine the expected sign of the initial conditions index in the growth equation, as it comprises a variety of variables, half of which positively and the other half- negatively related to growth. However, at least empirically, most studies find that different starting points matter for growth, yet their impact decreases over time (e.g., Berg et al. 1999, De Melo et al. 2001).

[4] For an alternative institutional proxy, see Beck and Laeven (2005).

Traditionally accepted as a very important determinant of growth (Romer 1990, Barro 1991), education is a variable that is absolutely essential to consider for our model. Although Falcetti et al. (2006) dismiss education on the claim that data is of doubtful quality, the newly available dataset by Barro and Lee (2011) provides the needed information. We decide to consider the initial level of education in its interaction with time rather than education each period, as we believe that subsequent period education rates are endogenous to each other. We find support for the inclusion of education in the growth regression for our transition economies in the work by Senhadji (2000), who finds that TFP is the most important determinant of growth for these economies. Following the suggestion of Sala-i-Martin (1997) that fractionalization impacts growth, we furthermore take the interaction with time of initial level of ethnic fractionalization as a proxy for equal access to participation in economic activity. The rationale for including the interaction terms of education with time and ethnic fractionalization with time as separate variables in the growth regression is that albeit important to growth, neither variable has been included in the computation of the initial conditions indicator developed by De Melo (1996). We do not believe that re-computing the initial components indicator to include education and fractionalization would render our results significantly different, as neither education, nor ethnic fractionalization are much correlated with any of the component variables of the initial conditions index. Therefore, the separate inclusion of initial conditions, education time- interaction term, and ethnic fractionalization time-interaction term should not be a problem.

Another important index besides initial conditions is the structural policy reform index, or the so-called liberalization index, computed as the weighted average of all EBRD ratings for transitional economies. Radulescu et al. (2002) and Havrylyshyn et al (1999) find that this weighted average has a better explanatory power on growth than any of the individual rankings alone. In addition, the impact of structural policy reforms on growth is strong and robust (Falcetti 2006). As De Melo et al. (2001) point out, empiric work shows a negative sign for the contemporaneous liberalization step but a positive one for the accumulated stock of reforms (De Melo et al. 2001). Heybey and Murrell (1999) and Wolf (1999) allow for a feedback of growth to structural reforms, and Berg et al. (1999) and Ghosh (1997) do likewise by adopting an instrumental variables approach. Falcetti et al. (2002) finds a significant feedback effect from growth to reforms and therefore suggest a simultaneous equation estimation to identify this interaction. We use the lagged value of structural policy reform as determinant for current growth, following Falcetti et al. (2006), rather than both current period and lagged value of structural policy reforms, as some other studies do, due to the inherent endogeneity resulting from the small number of observation periods in our study.

Two consensus variables we employ to model growth are the annual inflation rate and the size of the fiscal balance relative to GDP. Thereby, the expected signs are negative for both variables (Loungani and Sheets 1997, Fischer and Sahay 2004).

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A consensus variable I employ to model growth is the size of the fiscal balance relative to GDP, whereby its expected sign is negative in the growth regression. As Beck and Laeven (2005) suggest, not all variables are robust to controlling for additional variables. Therefore, my final model discards some of the abovementioned variables.

3. DATA AND METHODOLOGY

Data
The countries covered are Belarus, Bulgaria, Croatia, Estonia, Estonia, Hungary, Latvia, Lithuania, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Turkey and Ukraine. Thereby, we deliberately exclude the initial years of transition from our sample. The reason for this is that the improved macroeconomic performance after the initial shock of break with the command regime could hardly be attributed to the subsequent country-specific post-transition policy reforms. The sample period is 1997-2011 (15 years). Our target variables of macroeconomic performance are growth rate and inflation. We measure growth as annual rate of increase in GDP at constant prices in local currency, adjusted for the size of population. In other words, our first dependent variable is per capita GDP growth rate. These data are obtained from
It is imperative to employ a comprehensive set of carefully-selected control variables. These control variables, however, must be non-endogenous to growth performance. Synthesizing a large body of literature on determinants of economic (see Barro, 1991; Sala-i Martin, 1997; more ?)

As our purpose is to control for determinants, but not symptoms, of growth, we should not include endogenous variables that co-move with growth. For example, FDI inflows are highly correlated with growth measured over 3-year windows, however ....
Specifically, the variables (with the corresponding sources) we choose to include in our model, are the following:
GDPGi,t - real per-capita GDP growth in local currency units, taken from the World Bank for all years except for 2011. In calculating the 3-year period average, the 2011 values were obtained from EBRD

[4] For an alternative institutional proxy, see Beck and Laeven (2005).

Time - number of years since transition, defined each 3-year period, own calculations

TimeSQ – squared Time to capture non-linear effects of time

ICixTime – the interaction of initial conditions with time; ICi obtained from the EBRD 2001 Transition report

FRACi xTime – the interaction of ethnic fractionalization with time; FRACi obtained from the website of The Macro Data Guide International Social Science Resource

EDUCi xTime - completed tertiary education as % of the population aged 15 and over; taken from the Barro and Lee dataset (2011), which reports the values over 5-year periods starting from 1995; exceptions are Belarus and Turkey, for which there is no online available data on tertiary education completion

INFLi,t – consumer price inflation at the year-end in %, taken from the World Bank for all years except for 2011. In calculating the 3-year period average, the 2011 values were obtained from EBRD. Bulgarian inflation for the first observation period has been dropped as the country experienced a big economic crisis that could bias our results on growth and inflation performance.

SPRi,t-1 – lagged structural policy reform, also called liberalization; calculated as a weighted average of all EBRD reform ratings, specifically: price liberalization and competition policy (weight 0.3); trade and foreign exchange system (weight 0.3); large scale privatization, small scale privatization, and banking reform and interest rate liberalization (weight 0.4)

SPRSQi,t-1 – squared SPRi,t-1 to capture non-linear effects of liberalization

INSTi,t - institutional development and property rights and contract enforcement institutions; INSTi,t is different in nature from SPRi,t; INSTi,t is the simple average of EBRD reform ratings for competition policy, enterprise restructuring and governance, banking reform and non-bank financial institutions reform. Its scale ranges from 1-no reform to 4.33-standard typical of market economies; INSTi,t obtained from the yearly EBRD Transition reports

GOVEXPi,t-1 – lagged government consumption expenditure in %, taken from the World Bank

WGROWTHi,t – lagged real per-capita GDP world growth, taken from the World Bank for all years except for 2011. In calculating the 3-year period average, the 2011 values were obtained from the IMF

POLREFi,t - the Polity IV indicator for political reform as a proxy for civil liberty with a scale ranging from +10 (strongly democratic) to -10 (strongly autocratic); obtained from the Polity IV Project for all years except for 2011; In calculating the3-year period average, the 2010 value was taken.

COINTEGR - the degree of cointegration between the domestic monetary base and foreign exchange in countries with a currency board

CB – currency board dummy with a value of 1 for the presence of a currency board in and 0 otherwise

Float – dummy with a value of 1 for a flexible exchange rate regime and 0 otherwise. As the only country with a non-CB fixed peg over the years, Latvia would be defined with a value of 0 for both the CB and Float dummies

ERM2 – dummy with a value of 1 for participation in the European Exchange Rate Mechanism II and 0 otherwise; information obtained from
Euro – dummy with a value of 1 for having the euro as official currency and 0 otherwise

NonEU - dummy with a value of 1 for non-EU members; The EU-accession countries would be defined by a value of 0 for both EU and NonEU

Methodology

We employ a panel data model which captures both cross-sectional and time-variation. As some of the determinants of growth display some (sluggish) variation over time, we control for such variation by dividing our 15-years sample into five 3-year periods. The average growth rate of country i in each 3-year subperiod t, Gi,t, is our fist dependent variable. Our key explanatory variable is the CB dummy, Di,t, which takes the value of 1 for Bulgaria, Lithuania and Estonia (1997-2010), and 0 otherwise. We have no time variation in this variable (except one subperiod for Estonia), hence a fixed effects estimator would not be suitable for our purposes. We therefore estimate the following pooled regression with a random effects estimator:

$$G_{i,t,} = \beta_0 + \beta_1 D_{ij,t} + \beta_C X^C_{i,t} + e_{i,t} \quad (1)$$

where $X^c_{i,t}$ is a vector of control variables ($X^c_{i,t}$ =). The null hypothesis is $\beta 1 = 0$. A statistical rejection with a positive (negative) t-statistic would imply positive contribution of CBs to the growth performance.

4. RESULTS

1. Growth results

I checked for unit roots with the help of the Fisher unit root test for unbalanced panels and found that my panel variables do not contain unit roots. Due to the similar specification of INSTi,t and SPRi,t-1 from the EBRD indices, they

exhibit collinearity (0.6933). Therefore, I drop the variable institutions INSTi,t and I use SPRi,t-1 instead. Likewise, the variables SPRi,t-1 and POLREFi,t cannot be used in the same regression due to a collinearity of 0.82311. The rationale for these two sets of variables being collinear is that reforms (both structural, institutional, political, etc.) tend to have a complementary impact, that is, act together. In addition to dropping INSTi,t, I drop the dummies for different exchange rate regimes, which turned out to be insignificant under different model specifications. The interaction terms EDUCi x Time and FRACi x Time have been dropped from the growth regression due to the same reason. VARi,t was also not used in the final model specifications, as it turned out insignificant.

Exhibit 1. FE estimator on growth.

```
. xtreg growth cb lspr lgovexp, fe robust

Fixed-effects (within) regression               Number of obs      =        71
Group variable: id                              Number of groups   =        15

R-sq:  within  = 0.0769                         Obs per group: min =         1
       between = 0.0964                                        avg =       4.7
       overall = 0.0335                                        max =         5

                                                F(2,14)            =         .
corr(u_i, Xb)  = -0.8725                        Prob > F           =         .

                                    (Std. Err. adjusted for 15 clusters in id)
------------------------------------------------------------------------------
             |               Robust
      growth |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          cb |   8.468882   1.184218     7.15   0.000     5.928986    11.00878
        lspr |    -.45131   .6399506    -0.71   0.492    -1.823868    .9212476
     lgovexp |   -.194015   .3528391    -0.55   0.591    -.9507796    .5627496
       _cons |   9.447845   8.216579     1.15   0.269    -8.174965    27.07066
-------------+----------------------------------------------------------------
     sigma_u |  3.0826013
     sigma_e |  3.7464059
         rho |  .40370617   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Running the growth model with a FE estimator (Exhibit 1) and making the interpretations on the basis of heteroskedasticity-adjusted t-values, I find the CB-dummy to be significantly and positively affecting growth for my sample of transition economies at the 1%- significance level. However, the rest of the variables are insignificant.

Exhibit 2. BE estimation on growth.

```
. xtreg growth cb lspr lgovexp, be

Between regression (regression on group means)  Number of obs      =        71
Group variable: id                              Number of groups   =        15

R-sq:  within  = 0.0064                         Obs per group: min =         1
       between = 0.5989                                        avg =       4.7
       overall = 0.0742                                        max =         5

                                                F(3,11)            =      5.47
sd(u_i + avg(e_i.))=  .9963673                  Prob > F           =    0.0151

------------------------------------------------------------------------------
      growth |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          cb |   1.425747   .7061413     2.02   0.069    -.1284595    2.979954
        lspr |  -.8493369   .2502522    -3.39   0.006    -1.400138   -.2985354
     lgovexp |   .1532476   .0819968     1.87   0.088    -.0272261    .3337214
       _cons |   7.075462   2.240363     3.16   0.009     2.144456    12.00647
------------------------------------------------------------------------------
```

Likewise, running the growth model with a BE estimator (Exhibit 2), I find that the CB-dummy continues to be significantly and positively impacting growth, this time at the 5%-significance level. The positive and significant impact of the CB-dummy under both the FE and BE estimator shows that the imputed "credibility" effect of the currency board inspired trust in the local currency and markets and fostered market activity in our transition economies. In addition, the rest of the variables become significant as well. Howver, their signs variables are not unequivocally determined, but rather are determined empirically in the literature, especially by the newer papers, which show a rather blurry picture[7].

Despite the suggested by literature negative sign of government expenditures on growth, one cannot claim this with certainty, since growth does not only depend on the amount of expenditure, but also on the quality of the investment projects the government is investing in. If one assumes that the government expenditures during transition were efficient, then the results are consistent when the BE estimator is used and inconsistent when the FE estimator is used. A note of caution is needed about the temporal impact of government expenditures on growth, too. A lot of arguments can be made here, but the sign of the variable will ultimately be determined by empirics and vary across samples and observation periods.

[7]For a more detailed discussion, see Falcetti et al. (2006).

Structural reform has been claimed by the literature to have a negative effect on growth in the current period but a posive cumulative impact. However, the sign of the variable will also be affected by the quality of reform and reform continuity. Since the transitional economies exhibited differences in the level of reform in the beginning of the transition period, and over time, their pace of reforms differed, I assume that this variable will be significant under the RE-estimator.

I check the RE estimator to make a conclusion on the temporality of the effect of lgovexp ans lspr on growth.

Exhibit 3. RE estimator on growth.

```
. xtreg growth cb lspr lgovexp, re robust

Random-effects GLS regression                   Number of obs      =        71
Group variable: id                              Number of groups   =        15

R-sq:  within  = 0.0193                         Obs per group: min =         1
       between = 0.5213                                        avg =       4.7
       overall = 0.0842                                        max =         5

Random effects u_i ~ Gaussian                   Wald chi2(3)       =      7.97
corr(u_i, X)       = 0 (assumed)                Prob > chi2        =    0.0466

                                               (Std. Err. adjusted for 15 clusters in id)
------------------------------------------------------------------------------
             |               Robust
      growth |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          cb |   1.838156    .927334     1.98   0.047     .0206152    3.655698
        lspr |  -.7292101    .3065518   -2.38   0.017    -1.330041   -.1283795
     lgovexp |   .0464082    .1287907    0.36   0.719    -.206017    .2988334
       _cons |   8.163931    2.581793    3.16   0.002     3.103709    13.22415
-------------+----------------------------------------------------------------
     sigma_u |          0
     sigma_e |  3.7464059
         rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

The RE estimator on growth with robustness-adjusted t-values (Exhibit 3) shows that government expenditures do not significantly impact growth. Looking at the data, one can claim that for each country, government expenditures were fluctuating around a constant mean across time. Therefore, the FE estimator cannot explain the behavior of lgovexp in affecting inflation and the RE estimator will shows the impact of the BE-estimator. The BE output shows that lgovexp had a positive impact on growth in the transition economies over 1997-2011.

Exhibit 4. RE estimator on final growth model.

```
. xtreg growth cb lspr, re robust

Random-effects GLS regression                   Number of obs      =        71
Group variable: id                              Number of groups   =        15

R-sq:  within  = 0.0261                         Obs per group: min =         1
       between = 0.4565                                        avg =       4.7
       overall = 0.0823                                        max =         5

Random effects u_i ~ Gaussian                   Wald chi2(2)       =      7.69
corr(u_i, X)       = 0 (assumed)                Prob > chi2        =    0.0214

                                               (Std. Err. adjusted for 15 clusters in id)
------------------------------------------------------------------------------
             |               Robust
      growth |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          cb |    1.86938    .9387356    1.99   0.046     .0294918    3.709268
        lspr |  -.7293569    .3096437   -2.36   0.018    -1.336247   -.1224664
       _cons |   9.038543    2.301278    3.93   0.000     4.528121    13.54896
-------------+----------------------------------------------------------------
     sigma_u |          0
     sigma_e |  3.7328986
         rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Dropping lgovexp from our RE model estimation (Exhibit 4), I still confirm my previous conclusions about the positive and significant impact of the CB-dummy. In fact, the CB-dummy is also positive and significant under alternative model specifications.

2. Inflation Results

Exhibit 5. FE estimator on inflation.

```
. xtreg infl cb d_nbg lspr, fe robust

Fixed-effects (within) regression               Number of obs      =        71
Group variable: id                              Number of groups   =        15

R-sq:  within  = 0.8587                         Obs per group: min =         1
       between = 0.8971                                        avg =       4.7
       overall = 0.8668                                        max =         5

                                                F(1,14)            =         .
corr(u_i, Xb)  = 0.0592                         Prob > F           =         .

                                          (Std. Err. adjusted for 15 clusters in id)
------------------------------------------------------------------------------
             |               Robust
        infl |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          cb |  -2.729916   3.717889    -0.73   0.475    -10.70399    5.244162
       d_nbg |   332.7679   12.38309    26.87   0.000     306.2088     359.327
        lspr |  -10.05963   5.924922    -1.70   0.112    -22.76732    2.648067
       _cons |   84.81891   42.82675     1.98   0.068    -7.035336    176.6732
-------------+----------------------------------------------------------------
     sigma_u |  7.1778202
     sigma_e |  17.780754
         rho |  .14012626   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Employing the FE estimator with robustness-adjusted t-values on my inflation model (Exhibit 5), I get an insignificant negative effect of the CB-dummy on inflation. The negative sign of the dummy is line with theory. At the same time, the sign of the lspr is borderline significant and negative. The dummy controlling for the inflation period in Bulgaria is likewise significant.

Under a BE-estimation (Exhibit 6), the CB-dummy is likewise insignificant and negative. Structural policy reform becomes very significant at the 0.01-significance level. The positive sign of the CB dummy is not in line with theory. Therefore, to account for this incosistency, I include the **D_NBG** dummy. It is significant.

Exhibit 6. BE estimator on inflation.

```
. xtreg infl cb lspr d_nbg, be

Between regression (regression on group means)  Number of obs      =        71
Group variable: id                              Number of groups   =        15

R-sq:  within  = 0.8578                         Obs per group: min =         1
       between = 0.9046                                        avg =       4.7
       overall = 0.8680                                        max =         5

                                                F(3,11)            =     34.76
sd(u_i + avg(e_i.))=  7.733053                  Prob > F           =    0.0000

------------------------------------------------------------------------------
        infl |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          cb |  -.0537905   6.789914    -0.01   0.994    -14.99829    14.89071
        lspr |  -12.06636   1.966217    -6.14   0.000    -16.39397   -7.738746
       d_nbg |   317.3594   49.80913     6.37   0.000     207.7303    426.9886
       _cons |   98.75121   13.88609     7.11   0.000     68.18813    129.3143
------------------------------------------------------------------------------
```

Exhibit 7. RE estimator on inflation.

```
. xtreg infl cb lspr d_nbg, re robust

Random-effects GLS regression                   Number of obs      =        71
Group variable: id                              Number of groups   =        15

R-sq:  within  = 0.8583                         Obs per group: min =         1
       between = 0.9039                                        avg =       4.7
       overall = 0.8684                                        max =         5

Random effects u_i ~ Gaussian                   Wald chi2(3)       =  76430.35
corr(u_i, X)       = 0 (assumed)                Prob > chi2        =    0.0000

                                          (Std. Err. adjusted for 15 clusters in id)
------------------------------------------------------------------------------
             |               Robust
        infl |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          cb |  -1.281172   2.432653    -0.53   0.598    -6.049085    3.48674
        lspr |   -11.6682   2.412354    -4.84   0.000    -16.39633   -6.940074
       d_nbg |   328.1808   5.789693    56.68   0.000     316.8332    339.5284
       _cons |   95.97863   18.33962     5.23   0.000     60.03363    131.9236
-------------+----------------------------------------------------------------
     sigma_u |          0
     sigma_e |  17.780754
         rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Under the RE estimation (Exhibit 7), the CB becomes less insignificant and the sign remains negative. This result is consistent with theory and the "credibility effect" of the currency board's operation. Since the significance of the variables in the inflation model did not change drastically when employing the FE-, BE-, and RE estimators, one can claim that the RE-estimator is indeed the optimal one for describing the impact of the currency boards on inflation.

5. CONCLUSION

Whether the new-generation currency boards in Eastern Europe attain their basic goals of price stability and ultimately higher average growth rates was a pending question in the international finance literature. We fill this gap by providing out-of-sample evidence free of post-launch effects.

Appropriately controlling for other determinants of growth that are not endogenous, we establish a mild positive effect of CBs on growth performance and a negative effect on inflation. As is usually the case in the general growth literature, the statistical significance of our results is sensitive to the specification and other control variables employed, but a synthesis of our results suggests that the effect of CBs on inflation and growth performance is in the desired sign and at borderline levels of significance. Hence, our results imply that currency boards in European transition economies basically fulfill the role expected of them.

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URBAN TOURISM TOWARDS SUSTAINABLE DEVELOPMENT

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ABSTRACT

Tourism is a modern global phenomenon and reflects the general development of society. The impact of tourism development implies not only the economic but also environmental, social and cultural aspects of life. Due to the numerous economic benefits arising from its development, tourism has gained a very important status and in many countries has received a significant role and priority in economic development. Tourism, from the area uses certain economic benefits that would otherwise remain unused. However uncontrolled development often destroyed the area where it's realized, and in this way operates contrary to the tourism development primary aims. Uncontrolled development in which tourism is an essential part, bring into the question its further development. Therefore, the object of the paper is to determine the negative effects of uncontrolled and intensive tourism development in urban areas that are not based on the principles of sustainable development. The aim and purpose is to present the importance of applying the principles of sustainable tourism development in urban areas and define the key subjects that will have the impact for the application of the concept of sustainable development in such areas. In order to collect the basic data about the importance of applying the sustainable development conception in urban areas survey method was applied. Kruskal-Wallis test is used for the realization research aims. The research results will serve as the operational guidelines for the destination tourism managers in applying the concept of sustainable development in urban areas.

KEYWORDS: Sustainable tourism development, positive and negative impact, urban areas, Dubrovnik

1. INTRODUCTION

Tourism is very important part of economy for many countries because tourism can bring many economic benefits like further development of the area, employment etc. Although tourism has positive impact on the destination development, uncontrolled and unplanned development may be responsible for many negative effects on the destination. Rapid expansion of the tourism can create a pressure on the natural, social and economic environments of the destination. It is considered that uncontrolled and unplanned development of tourism can have negative impacts on environment, social and economic particularities, but also that all those possible negative impacts represents a serious threat to tourist activities and further development of urban areas. To be sustainable tourism should make optional use of the environmental resources, should respect the socio cultural authenticity of the host communities and ensure viable long term economic operations. Those are the principles of sustainable development of tourism. In order to prevent all those possible negative impacts that tourism could create we have to develop tourism in accordance with the principles of sustainable development so we can protect the basis on which tourism is built. Therefore, the main objective of this paper is to point out the necessity of the implementation the goals and the principles of the sustainable tourism development in the urban areas.

2. LITERATURE REVIEW

The explicit idea of sustainable development was first highlighted by the International Union for the Conservation of Nature and Natural resources in its World Conservation strategy.[1] The original definition of sustainable development was provided by the Brundtland Commission in *Our Common Future* as „development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[2] Authors Vukonić and Keča indicated the following

[1] Zhenhua, I. (1987.) Sustainable tourism development a critique, Journal of sustainable tourism, vol. 11 (6), p. 460. http://www.tandfonline.com (accessed 31.05.2012.)

[2] World Commission on Environment and Development (gro Harlem Bruntland) (1987.) Our Common Future, Oxford University Press, Oxford accessed in Pravidć, V. (1996.) Perspektive održivog razvitka i izbor između ekonomske i ekološke koncepcije, Ekonomija: Hrvatska i održivi razvoj (2) Rifin, Zagreb, p. 339.

definition of sustainable development: „Sustainable development is a change in the structure of global production and consumption that does not disturb the ecosystem".[3] Four basic principles for the concept of sustainability have been considered: idea of holistic planning and strategy making, the importance of preserving essential ecological processes, the need to protect both human heritage and biodiversity and development based on the idea that productivity can be sustained over the long term for future generations.[4] Authors Kordej de Villa, Stubbs and Sumpor indicated that definition of sustainable development as a concept that encompasses intertwined economic (it is defined as growth, efficiency and „equitable „distribution of wealth), social (participate in decision making, social identity) and environmental dimension (respect the integrity of various ecosystems, carrying capacity and protection of natural resources).[5] Concept of sustainability rests on three integrated elements: the economic, socio cultural, and ecological. Delivering sustainable development means striking a balance between mentioned elements.[6] Sustainable development refers to achieving the right balance between social, economic and environmental goals. The goal in economic field is changing unsustainable patterns of consumption and production, while in the environmental field the goal is sustainable managing of natural resources for development.[7] Interpretations of sustainable development can be classified as ranging from „very strong"(traditional resources exploitative) to „very weak" (extreme resources preservationist).[8] Sustainability cannot simply be a „green"or „environmental"concern, no matter how crucial those aspects of sustainability are. A truly sustainable society is one where wider questions of social needs and welfare, and economic opportunity are integrally related to the environmental constraints imposed by supporting ecosystems and the climate.[9] Economic growth and environmental conservation are not only compatible, they are necessary partners and that they cannot exist without another.[10]

The rapidly growing size and significance of the tourism has also given rise to increased critical review of its social and environmental consequences.[11] There is now recognition that uncontrolled growth in tourism aiming at short-term benefits often results in negative impacts, harming the environment and societies, and destroying the very basis on which tourism is built and thrives.[12] Tourism, it is claimed ultimately degrades the attractive natural and cultural features of the place and thus can neither sustain the basic resources on it which relies, not rely on itself as an industry in the long term. If those charges are valid than tourism either can be severely restrained or will eventually burn itself out, but not before causing a great deal of damage.[13] Tourism destinations are facing increasing pressure on their natural, cultural and socio-economic environments as a result of the rapid expansion of the tourism sector.[14] Author Turkelj thinks that negative sides of tourism can place direct pressure on fragile ecosystems causing degradation of the physical environment and create pressure on host communities.[15] Tourism development not only changes the physical landscape of a destination but also results in changes to the social life of the community.[16] Tourism can contribute to environmental degradation, but also has the potential to assist in improving the environmental situation.[17] Tourism can bring many economic benefits for many countries, regions and local communities, uncontrolled development may be responsible for numerous adverse effects on the environment. Today is considered, not only that uncontrolled development of tourism can do harm to the environment, but also that environmental degradation represents a serious threat to tourism related activities.[18] When the exploitation of nature resources for tourism development is carried out carefully and in certain limits, tourism becomes a special form of protection of the nature. We are talking about destructive forms of tourism when tourism uses natural resources in uncontrolled way.[19]

Cultural heritage attractions are, by nature, unique and fragile. Therefore, it is fundamental that tourism authori-

[3] Vukonić, B. Keča, K. (2001.) Turizam i razvoj pojam, načela i postupci, Mikrorad, Zagreb. p. 190.

[4] World Commission on Environment and Development, op. cit., accessed in Lu, Y. Nepal, K. S. (2009.) Sustainable Tourism Research an analysis of papers published in Journal of Sustainable Tourism, Journal of Sustainable Tourism, vol. 17 (1), p. 6. http://www.tandfonline.com (accessed 31.05.2012.)

[5] Kordej De Villa, Ž. Stubbs, P. Sumpor, M. (2009.) Participativno upravljenje za održivi razvoj, Ekonomski institut, Zagreb, p. 18.

[6] Turkelj, Ž. (2010.) Turizam i agroturizam u funkciji održivog razvitka, Sveučilište J.J. Strossmayera u Osijeku, Ekonomski Fakultet Osijek, p. 31.

[7] World Tourism Organization, (2002.) Contribution of the World Tourism Organization to the World Summit on Sustainable Development, Madrid, p. 3., http://www.wtoelibrary.org (accessed 31.05.2012.)

[8] Turner, R. Pearce, D. Bateman, I. (1994.) Environmental Economics an elementary introduction, Hemel Hemstead: Harvester Wheats Heaf, accessed in Harris, R. Griffin, T. Williams, P. (2002.) Sustainable Tourism a global perspective, Elsevier Butterworth Hiennemann, p. 9.

[9] Bramwell, B. Lane, B. (2009.) Priorities in Sustainable Tourism Research, Journal of Sustainable Tourism, vol. 16 (1), p. 1. http://www.tandfonline.com (accessed 31.05.2012.)

[10] Harris, R. Griffin, T. Williams, P. op. cit., p. 36.

[11] McCool, S. F. Moisey, R. N. Nickerson, N. P. (2001.) What tourism should sustain the disconnect with industry percepteption of useful indicators, Journal of travel research, vol. 40 (124.), p. 124. http://jtr.sagepub.com/content/40/2/124 (accessed 15.06.2012.)

[12] World Tourism Organization, op. cit., p. 7.

[13] Harris, R. Griifin, T. Williams, P. op. cit., p. 24.

[14] Butler, R. W. (1999.) Sustainable tourism a state of the art review, Tourism Geographies an international Journal of tourism, space and environment, vol. 1 (1), p. 18. http://www.tandfonline.com (accessed 31.05.2012.)

[15] Turkelj, Ž. op. cit., pp. 30- 31.

[16] Kang, S. K. Lee, C. K. Yoon, Y.S. Long, P.T. Resident perception of the impact of limited stakes community based casino gaming in nature garming communities, Tourism Management, vol. 29 (4.), pp. 681-94, accessed in Doohyun, H. Stewart, W. P. Ko. D. (2012.) Community behavior and sustainable rural tourism development, Journal of travel research, vol. 51 (328.), p. 382. http://jtr.sagepub.com/content/51/3/328 (accessed 15.06.2012.)

[17] Pigram, J. Outdoor Recreation and resource menagement, London, Croom and Helm, accessed in Pigram J. Wahab, S. (1997.) Sustainable tourism in changing word, Tourism development and growth, Routledge, London, p. 19.

[18] Neto, F. (2003.) A new approach to sustainable tourim moving beyond environmental protection, Natural resources forum 27, p. 216.

[19] Vukonić, B. Keča, K. op. cit., pp.82-88.

ties study how best to develop these cultural sites while protecting and preserving them for the long term.[20] World heritage sites include many of the outstanding attractions and monuments of the past. They require management that preserves them for future generations and at the same time, makes them accessible to the public.[21] The World Tourism Organization also indicated that accelerated and the massive growth in tourism has fundamental implications. It means that tourism resources in urban centre, especially cultural sites, monuments and museums are becoming heavily congested. Aware of dangers of mass and unplanned tourism, as well as opportunities for the more human type of cultural encounter between local host and guests, tourism authorities, local communities, and the tourism private sector have to work closely together and apply the principle of sustainability in the planning and management of tourism. A balance must be achieved between tourism development on one hand and cultural preservation on the other. Achieving this balance is a challenge.[22]

Sustainable tourism began life in part as a negative and reactive concept in response to the many issues that tourism had begun to create in the 1970s, issues ranging from environmental damage to serious impacts on society and traditional cultures.[23] In the wake of the World Commission on the Environment and Development Report, Our Common Future tourism research has responded to the popularization of the concept of sustainable development.[24] Since the Rio Earth Summit, sustainability has become the central issue in tourism development policies. The Rio Summit clearly meant a turning point in the level of awareness about sustainable practices in tourism among governments and major groups.[25] Sustainable tourism development is "management of all resources in such a way as to satisfy the economic, social and aesthetic needs, and ensuring the preservation of cultural integrity, ecological processes, biological diversity, and meet basic human needs".[26] In 1996, the World Tourism Organization, the Earth Council and the World Travel & Tourism Council, representing large multinational tourism and travel companies, joined together to launch an action plan entitled „Agenda 21 for the Travel & Tourism Industry: Towards Environmentally Sustainable Development" a sectoral sustainable development programme based on the Rio Earth Summit results.[27] Fundamental principle of all sustainable tourism development policies is that the natural, social and cultural resources upon which tourism depends should be protected.[28] Sustainable tourism as "all forms of tourism development, management and activities that provide long life and cultural activities that will preserve for future use all inherited resources (natural, cultural or built) which allow further development of tourism.[29] To be sustainable tourism should make optional use of the environmental resources, respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and ensure viable, long term economic operations providing socio-economic benefits to all stakeholders.[30] Sustainability is a positive approach intended to reduce the tensions and friction created by the complex interactions between the tourism industry, tourists, the environment and the host communities so that the long term capacity and quality of both natural and human resources can be maintained.[31]

Many authors have proposed that sustainable tourism (alternatively green tourism and ecotourism) be developed to address the social, environmental, and economic issues associated with the tourism industry.[32] Sustainable tourism is tourism that is developed and maintained in a manner and at such a scale, that it remains economically viable over an indefinite period and does not undermine the physical and human environment that sustains and nurtures it.[32] Sustainable tourism can be viewed as "a process which allows development to take place without degrading or depleting the resources . . . so that they remain able to support future as well as current generations".[34] Visions of sustainable development (and sustainable tour-

[20] World tourism organization, (2001.) Cultural heritage and tourism development a report on the international conference on cultural tourism, Madrid, p. 38. http://www.wtoelibrary.org (accessed 31.05.2012.)

[21] World tourism organization (1993.) Tourism at world heritage sites the sites managers handbook international committe on cultural tourism, Madrid, p. 7. http://www.wtoelibrary.org (accessed 31.05.2012.)

[22] World tourism organization, op. cit. p. 5. http://www.wtoelibrary.org (accessed 31.05.2012.)

[23] Bramwell, B. Lane, B. (1993.) Sustainable tourism an evolving global approach, Journal of sustainable tourism, 1(1), 1:5, accessed in Bramwell, B. Lane, B. (2012.) Towards innovation in sustainable tourism research, Journal of sustainable tourism, vol. 20 (1), p. 1. http://www.tandfonline.com (accessed 31.05.2012.)

[24] World Commission on environment and development, op. cit., accessed in Harris, R. Griffin, T, Williams, P. op. cit., p. 3.

[25] World Tourism Organization, op. cit., p. 11. http://wtoelibrary.org (accessed 31.05.2012.)

[26] Globe 90, Tourism Canada, An action strategy for sustainable tourism development,Ottawa, p. 3., accessed in Murphy, P. E. (1998.) Tourism and sustainable development, Global tourism, Butterworth Heinemann, Second edition, Oxford, p.179.

[27] World tourism organization, op. cit., p. 24. http://www.wtoelibrary.org (accessed 31.05.2012.)

[28] Sharpley, R. (2000.) Tourism and sustainable development exploring the theoretical divide, Journal of sustainable tourism, vol. 8 (1), p. 12. http://www.tandfonline.com (accessed 31.05.2012.)

[29] Travis, A. S. Sustainable tourismn concept and innovations in coastal areas and coastal city, Zbornik radova međunarodnog znastvenog skupa prema održivom razvitku turizma u Hrvatskoj, Institut za turizam, Zagreb, accessed in Magaš, D. Smolčić, Jurdana, D. (1999.) Metodološki aspekti određivanja prihvatnog kapaciteta turističkog područja, Tourism and hospitality management, vol.5., no. 1-2, Opatija/Wien, p. 98.

[30] World tourism organization (2005.) Sustainable definitions of tourism conceptual definition http://www.world-tourism.org/frameset/frame_sustainable.html, accessed in Turkalj, Ž. op. cit. pp. 31-32.

[31] Bramwell, B. Lane, B. op. cit., p. 1, accessed in Zhenhua, L. op. cit. p. 460. http://www.tandfonline.com (accessed 31.05.2012.)

[32] Butler, R. W. (1991.) Tourism, environment and sustainable development, Environmental conservation, 18 (3) pp. 201-9 accessed in McCool, F. S. Moisey, R. N. Nickerson, N. P. op. cit., p. 124. http://jtr.sagepub.com/content/40/2/124 (accessed 15.06.2012.)

[33] Harris, R. Griffin, T. Williams, P. op. cit., p. 24.

[34] World tourism organization (1993.) Sustainable tourism development guide for local planners, Madrid, accessed in Soteriou, E. C. Coccossis, H. (2010.), Integrating sustainability into the strategic planning of national tourism organizations, Journal of travel research, 49 (2) p. 191. http://jtr.sagepub.com/content/49/2/191 (accessed 15.06.2012.)

ism) are couched in the language of „balance" finding the right balance between the need for development and the need for environmental protection.[35] Sustainable tourism as a tourism that: both now and in the future operate within natural capacities for the regeneration and future productivity of natural resources; recognize the contribution that people and communities, customs and lifestyles, make to the tourism experience; accept that these people must have an equitable share in the economic benefits of local people and communities in the host areas.[36]

Sustainable tourism is defined as an alternative tourism form that improves the quality of life of the host community provides a high quality of experience for the visitors and maintains the quality of the environment on which both the host community and the visitor depend.[37] Sustainable tourism as „tourism which is developed and maintained in an area (community, environment) in such a manner and at such a scale that it remains viable over an infinite period and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and well being of other activities and processes".[38]

2.1. Urban tourism and importance of sustainability principles in urban areas

Urban tourism has emerged as a significant and distinctive field of study during the 90s. Earlier work, dating back to the 60s, was sporadic and limited in scope, much of it being carried out by geographers.[39] According to Law four factors have propelled cities toward tourism development: the decline of long established manufacturing activities, the need to create new economic activities or face high unemployment, the perception of tourism as the growth industry and the hope that tourism development will result in the regeneration and revitalization of urban cores.[40] Major urban areas perform important functions within the workings of the overall tourism system: for example, they are key ''gateways'' for both international and domestic tourists and, as key nodes in the air transport system, act as staging posts for multi-destination trips. Many of these functions are often taken for granted and, as a consequence, the requirements for profitable and sustainable tourism development in urban areas are not well understood.[41]

The attractiveness of urban destinations according to Karski lies in the "… rich variety of things to see and do in a reasonably compact, interesting, and attractive environment, rather than in any one component. It is usually the totality and the quality of the overall tourism and town centre product that is important …".[42] According to Law here are some key attributes that urban areas have to possess as tourist destinations. They have naturally large populations which in turn attract visiting friends and relatives. They draw tourists to their attractions because these are often much better developed than in other types of destinations. They are easily accessible through airports and scheduled services. There is a large stock of accommodation built to serve the business traveller and finally, urban destinations appeal to a number of different tourist markets as they offer the communications, transport, services and facilities which meet tourist needs.[43] Urban expansion has firmly established cities as strategic centres of growth, innovation, and creativity, making it essential to ensure their sustainability in the twenty-first century.[44]

Urban tourism is becoming one of the fastest growing tourism sectors in the world. The unexplored opportunities and the rising adverse effects on the local communities, however, are increasingly highlighting the importance of dealing with the sector in relation to the urban economy, environment, society, and cultural specifics.[45] This increase in attention in part reflects the growth of tourism in urban areas and its resulting associated policy issues. This tend to be of two main types. On the one hand, the growing demand from tourists, particularly in historic cities, has brought a reactive response arising from the problems of coping with increased visitation, a situation perhaps most commonly experienced in Europe.[46] On the other, many

[35] Harris, R. Griffin, H. Williams, P. op. cit., p. 10.

[36] Eber, S. ed. (1992.) Beyond the green horizont a discussion paper on principles for sustainable tourism, Goldaming, UK accessed in Butler, R. W. op. cit., p. 10. http://www.tandfonline.com (accessed 31.05.2012.)

[37] McIntry, G. (1993.) Sustainable tourism development guide for local planners, Madrid, Hwan, S. Choi, C. Sirakaya, C. (2005.) Measuring residents attitude toward sustainable tourism Development of sustainable tourism attitude scalee, Journal of travel research, vol. 43 (380), p. 381.

[38] Butler, R. W. op. cit., p. 18.

[39] Guttierez-Ronco, S. (1977.) Localizacion Actual de la Hostelaria Manrilena Boletin de la Real Sociedad Geografica 2:347-357, Pearce, D. G. (1981.) L espece touristique de la grand ville: elements de synthe et application a Christchurch, L espece Geographique, 10:207-213, accessed in Pearce, D. G. (2001.) An integrated framework for urban tourism research, Annals of tourism research, vol. 28. no. 4., Elsevier science Ltd, p. 126., accessed in www.elsevier.com (01.09.2012.)

[40] Law, C. M. (1993.) Urban Tourism Atrracting visitors to large cities, London, Mansell accessed in Chan, T. C. (1996.) Urban heritage tourism the global local nexus, Annals of tourism research, vol. 23. no. 2., Elsevier Science Ltd, p. 286., accessed in www.elsevier.com (31.08.2012.)

[41] Edwards, D. Griffin, T. Hayllar, B. (2008.) Urban tourism research: developing an agenda, Annals of tourism research, vol. 35. no. 4., pp. 1032-1052, Elsevier Ltd, p.133. accessed in www.elsevier.com (31.08.2012.)

[42] Karski, A. (1990.) Urban tourism a key to urban regeneration, The planner (April 6), 15-17, accessed in Pearce, G. D., op. cit., p. 927.

[43] Law, C. (1996.) Tourism in major cities, London: international Thompson Bussine press/Routledge, accessed in Edwards, D. Griffin, T. Hayllar, B. op. cit., p. 1033.

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[45] Ibidem., p.109.

[46] Van der Borg, J. (1998.) La gestion du tourisme dans les villes historiques, in Cazes, G. Potier, F. Eds, Le tourisme et la ville: experience Europennes, pp. 99-109, accessed in Pearce, D. op. cit. p. 927.

urban policies have recently incorporated an increasingly proactive stance towards tourism which is seen more and more as a strategic sector for urban revitalization in post industrial cities.[47] Growth in tourism demand will positively affect income and employment levels of a relevant part of the population. At the same time, increasing numbers of visitors will generate negative effects, or "costs" borne by the physical and cultural environment, the local population and the visitors themselves. A particular concern is the manner in which tourist's effect changes in host communities collective and individual value systems, behaviour, patterns, community structure, lifestyle and quality of life.[48] Urban tourism now is being increasingly seen as a means of developing competitive urban destinations, in the context of improving the attractiveness and functioning of places and regions as visiting areas through a sustainable process, not just economically and ecologically, but socially, culturally, and politically as well.[49]

Urban areas have always attracted visitors, but in the recent years tourism to cities has increased and the visitors economy has become more important to them.[50] Development of tourism in cities can bring to the city a lots of positive things (economic benefits, employment), but on the other hand arrivals of tourists, especially in large numbers, can create negative effects. Authors Girard and Nijkamp indicated that negative sides of the presence of tourists, especially in large numbers may have adverse effects on the local quality of life, to the point of possibly destroying the social and cultural uniqueness of locations.[51]

2.2. Dubrovnik as an example of urban tourism area

Dubrovnik is destination in which urban tourism is developed. Tourists' arrivals, overnights and environment protection in Dubrovnik Neretva County are shown below. More than 1.922.104 overnights in Dubrovnik Neretva County are realized in August. 1.174.168 of the overnights are realised in July in Dubrovnik Neretva County.[52] Most of those overnights are realized in the city of Dubrovnik. From this date we can see that more than 50% of the total overnights (in 2010.) are realized in just two months during the high season in Dubrovnik. Tourist season in Dubrovnik last from June until October, and most of the overnights and arrivals in this county is realized in that period of time. Large numbers of tourists in such short period of time can create negative effect on environment, biodiversity, and what is the most important can have negative impact on destination.[53] Furthermore investments in environment protection are very low. We invest in environment protection 9.026.000 HRK which is only 0,39 % of the total investments in environment in Croatia.[54] From this date we can conclude that investments in environment protection in this county are very low especially when we know that this destination depends only on tourism development. In the future we have to invest more in environment protection so we can prevent possible negative effects on environ on which tourism depends. All this data can show us that we have to develop tourism in this destination in accordance with the principles of sustainable development so we can avoid negative impacts on the destination.

3. DATA AND METHODOLOGY

In order to present the importance of applying the principles of sustainable tourism development in urban areas and determine the negative effects of uncontrolled and intensive tourism development in urban areas that are not based on the principles of sustainable development, an analysis was carried out, where primary data was collected and compiled alongside the collection of secondary data. In order to identify the key subjects that will have the impact for the application of the concept of sustainable development, empirical research was carried out using a sample survey taken from among 150 randomly-chosen local residents in Dubrovnik. The research was conducted within the cooperation between University of Dubrovnik and „Deša" association with aim to determined necessaries and features for customization local centres of sustainable development in Dubrovnik Neretva County. The research was carried out from June 1st to September 1st, 2010. In total, 185 questionnaires were distributed among residents of Dubrovnik out of which 150 were correctly filled.

The data obtained from the survey were analyzed using different analytical tools, including methods of analysis and synthesis, inductive and deductive methods, method of generalization and specialization, and different statistical methods. A survey was made for the purpose of emphasizing the role and importance of implementation the principles of the sustainable tourism development especially in the urban tourism areas. The aim of the research was to create operational guidelines for the destination tourism managers for applying the concept of sustainable

[47] Jansen-Verbeke, M. C. Lievois, E. (1999.) Analysing heritage resources for urban tourism in European cities, In Pearce, D. G. Butler, R. W. eds, Contemporary issues in tourism development, London, Routledge, pp. 81-107, accessed in Pearce, D. G. op. cit. p. 927.
[47] Jansen-Verbeke, M. C. Lievois, E. (1999.) Analysing heritage resources for urban tourism in European cities, In Pearce, D. G. Butler, R. W. eds, Contemporary issues in tourism development, London, Routledge, pp. 81-107, accessed in Pearce, D. G. op. cit. p. 927.
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[50] Law, C. M. (2002.) Urban tourism the visitor economy and the growth of larges cities, Cengage Leaming, p. 13.
[51] Girard, L. F. Nijkamp, P. (2009.) Cultural tourism and local sustainable development, Ashgate Publishing Ltd, London, p. 13.
[52] www.dzs.hr (27.11.2011.)
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[54] www.dzs.hr (27.11.2011.)

development in urban areas. As dependent variable was measured on ordinal scale Kruskal-Wallis test was used. All statistical analyses were made using an SPSS package version 17.0.

The goals of the research aimed to prove or reject the following hypotheses:

H1: The major role in the application of the concept of sustainable development in urban tourism areas has regional and local autonomy and local tourist board
H2: Regional and local autonomy need to participate the most in application of the concept of sustainable development in domain of optimal resources use, cultural heritage conservation and environmental protection.

4. RESULTS

The table below shows results of descriptive statistical analysis of frequencies.

Table 1. Respodent profile

Demographic characteristics		Frequency	Percentage (%)
Age	18-39	83	55,3
	40-69	62	41,3
	70 and over	5	3,4
Gender	Male	87	58
	Female	63	42
Education	High school and less	84	56
	College	60	40
	Post-graduate school	6	4
Occupacy	Unemployed	18	12
	Farmer	0	0
	Private undertaking	13	8,7
	Employed in public sector	45	30
	Employed in private sector	55	36,6
	Manager	7	4,7
	Rest	12	8

Source: Authors research

H1: The major role in the application of the concept of sustainable development in urban tourism areas has regional and local autonomy and local tourist board

Table 2. The role in the application of the concept of sustainable development in urban tourism areas

Type of stakeholder	Yes	No	Partly
Government	82	2,7	15,3
Regional and local autonomy and local tourist board		38	51,47
90,7		115	
2,7			
6,7			
Economic operators	84,7	5,3	10

Respondents considered that all quoted stakeholders have the huge role in application of sustainable development concept in Dubrovnik as urban area, but their attitude is that the major impact has regional and local autonomy and local tourist board.

H2: Regional and local autonomy need to participate the most in application of the concept of sustainable development in domain of optimal resources use, cultural heritage conservation and environmental protection.

Table 3. Ranks

	Optimal use of resources	N	Mean Rank
Regional and local autonomy and local tourist board	Strongly disagree	2	91,0
	Disagree	3	42,50
	Neither agree nor disagree	35	67,69
	Agree	67	70,19
	Strongly agree	**42**	**90,33**
	Total	149	

Results of the Kruskal Wallis test are:
- Chi-Square = 11,223
- Df = 4
- Asymp. Sig. = ,024

Table 4. Ranks

	Cultural heritage conservation	N	Mean Rank
Regional and local autonomy and local tourist board	Strongly disagree	1	123,50
	Disagree	1	10,50
	Neither agree nor disagree	16	55,69
	Agree	55	72,87
	Strongly agree	**76**	**80,82**
	Total	149	

Results of the Kruskal Wallis test are:
- Chi-Square = 10,113
- Df = 4
- Asymp. Sig. = ,039

Table 5. Ranks

	Environmental protection	N	Mean Rank
Regional and local autonomy and local tourist board	Strongly disagree	1	123,50
	Neither agree nor disagree	12	51,92
	Agree	51	70,18
	Strongly agree	**85**	**80,58**
	Total	149	
		1	123,50

Results of the Kruskal Wallis test are:
- Chi-Square = 8,316
- Df = 3
- Asymp. Sig. = ,040

Data review showed in Tables 3, 4 and 5, as the results of Kruskal Wallis test, confirm the second hypothesis that regional and local autonomy need to participate the most in application of the concept of sustainable development in domain of optimal resources use, cultural heritage conservation and environmental protection.

5. CONCLUSION

Urban tourism areas are facing increasing pressure on their natural, cultural and socio-economic environments as a result of the rapid expansion of the tourism. Implementation of sustainable development principles refers to achieving the right balance between social, economic and environmental goals. Uncontrolled tourism development ultimately degrades the attractive natural and cultural features of the place and thus can neither sustain the basic resources on it which relies, not rely on itself as an industry in the long term, although tourism can bring many economic benefits for many countries, regions and local communities. Sustainability is a positive approach intended to reduce the tensions and friction created by the complex interactions between the tourism, tourists, the environment and the host communities so that the long term capacity and quality of both natural and human resources can be maintained. The need to create new economic activities, the perception of tourism as the growth industry had induced urban areas toward the tourism development. Major urban areas perform important functions within the workings of the overall tourism system. Therefore this paper analyzed positive effects of the implication of the sustainable principles in the urban areas with the example of Dubrovnik. Research attempted to determine the community awareness about the need for implementation of the sustainable principles in the urban areas. Results showed that all quoted stakeholders have the huge role in application of sustainable development concept in Dubrovnik as urban area, but their attitude is that the major impact have only regional and local autonomy and local tourist board and also that regional and local autonomy need to participate the most in application of the concept of sustainable development in domain of optimal resources use, cultural heritage conservation and environmental protection. All above mentioned indicate that implementation of the sustainable principles of the development in the urban areas such is Dubrovnik is at the same beginning. Only by raising the general level of the importance of the sustainable education of the whole community, not only of the regional and local autonomy and local tourist board, it is possible to get benefits of the tourism development for the long term. According this research it is evident that now is created completely incorrect vision of the sustainable development.

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WEALTH, POVERTY AND HAPPINESS IN THE CONTEXT OF THE DIFFICULT CONDITIONS OF THE EARLY 21ST CENTURY

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ABSTRACT

Wealth, poverty and happiness, as well as their interdependencies, respectively the mutual interrelations have attracted the interest of philosophers, economists, psychologists, sociologists, but also scientists from other disciplines, politicians and policy makers. The beginning of 21st is associated with the formation of new economies. The formation of new economies presents very complex, dynamic and costly process which, moreover, takes place in conditions of strong globalization trends as well as in conditions of the global financial and economic crisis. The beginning of 21st century is associated with continued deepening polarization within individual countries, regions, but also in global context. This strengthens the position of a minor elite, weakens the position of the middle class and increasing number of people who are at risk of poverty. Complexity of the conditions requires special attention. The aim of the paper is to contribute to the ongoing debate about the need for a new perception wealth, poverty and happiness, the need to respect their mutual relations and compliance, the need to identify the causes of having to change their perceptions and the consequences of these changes. On the basis of generalization of acquired theoretical and empirical knowledge to identify the possible alternatives for further development, that will correspond with the needs of the formation of new economies in the difficult conditions in the early 21st century. The processing of the issues supposes the application of a multidisciplinary approach. A multidisciplinary approach is based mainly on knowledge of economics, sociology, positive psychology, political science. To check the hypothesis that there is a relationship and conditionality between wealth, poverty and happiness we use a wide spectrum indicators on the example of the EU.

KEYWORDS: Wealth, Poverty, Happiness, New economy, Polarization, Minor elite

1. INTRODUCTION

The end of the first decade and the beginning of the second decade of the 21st century can be characterized as a period for which is symptomatic a shift from positive expectations to more or less negative expectations in the national, regional and even in global context. The negative impacts of the global financial and economic crisis have affected all countries, all subjects although to varying degrees and in different directions. Scientists need to correct their vision of forming new economies, integration and globalization processes. Scientists must justify the need for orientation on real resources and their effective use. In this scenario, it can be expected not only an increase of the competitiveness of individual economies, but also the growth of prosperity, and of well-being just some individuals or some economies, as well the positive development in the global context. Scientists must intensify their effort in the direction of correction of their perception, because the real resources are limited. Appropriate choice of their use, the elimination of the inefficiencies and the fairer distribution can lead to the restoration of positive expectations.

2. SOME ASPECTS OF THE PERCEPTION OF WEALTH, POVERTY AND HAPPINESS

2.1. The perception of wealth, poverty and happiness and their determinants (methods)

The aim of the paper is the identification of the particulari-

[1] The paper was elaborated within the project VEGA No. 1/0174/11 Determinants of forming the Knowledge Economy in the Context of the New Economic Strategy "Europe 2020" and within the framework of the OPV and V called A creating of excellent economic research for solving the civilizational challenges in the 21st century (ITMS 26240120032). We support the research activities in Slovakia. Project is financed by the EU.

ties of perception of wealth, poverty and of happiness, of their interdependencies and mutual conditionality, as well as the identification of the main determinants that affecting them. Therefore, it was necessary to apply the general and specific theoretical methods as a method of scientific abstraction, analysis and synthesis, induction and deduction. It was desirable to apply the logical - historical approach in order to obtain correct knowledge.

Based on the analysis of works and of the elimination of irrelevant knowledge, as well as, on the basis of synthesis of generalized knowledge, and consequently, their comparisons be to identify the shifts in the perception of wealth, poverty and happiness, also to identify the need for a redefinition of these categories with regard to changed conditions. Specification of mutual conditionality was performed by comparing of a wider range of indicators, using statistical data and by their interpretation. Application of multidimensional approach meant the application of specific methods appropriate to specific disciplines (empirical surveys, tests).

2.2 Theoretical aspects of the perception of wealth, poverty and happiness (results).

The limited scope of the paper does not capture the full area of diverse views on wealth, poverty and happiness, yet we try to point out a few insights that we consider to be inspiring. It is desirable to indicate that the theory does not provide a clear definition of wealth and poverty as well as happiness. We meet with the narrower or broader definitions, also with the definitions that are contingent of particularities of different sciences.

Many scientists defined the wealth. J. Tobin defined wealth as a continuous spectrum of assets, the assets of various types that individual subjects freely confuse depending on their expected returns, the expected risks, as well as on the transaction costs. F. Modigliani defined wealth as the sum of current assets, the current labor income and the current value of expected future income, I. Fisher described the wealth as the current value of the future stream of income, or M. Friedman defined wealth by supporting the five structural components of wealth - money, securities, bonds, movable and immovable assets, and human capital. Generally, wealth can be defined as the monetary value of all assets that an individual or household has at some point. The extent of the assets is not identical for all authors.[2]

Scientists are looking for answers to questions affecting the motives of creation and accumulation of wealth, particularly the creation of enormous wealth in the hands of minor elite. American economist K. Galbraith very concisely wrote that the motive for wealth accumulation is the satisfaction from the power, honors and the possession of things that a person acquires due to wealth (Galbraith, 1967). Undoubtedly, exists a wide range of other motives such as: a sense of freedom of choice without the borders; the possibility of further acceleration of wealth due to a greater number of opportunities, as the ability to conduct business on a global scale, where they can succeed only the strongest players; the opportunity to meet all needs without need to seek a compromise; the possibility of participation on the global information and knowledge resources; the possibility of self - realization; an enhance of self-esteem; the strengthening its position within the company; the opportunity to ensure the safety, security and health. At the same time exists a number of motives that leading to the formation of enormous wealth, but not necessarily in full accordance with the law or with the ethical principles. The wealth allows them to hire the best lawyers, accountants or other professionals who are able to legalize the revenues from illegal, but highly profitable activities.

Based on the generalization of knowledge can be stated that the main resources of enormous wealth are: a huge capital concentrated in the hands of a few individuals, the high profits from high-risk investments or the extremely high wages of young experts or some managers operating in the financial markets. The elite of the financial sector also benefits from the existing rules. In some cases, the wealth was not acquired by efforts and an extraordinary commitment, but it was obtained through a system that does not provide the border.

The scientists have long been pointed out the need for correction of the definition of poverty. It should be noted that there is no consensus on the definition of poverty. We may encounter with a very narrow definition of income poverty, but also with more complex view of the definition of poverty. Several authors point to the fact that poor people cannot make the choice that is common for wealthy individuals, respectively wealthy households. In general, poor people are more at risk of various diseases also they are more vulnerable and unable to lead honorable life. These people are not able to perform their functions in society, respectively do not wish to participate on the activities of society (Dahrendorf, 1991, Sen, 2006, Payne, 2006).

Scientists do not pay attention only to the definition of poverty, but also to the identification of the various causes that lead to poverty. If the cause of poverty is the freedom of trade or globalization; the loss of competitiveness of firms and the growth of unemployment, particularly of long-term unemployment; the emergence of new economies and the associated lack of qualifications in relation to the needs of the market, for

[2]Rozborilová, D. (2005). Teória spotreby, úspor, investícií a vládnych výdavkov, s. 21 – 70, 71 – 86. True wealth incorporated money, health, relationships, time to do the things you want to do, having meaning and purpose in your day to day. Schneider, K.: Happiness creates wealth. Mhtml:file://G:\Happiness creates wealth.mhtml

example computer illiteracy or an ignorance of foreign languages and the limited ability of mobility (search for employment outside the home´s country); the financial costs of acquiring knowledge and skills that correspond to market conditions, while these conditions are constantly changing and without lifelong learning is the keeping of job unrealistic; the loss of breadwinner; the serious illness; the disability; old age; a different starting position; a different talent or the various physical assumptions is required different approach than in the cases, if the cause of poverty lies in a lack of interest in work; or people consciously work towards it to become poor.

The knowledge of the causes of poverty creates better conditions for to detect the consequences of poverty and for its elimination. Eliminating poverty is not very realistic, but what can be regarded as real is poverty alleviation. To the most serious consequences of poverty can be classified: inability to meet needs beyond the basic needs; decrease in purchasing power due to reducing of business activity and employment; the upward pressure on government spending, respectively expenditures and activities of other entities; crisis of values; family crisis; apathy; depression; suicidal tendencies; respectively addiction; aggression; crime; low chance of achieving of sound lifestyle, which is reflected in a higher risk of serious diseases that may threaten the entire society; the lack of interest of participation in the activities of society; social exclusion, with all the negative impacts on individuals as well as on the society. Although this is only a fraction of the different effects of poverty, their significance is undeniable. Poverty is seen as one of the most important phenomena of today.

Poor individuals, respectively households often get into situations that can be characterized as social exclusion. It is an allocation to the margin of society that excludes them from participation in the activities of the society. The seriousness of social exclusion is in the difficulty of its identification because can be examined in the context of different levels (local, regional, national and global) as well as in the context of different dimensions (economic, political, cultural or spiritual.)

Similarly, scientists from different fields of science looking for answers to the questions: What determines human happiness? Which determinants play the dominant role? Jeremy Bentham, an important representative of utilitarianism, wrote that the best society is one where the people are happiest, and the best policy is one that produces the greatest happiness. The aim of the society is to ensure the highest level of happiness for as many people as possible. He pointed out that in people´s lives are present both pleasure and suffering and also he suggested the methodology as to test the happiness. Bentham concluded that the level of each suffering or pleasure can be measured on the basis of the following categories: intensity, duration, certainty, proximity, productiveness, purity and extent. He cover pleasure and suffering to both aspects, to the material as well as to the spiritual aspects. Bentham believed that the government can intervene if creates a space to achieve a sustainable level of happiness. The ideas of Bentham were elaborate by others authors such as the great English economist John Stuart Mill. Mill evaluated a success of government on its ability to create equal opportunities[3] for all and to prevent excessive concentration of wealth.

Further contribution to the theory of happiness provided by the authors of the old and new school of the welfare economics. Arthur Cecil Pigou proclaimed that the goal of welfare economics is the study of determinants which influence economic welfare. He approved of government intervention in case that the obstacles would arise to facilitate the increase of welfare. J. R. Hicks and N. Kaldor, authors of the new school of the welfare economics, distinguished between individual and social welfare and stressed that the maximization of individual welfare does not have necessarily to coincide with the social welfare maximization. They designed the compensation test, which have been subjected to considerable criticism (Kaldor, 1939, Hicks, 1975).

The approaches of institutionalists, neoinstitutionalists, and also of the authors of positive psychology (Fordyse, 1997, Seligman, Peterson, Steen, Park, 2005, Haidt, 2006, Diener, 2000) or of the authors of the theory of public choice (Pestieu, 2006, Besley, 2001) can be seen as the alternative approaches. Institutionalists and neoinstitutionalists apply a holistic approach to examining the ability of government to pursue a policy that is ultimately for the benefit of the whole society. The authors analyze the ability of government to use the institutional factors to desirable behavior that ensures maximization of happiness (Galbraith, 1967).

Significant benefits can be attributed to authors of positive psychology who apply a holistic approach to finding the answers to questions: What is happiness? Can we define happiness? Can we measure the intensity of happiness? What is the most important thing in life? The authors of positive psychology have attempted to specify the definition of happiness and to identify the determinants that affect happiness in different countries of the world. Jonathan Haidt, professor of psychology, identified the definition of happiness: pleasure + engagement + meaning = happiness (Haidt, 2006). Happiness is perceived as a positive emotion that can be described also in other words as contentment, satisfaction or well-being. In their view, the most important deter-

[3]The equity is the category which is provoked and continues to provoke much heated debate. In order to avoid sharp rejection encountered in the theory and practice of substituting the term by another term, which is milder and more accept. The concept of equity is usually replaced with the concept of fairness.

minants are income, wealth, social relations, employment, health, age, social status and freedom.

Several scientists have shown the impact of income and wealth on happiness. American sociologist Richard Easterlin wrote that happiness was found to be an increasing function of income however the marginal impact on happiness was found to decline with the increasing income (Easterlin, 2001). Easterlin also concluded that people are less happy despite the fact that they are richer. Extra wealth has not brought extra well-being. It could even be making matters worse. British economist Richard Layard perceived income and personal relationship as the important determinants of happiness. Higher incomes are generally the basis of higher happiness, but it is not completely a linear relationship. The richer societies are not happier than poorer societies in the case when the average income is above 10 000 £ per head because people compare their incomes with the incomes of other people. In rich societies, the quality of personal relationships affects happiness (Layard, 2005). Angus Deaton analyzed the data on health satisfaction and life satisfaction to national income, age, and life expectancy. In some aspects, the findings aligned with the conventional wisdom that wealth brings happiness. The citizens of richer countries are on average more satisfied with their lives than the citizens of poorer countries. Each doubling of national income is associated with a near one unit increase in average life-satisfaction. He came to an interesting conclusion. Deaton´s findings on life satisfaction are directly contrary to the idea that countries with high adult mortality rates would have correspondingly a

low ranking in life and health satisfaction. In fact, it has little effect (Deaton, 2006). The scientists also pointed out that the combination of some determinants can increase happiness, but in other cases can lead to its decrease for a given individual, or for other individuals. The social scientists discovered that the levels of life satisfaction gradually decline over the last quarter of a century.[4]

American psychologist Ed Diener is one of these scientists who foresee the possibility to measure happiness by asking people how happy they are. Diener prepared a test that consists from five the statements. People must decide whether they agree or disagree using a 1 – 7 scale. Test is available on the internet. Anyone who is interested can be tested, and can learn what can do to be happier and those the determinants may contribute to greater happiness. Some researchers prefer a different approach. People must describe in their own words what happiness means to them.

Table 1. Test your Happiness by Ed Diener

The statement of the test:
1. In most ways my life is ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.
7 scales: 1.Strongly disagree, 2. Disagree, 3.Slightly disagree, 4.Neither agree nor disagree, 5. Slightly agree, 6. Agree, 7. Strongly agree.

Source: Happiness test by Professor Ed Diener from the University of Illinois. http://www.goodnewsfor.com/san-clemente/happiness-test.php

2.2.1. A spectrum of the indicators – an assumption of identification of interdependencies and the mutual conditionality

Scientists from different fields of science looked for the answers to the questions: What determines wealth, poverty and happiness? Which determinants play a dominant role at different levels of economic development? We can consider about a mutual conditionality between wealth, poverty and happiness? Scientists are looking for the best indicators that identifying the situation in individual countries, not only in the terms of ensuring a long-term economic growth, but particularly in terms of the conditions for the growth of prosperity of society and of well-being of individual members of society.

The understanding of mutual conditionality eliminates the problems of a simplified view on the situation in the individual countries, eliminates a simplified perception of economic growth, as well as an increase of the competitiveness of individual economies, and the ongoing integration and globalization processes that reflect an automatic growth of wealth and prosperity. The aim of paper was also to verify the hypothesis that higher income and more wealth while mean increase happiness for the individual members of society, but beyond a certain limit of income or wealth leads to marginal increase of happiness.

Table 2. Human Development Index, Happy Planet Index, Index of Wellbeing – Overall- Life satisfaction and Legatum prosperity index

Indicators Countries	HDI 2011	Ranking	GNI per Capita PPP $	* Life expectan	**	***	HPI	a)	b)	c)	LPI 2009	LPI 2011	OLS****
France	0.884	20	30.462	81.5	10.6	16.1	46.5	6.8	81.5	4.9	18	18	6.8
Germany	0.905	9	34.854	80.4	12.2	15.9	47.2	6.7	80.4	4.6	16	15	6.7
Italy	0.874	24	26.484	81.9	10.1	16.3	46.4	6.4	81.9	4.5	26	30	6.4
Belgium	0.886	18	33.357	80.0	10.9	16.1	37.1	6.9	80.0	7.1	15	17	6.9
Netherlands	0.910	3	36.402	80.7	11.6	16.8	43.1	7.5	80.7	6.3	11	9	7.5
Luxemburg	0.867	25	50.557	80.0	10.1	13.3	29.0	7.1	80.0	10.7			7.1
UK	0.863	28	33.296	80.2	9.3	16.1	47.9	7.0	80.2	4.7	13	13	7.0
Denmark	0.895	16	34.347	78.8	11.4	16.9	36.6	7.8	78.8	8.3	2	2	7.8
Ireland	0.908	7	29.322	80.6	11.6	18.0	47.4	7.3	80.6	6.2	9	11	7.3
Finland	0.882	22	32.438	80.0	10.3	16.8	42.7	7.4	80.0	6.2	4	7	7.4
Sweden	0.904	10	35.837	81.4	11.7	15.7	46.2	7.5	81.4	5.7	7	5	7.5
Austria	0.885	19	35.719	80.9	10.8	15.3	47.1	7.3	80.9	5.3	14	14	7.3
Spain	0.878	23	26.508	81.4	10.4	16.6	44.7	6.2	81.4	4.7	20	23	6.2
Portugal	0.809	41	20.573	79.5	7.7	15.9	38.7	4.9	79.5	4.1	25	25	4.9
Greece	0.861	29	23.747	79.9	10.1	16.5	46.5	5.8	79.9	4.9	36	40	5.8
Slovenia	0.884	21	24.914	79.3	11.6	16.9	40.2	6.1	79.3	5.2	23	27	6.1
Czech Republic	0.865	27	21.405	77.7	12.3	15.6	39.4	6.2	77.7	5.3	24	26	6.2
Slovakia	0.834	35	19.998	75.4	11.6	14.9	40.1	6.1	75.4	4.7	37	32	6.1
Poland	0.813	39	17.451	76.1	10.0	15.3	42.6	5.8	76.1	3.9	28	28	5.8
Hungary	0.816	38	16.581	74.4	11.1	15.3	37.4	4.7	73.3	4.0	38	36	4.7
Lithuania	0.810	40	16.234	72.2	10.9	16.1	34.6	5.1	72.2	4.4	40	44	5.1
Latvia	0.805	43	14.293	73.3	11.5	15.0	34.9	4.7	73.3	4.0	41	51	4.7
Estonia	0.835	34	16.799	74.8	12.0	15.7	34.9	5.1	74.8	4.7	31	33	5.1
Malta	0.832	36	21.460	79.6	9.9	14.4	43.1	5.8	66.6	2.6			5.8
Cyprus	0.840	31	24.841	79.6	9.8	14.7	45.5	6.4	79.6	4.4			6.4
Bulgaria	0.771	55	11.412	73.4	10.6	13.7	34.1	4.2	73.4	3.6	47	48	4.2
Romania	0.781	50	11.046	74.0	10.4	14.9	42.2	4.9	74.0	2.8	48	58	4.9

Source: Human Development Index and its Components. Statistical Tables – Table 1.pp. 127 – 130, Human Development Report 2011. HDI world 0,682; Human development Index groups: Very high human development 0,889; High human development 0,741; Medium human development 0,630; Low human Development 0,456. Gross national income (GNI) per capita (constant 2005 PPP $), * life expectancy at birth, ** means years of schooling, *** expected years of schooling. Happy Planet Index a/ experienced well-being, b/ Life expectancy, c / ecological footprint. The 2011 Legatum Prosperity Index TM an Inquiry into Global Wealth and Wellbeing. Legatum Institute. High ranking countries (top 30), medium ranking countries (middle 50), Low ranking countries (bottom 30). Ranking of countries in years 2009 and 2011, s. 43. www.prosperity.com. In 2011, data for 110 countries in which lives 93% of the world´ s population. **** Well-Being - Overall – Life Satisfaction 2006 – 2010 (0 - least satisfied, 10 – most satisfied). Perceptions about Well-Being and the Environment, table 8, pp. 154-157. The value of OLS for the world is 5.3. Human Development Report 2011. Gallup´s methodology ensures that the reported data are representative of 95% of the world´s adult population.

The Human Development Index is a composite index that measures an average achievement in three basic dimensions of human development – along and healthy life, knowledge and a decent standard of living. All countries of EU, except Bulgaria and Romania, have very high human development. Bulgaria and Romania are among the countries with high human development. The ranking of countries shows that the very high human development is not connected always with countries that have the highest economy level. In the top ten ranking were placed – Netherland, Denmark, Finland and Sweden, and in the twenties were placed Ireland, United Kingdom, Austria, Germany and Belgium. The Happy Planet index is an indicator that identifies the experienced wellbeing, life expectancy, and ecological footprint. Ecological footprint reflects the amount of natural resources that are needed to maintain the life style of a country. Some countries consume much more than would correspond to their share of natural resources. Between these countries are placed Luxemburg, Denmark and Belgium. In comparison, the goals set for 2050 - the average value of HPI 89, life expectancy 87, experienced well- being 8,0, and ecological footprint 1,7. The Legatum Prosperity Index TM provides the world global assessment of prosperity based on income and well-being, what makes this index unique. LPI creates an area for capturing a holistic prosperity unlike the traditional indicators of prosperity. From our point of view is important to remember that prosperity is not about money, it is also about satisfaction with life. LPI is also the first global index that provides an empirical basis for an intuitive sense that true prosperity is a complex blend of income and wellbeing. The advantage of this index is that examines the correlations of both income and wellbeing across different dimensions of society and explores how factors influence an income of country and happiness of its citizens.[6]The ranking of the countries reflects their ability to create the conditions for the growth of prosperity. In the period 2009-2011, the position of the majority countries of EU deteriorated, except France, Denmark, Austria, United Kingdom and Portugal. The highest deterioration occurred in Italy, Greece, Lithuania, but especially in Romania and Latvia.[7]On the other hand, the most favorable environment for the growth of prosperity and the growth of the welfare of citizens is in the Nordic countries, and in Netherlands.

The findings suggest that the political integration by European policymakers have done little to equalise economic or institutional differences among European countries. The income gap between the richest and poorest member states of EU remains vast. In the countries of the Mediterranean area is high levels of corruption, low rates of social trust, low level of rule of law and inefficient public sector. The current financial troubles reflect in several objective and subjective variables of the index. The certain variables tend to be more long-term or permanent by nature and therefore are less affected by temporary fluctuations in the global economy. A recession should not have a major impact on the rank of countries, unless it shakes the foundations of long-term prosperity.[8]

The comparison of a wider range of indicators created a space for identifying countries that could to create conditions for growth performance and competitiveness in the global environment and the conditions for a happy and satisfied life despite a various income inequality.

[6] The 2011 Prosperity index consists of eight sub-indices (economy, entrepreneurship and opportunities, governance, education, health, safety and security, personal freedom and social capital). Each sub – index has be identified as a foundation of prosperity or each sub-index give an answer to the question of how the local area will contribute to higher level of income and the greater personal wealth. Each from eight sub-indices is equally weighted. The creation of LPI, the more detailed explanation of the methodology and the data sources, country´s profiles, and tools that allow you to explore the data can be found at www.prosperity.com.

[7] The situation isn´t favorable due to lower level of tolerance for immigrants and ethnic minorities, but also less satisfaction with their freedom of choice and own life.

[8] Human Development Report 2011, 2008 Financial Crisis – Impact and Legacy, p. 36

Table 3. The Indicators of the Income Inequality, Poverty and their Components

Indicators / Countries	GI 2000 –2011	GI	Quintile Income Ratio	MPI	a/	b/	% people in risk of poverty	40% median	50% median	60 % median
France	.	32.7a	5.6	.	.	.	13.0	2.831	7.308	13.725
Germany	28.3	27.0c	4.3	.	.	.	15.0	3.860	8.518	14.342
Italy	36.0	32.0c	6.5	.	.	.	19.0	6.917	12.085	20.335
Belgium	33.0	28.0d	4.9	.	.	.	15.0	3.670	8.078	16.117
Netherlands	.	30.9	5.1	.	.	.	11.0	3.750	6.306	11.607
Luxemburg	.	26.0d	.	.	.	.	13.0	3.249	8.773	13.779
United Kingdom	.	34.0d	7.2	.	.	.	19.0	5.336	11.566	19.195
Denmark	.	24.0d	4.3	.	.	.	12.0	2.348	5.582	13.191
Ireland	34.3	32.0d	5.7	.	.	.	16.0	5.629	13.209	21.974
Finland	26.9	29.5b	3.8	.	.	.	14.0	2.521	6.546	13.541
Sweden	25.0	23.0d	4.0	.	.	.	12.0	2.641	5.596	11.969
Austria	29.1	26.0b	4.4	.	.	.	12.0	3.461	7.127	13.383
Spain	34.7	32.0d	6.0	.	.	.	20.0	7.764	14.084	20.580
Portugal	.	38.5b	7.9	.	.	.	18.0	.	.	.
Greece	34.3	33.0d	6.2	.	.	.	20.0	6.973	12.454	19.690
Slovenia	31.2	24.0d	4.8	.	.	.	12.0	3.492	7.103	12.673
Czech Republic	.	26.0d	3.5	0.010	.	.	9.0	2.987	5.801	11.445
Slovakia	.	26.0d	4.0	0.000	.	.	11.0	3.910	6.996	12.065
Poland	34.2	34.9d	5.6		.	16.6	17.0	6.413	11.510	17.748
Hungary	31.2	28.0d	4.8	0.016	.		12.0	4.099	7.411	12.476
Lithuania	37.6	36.0d	6.7		.		20.0	.	.	.
Latvia	35.7	36.0d	6.3	0.006	.	5.9	26.0	.	.	.
Estonia	36.0	34.0a	6.3	0.026	.	.	19.0	7.369	12.623	20.058
Malta	.	26.0b	.	.	.	.	15.0	.	.	.
Cyprus		29.0d	.	.	.	.	16.0	.	.	.
Bulgaria	45.3	30.7b	10.2	.	1.0	12.8	21.0	.	.	.
Romania	31.2	32.0	4.9	.	0.5	13.8	23.0	3.588	8.090	14.107

Source: Inequality-adjusted Human development Index. Multidimensional Poverty Index: Population below Income Poverty Line: a/ PPP $ 1.25 a day in the years 2000 - 2009, b/ National Poverty Line. Human Development Report 2011, Table 5, pp. 143 – 145. Table 8, pp. 154 – 157. Distribution of family income – Gini Index 2011 Country ranks, CIA World Factbook, 2011.

The most commonly applied indicators of poverty - an indicator of absolute and relative poverty – represent a narrow definition of poverty. Absolute poverty is defined in relation to a certain minimum standard. It is usually defined in the form of money amounting to $ 1.25 / day, respectively 2 or 2.5 USD / day and is also defined as the quantity of basic goods that are deemed necessary. Absolute poverty reflects a real hardship, reflects the state of the inability to satisfy basic needs or is required as a condition of survival. Relative poverty means that someone is poor compared with other people. The threshold of relative poverty is defined as 40, 50, respectively 60% of median net disposable income. Relative poverty provides information on the population that is at risk of social exclusion.

Absolute and relative poverty are the indicators, which are currently considered to be indicators that do not allow adequately identify a situation in which individuals or households are located. Therefore, it is necessary to use other indicators that specify the situation in more detail: the depth of poverty, income poverty by type of household, the share of income of the upper and lower quintile or the dispersion around the at-risk-of poverty.

Criticism of a simplified view on poverty leads to a search of new indicators of poverty, capable of capturing the complexity of the situation in which an individual or a household is. Multidimensional Poverty Index (MPI)[9] is a new international

indicator of poverty, which specifies not only those who are multidimensional poor, but also as are multidimensional poor. In the construction of the index were applied three dimensions of poverty, more specifically through the ten indicators. The individual dimensions have the same weight (1/3), as well as the individual indicators within each dimension. If an individual (household) is deprived for multiple dimensions can be classified as the multidimensional poor. But this is not about some deprivation, a deprivation is exactly specified. If a deprivation is less than 30%, the individual (household) is not poor in a given dimension. Only if the deprivation is higher than 30% at least in two dimensions can be an individual (household) described as multidimensional poor.

The advantage of this indicator is that provides information on the situation in the individual countries, individual regions or in global measure. Identification of deprivation in specific areas creates the conditions for makers of economic policy to allocate the limited resources as efficiently as it is possible. Another advantage of this index is that allows identify the situations when the deprivation may prevent individuals or households to make a free choice, respectively accurately identify a situation in which individuals or households are located. The advantage of this index is that there are no hurdles to the change or to supplement of dimensions in the future. Some countries constructed the national multidimensional poverty indices that allow the choice of dimensions. The indicators create a space for a more accurate identification of the most acute problems, and can also take into account local, political, economic, cultural, climatic and other specifics.

In connection with the construction of the index there is a discussion which affects a range of dimensions and indicators; a discussion whether the change will affect the results, as also discussion which refer to the possibility of changes in the dimensions and indicators. The search for answers by the empirical tests can be found in the work of authors Alkire, S. and Santos, M. E., Yalonetzky, G.: Is the Multidimensional Poverty Index Robust to different weight? [Alkire, Yalonetzky, Santos, 2010].

Data in the table show that in the EU countries are not identified the significant negative values of indicator of absolute and relative poverty, but also of indicator multidimensional poverty. The situation is less favorable in the case of the indicator which specifies those who are at risk of poverty. More as 20% people is at risk of poverty in six countries of EU. Also, the values of the Gini index do not reflect a substantial income inequality. Another situation occurs when we examine a quintile shares. Incomes 20% of the richest to incomes 20% of poorest are higher between 3.5 times (CR) to 10.2 (Bulgaria) or 7.2 times (UK).

2.3. The some principal problems of the perception of wealth, poverty, happiness and their determinants (discussion)

In the present period can be identified the some major issues covered to wealth. One serious problem is the precise identification of wealth. If a greater share of wealth present the financial assets, especially the virtual assets, is difficult to identify the exact value of wealth. It is also necessary to take into account the fact that in today's turbulent world occurs in a short time to a significant change in the value of wealth.

Other serious problem is the concentration of wealth by minor elite and the changing structure of wealth in favor of virtual assets in symbiosis with the wealth effect can have a big impact on the further development not only within countries, but also in a globalized world. Scientists are stepping up efforts to clarify the nature of these trends as well as to clarify the modification of the structure of wealth. Especially in the current period exacerbated the problem related to the exaltation of wealth. Glorification of wealth is not sustainable in the long term, especially if the trend should be characterized on a global scale. This is due to the fact that the glorification of wealth in developed countries translates into glorification of high demand. Glorification of wealth ignores the needs of people in other countries and also the needs of future generations.

In identifying problems related to wealth cannot leave out the problem of confusion between wealth and well-being. It should be noted that many scientists pointed out the need of the solution of this problem. Pigou pointed out the differences between the desire to maximize wealth and effort to maximize welfare. He rejected the hunt for wealth and for personal advantages, because from his point of view, an abundance of material goods does not mean the growth of prosperity. Pigou expressed the proposition that an economic theory should attempt to qualitatively evaluate the various forms of wealth that can ensure the prosperity. The higher and more stable incomes are achieved if the income distributed more evenly. From his point of view, the maximization of individual welfare does not necessarily maximize social welfare. It is possible in cases where the maximization of individual welfare is in a conflict with the maximization of social welfare, or if the scarce resources are used for the production of goods, that does not increase well-being, as well as in cause if exists a highly uneven a distribution of incomes. These issues are the subject of interest of many scientists: A. Marshall, V. Pareto, N. Kaldor, J. Mead, J. Hicks or A. Bergson.[10]

[9]Calculation of the index: MPI = A x H, where A – average intensity of MPI poverty across the poor (%), H – percentage of people who are MPI poor.
[10] Čaplánová, A., et al. (2011.) Teória verejnej voľby. Bratislava: Vydavateľstvo Ekonóm, pp. 98-122.

A counterpart of wealth is poverty. Risk of approach to the poverty line is realistic especially in the period of the strongly pessimistic expectations. The causes of pessimistic expectations can have economic or non-economic character. The accumulation of different problems in a global context intensifies the fears, but also intensifies an effort detect and specify the complex causes which lead to the volatility of positive expectations and to the loss of illusions, as well as to the search of constructive solutions of accumulated problems. In this difficult situation, the issue of poverty is even more urgent, as well as the modification of the perception of poverty and its alleviation.

The discussions lead to the wider definitions of poverty, and to the identification of the causes and the consequences of poverty. The discussions also relate to other issues - whether it is only a problem of individuals or a problem of society, whether it is possible to talk about the deepening divide between the extremely poor and extremely rich, whether it is appropriate and possible take measures to eliminate or to alleviate poverty.[11]On the one hand are the views that refuse the relevance of interventions towards the elimination of extreme poverty, on the other hand are the views that the opportunities to improve human society are unlimited and that are the justified interventions in favor of those who are at risk of poverty. Discussions also address the question of what the possibilities and forms of reducing poverty are acceptable, respectively at what level (national, regional or global level) it is possible to find the most effective solutions.[12]

To capture real poverty is also necessary to specify particular forms of poverty, whether is transitive or permanent poverty, primary, secondary or acquired poverty, old or new poverty, economic, human or spiritual poverty. The acquired knowledge can contribute to finding the most effective solutions to this serious problem.

3. CONCLUSION

A new perception of wealth is reflected in the integrity of material and spiritual wealth, in a preference of real wealth before virtual wealth, in closer linkage between wealth and happiness. New perception of wealth can eliminate the negative side effects of the last approach. It is particularly important to ensure an increase of the efficiency of use of scarce resources. Also is necessary to prevent the social exclusion of part of population from society, to prevent the growth of social conflicts, which are inextricably linked to the increasing polarization.

The problem of poverty can be identified as a complex problem of a global nature, and therefore the solution of the problem of poverty must have a comprehensive and global dimension. A solution implies identification and analysis of endogenous and exogenous causes, objective and subjective reasons which lead to the fact that individuals, households and countries are becoming poorer. The solution of the problem of poverty implies the identification and specification of the consequences of poverty, not only in the short term but also in the long term, because the severity of the consequences of poverty can significantly escalate over time. It is also necessary to identify and to analyze: economic, ethical, social, political options to solve this problem in different national economies and in the global context; the alternative possibilities of application of scarce resources; the alternative institutions and instruments mitigation, respectively elimination of poverty.

The complexity of the problem leads to that the adoption of specific measures can be very low. Many individuals lost the motivation to a work, especially if a work does not guarantee the change their position. They lost a sense of participation in activities that would help them to change their fate. Some poor people prefer the social benefits, often a life on the street. It is important to remember that exists often a predisposition to such a way of life. The very serious problem is a problem of intergenerational poverty that cannot be solved in the short term. A solution is real in a period of several generations. The most effective way to reduce poverty is the prevention, and an education to personal responsibility for their fate. The importance of prevention is based on the recognition that effort to get out of poverty is not sufficient for the escape from poverty. The absence of relations with people from other classes and a lack of the ability to communicate with people is a serious obstacle. Without understanding of a significance of the intergenerational transmission of knowledge that could change their behavior and without the development of skills cannot think of moving out of poverty.

Although the term happiness has been a frequently used term colloquially, when trying to put term into the analytical framework, we are left with the necessity to look for its adequate definition. The diversity of approaches is reflected in the different nature of the definitions. There is no strict conceptual identity. There is also an ambiguous view on the possibility of measuring happiness and an explanatory ability of the results. Same may be said that there is a wide diapason of view of which determinants, how much and in what direction affect happiness.

[11] Thomas Robert Malthus in the first edition of his work An Essay on the Principle of Population, 1798 wrote that all efforts to improve the existing situation are futile. As a result of the necessary laws of nature a part of people must suffer from shortage. These people are the unfortunates who drew a blank ticket in a large lottery of life. On the great feast of nature is not spreaded for their. Nature dictates them to move away and neotame in carrying out his orders. These ideas, however, in later editions (1803, 1806, 1807, 1817 and 1826) of this work hasn´t been presented.

[12] A. Smith, in his work On the Nature and Causes of the Wealth of Nations wrote that no society can surely be flourishing and happy of which the far greater part of the member are poor and miserable. Also wrote, that a person is rich or poor according to the degree to which it can afford the necessary living resources, items pleasant the life and enjoyment of life (Smith, p. 95, 51).

On the other side there is a consensus on the positive impact of happiness. Happiness is positively correlated with optimism, positive expectations, and willingness to overcome obstacles. The consensus affects the need for change in the thinking of individuals and governments. In many cases is the consensus that the governments can effectively contribute to happiness of the people.

Comparison facilitates an analysis of the perception of happiness in national, regional and global context, also an impact of various determinants, both in time and between countries, but its contribution can be minimized, if is not adequately and fairly presented. It should lead to the motivation of individuals and governments in the direction of correction of behavior, if the results of several surveys show that resources are used effectively and the people are not satisfied with their lives. Comparison can encourage behavioral change and ensuring greater happiness, but it can also discourage and happiness decreases.

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MODELS FOR MEASURING OF KNOWLEDGE MANAGEMENT AND E-BUSINESS SYSTEMS SUCCESS

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ABSTRACT

The resulting model of the measurement of knowledge management system success is used to classify the abundant variables described in a large number of empirical studies and comprises six components. On the basis of some resources and on the basis of this literature review, the DeLone/McLean model for information system (IS) success measurement is selected and discussed. We also give a figure to show that the six categories are interrelated and describe a process view of knowledge management success, a series of constructs which include temporal and casual influences in determining success. The clear structuring of the measures and especially the interrelationships hypothesized in DeLone/McLean model have been subject to repeated criticism. Finally some critics are reviewed and developed of extensions to this model. We have extended the original DeLone/McLean model, respecified parts of the interrelationships, and even presented alternative models that follow an entirely different logic. The new model allows for a much more comprehensive analysis of independent factors influencing knowledge management system success and takes into account most of critique directed at the original DeLone/McLean model.

KEYWORDS: Knowledge Managemet, Quality, Competences, e-economy

1. INTRODUCTION

Skepticism about the value of e-business and information technology (IT) has been renewed recently, in part due to the gap between substantial firm spending on IT-particularly on Internet-related technologies-and the widespread perception about the lack of value of value from e-business.

Today more than ever, IS research face strong pressure to answer the question of whether and how e-business investments create business value. Although innovation diffusion represents a complex process, much of the existing research has focused on the adoption decision and on measures such as “intent to adopt” and “adopting versus nonadoption” (Fichman 2000). We need to view e-business diffusion as a multistage process that starts at adoption and extends to usage and value creation.

There is a lack of empirical evidence to gauge e-business usage and its impact on firm performance, partly because of the difficulty of developing measures and collecting data. A related issue is the lack of theory to guide empirical research. Although showing recent signs of advancement, the linkage between theory and measures is still weak in the e-business literature. Clearly, there is a need for a theoretically rigorous and empirically relevant framework for examining the use and value of e-business in organizations.

Prior research argued that theories developed in the context of mature markets and industrialized economics need to be reexamined in the context of developing countries, because these countries may have very different economic and regulatory environments challenges the presumption of conceptual equivalence across cultural and economic barriers in management science research. We believe it is important to investigate whether innovation theories can be generalized and empirical findings are applicable in different economic contexts. To achieve this, we study e-business experience of organizations in developed and developing countries that might represent different stages of e-business transformation, for results in Vojvodina.

The gaps in the literature limit our understanding of the process of e-business innovation and consequently of e-business value. Key research questions that motivated our work are: (1) What framework can be used as a theoretical

basis for studying e-business use and value? (2) Within this theoretical framework, what factors can be identified as key antecedents of e-business use and value? (3) How would these factors vary across different economic environments like Vojvodina?

To better understand these issues, we developed a conceptual model for e-business use based on the technology-organization-environment (TOE) framework (Tornatzky and Fleischer 1990). We also analyzed e-business value creation, from a resource-based perspective, that stems from the unique characteristics of the Internet.
A host of variables, indicators and measures to assess the success of an IS:

- user (information) satisfaction of system acceptance,
- user engagement, user participation or user involvement,
- (perceived) information quality or system quality,
- perceived service quality: user satisfaction,
- usage of IS, usage to support specific tasks,
- task-technology fit,
- success of specialized IS: impact on individual, group or organizational performance, such as decision support systems, group (decision) support systems and group communication support systems, office systems, Creativity Support Systems, computer-mediated communication or End-User Computing.

DeLone and McLean went to the trouble of a comprehensive analysis of all the different streams of research about IS success and proposed an integrated model for information system success. This model is one of the most cited and empirically tested frameworks of IS success, in spite of many respectifications and extensions mostly in its original form, probably due to the fact that it is comparably well-defined, theoretically founded and yet simple and easily tailored to specific situations.

2. E-BUSINESS AND KNOWLEDGE MANAGEMENT

A theoretical model for e-business use needs to take into account factors that affect the propensity to use e-business, which is rooted in the specific technological, organizational, and environmental circumstances of an organization. The TOE framework identifies three aspects of a firm, s context that influence the process by which it adopts, implements, and uses technological innovations: *(a) Technological context* describes both the existing technologies in use and new technologies relevant to the firm. *(b) Organizational context* refers to descriptive measures about the organization such as scope, size, and the amount of slack resources available internally. *(c) Environmental context* is the arena in which a firm conduct its business-its industry, competitors, and dealings with government.

There are three types of innovations: Type I innovations are technical innovations restricted to the IS functional tasks (such as relational databases, CASE); Type II innovations apply IS to support administrative tasks of the business (such as financial, accounting, and payroll systems); and Type III innovations integrate IS with the core business where the whole business is potentially affected and the innovation may have strategic relevance to the firm. We consider e-business a Type III innovation, in the sense that e-business is often embedded in a firm's core business processes (e.g., making use of the open standard of the Internet protocol to streamline information sharing among various functional departments); e-business can extend basic business products and services (e.g., leveraging Internet-enabled two-way connectivity to offer real-time customer service); and e-business can streamline the integration with suppliers and customers.

E-business is a new Type III innovation and warrants investigation along with these innovations. In particular, the migration toward the Internet and the transformation of traditional processes require firms and their subunits to orchestrate the coevolutionary changes to their technologies in use, business processes, and value chain structures to successfully assimilate the Internet technologies into their e-business initiatives.

The TOE framework is appropriate for studying e-business usage. Based on the TOE framework, the use of e-business in organizations will be influenced by three types of antecedents: *technological* factors*, organizational* factors*,* and *environmental* factors*.*

The Internet is characterized by *open standard* (versus proprietary standard), *public network* (versus private network), and *broad connectivity* (back end and front end). These characteristics may have very different impacts on customer reach and richness of information. The global reach of the Internet enables cost-efficient means of reaching out to new markets, attracting new customers, and delivering products and services, as well as improving coordination with suppliers and business partners.

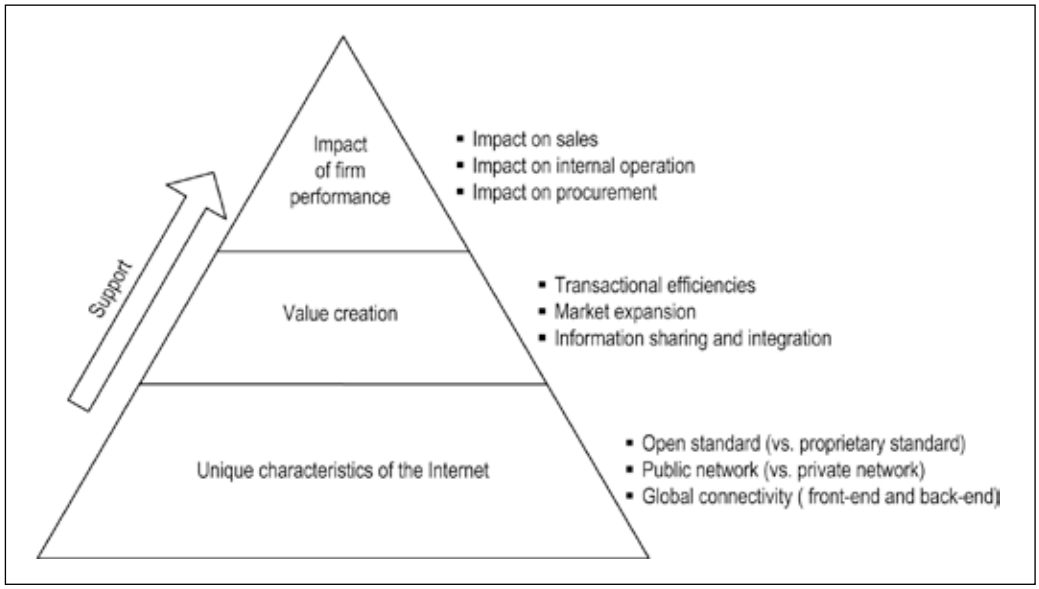
2.2. E-Business Value and the Resource-Based Theory

The resource based view (RBV) provides a theoretical basis for linking e-business use and value. Rooted in the strategic management literature, the RBV of the firm posits that firms create value by combining heterogeneous resources that are economically valuable, difficult to imitate, or imperfectly mobile across firms.

The value hierarchy depicts the unique characteristics of the Internet and how these characteristics enable value creation via e-business. In contrast to e-business, less connectivity, and a private network configuration – creates business value mainly through improving transactional efficiencies and reducing costs in procurement (Figure 1).

We examined the unique characteristics of the Internet and linked them in three ways through which e-business may create value-transactional efficiencies, market expansion, and information sharing. Combining them with the RBV, we developed an e-business value hierarchy, as shown in Figure 1. Open-standard information exchange can results in a more synchronized information flow will make materials move efficiently along the supply chain, thereby reducing the bullwhip effect. Such e-business value may lead to improved firm performance in sales, procurement, and internal operations, as shown in the top layer of the value hierarchy in Figure 1.

Figure 1. E-Business Value Hierarchy



3. BASIC ELEMENTS FOR DIFFUSION OF E-BUSINESS

Technology Context. The literature suggests that IS capabilities consist of infrastructure, human resources, and knowledge. Firms with a higher degree of technology competence tend to enjoy greater readiness to use e-business in their value chain processes. As a result, they would be more likely to achieve a greater extent of e-business usage. This leads to the following hypothesis.

H1. Firms with greater technology competence are more likely to achieve a greater extent of e-business use.

Organization Context. Firm size is commonly cited in innovation diffusion literature, yet different opinions exist as to the role that firm size plays in the process of innovation diffusion, due to the tension between resource availability and organizational inertia. On one hand, large firms generally possess slack resources that can facilitate implementation and usage. On the other hand, firm size is often associated with inertia; that is, large firms tend to be less agile and flexible than small firms. The possible structural inertia associated with large firms may slow down organizational usage and may therefore retard e-business value creation. Because our model has controlled for technological and financial resources that large firms may possess, the notion of structural inertia leads us to expect that large firm size may deter e-business usage and value creation. This leads to the following hypothesis.

H2. Controlling for resource availability effects, larger firms tend to achieve a lesser extent of e-business use.

Firms conducting business in multiple markets have to manage demand uncertainty in all segments simultaneously, which requires a high degree of integration, flexibility and responsiveness in their information systems, as well as the broader information infrastructure linking the firm with its customers, trading partners, and distributors. As documented in the literature and consistent with our value hierarchy in Figure 1, e-business may help to create these capabilities within the firm and with its trading partners as a result of common standards, lower cost, and greater ease of implementation of Internet-based applications. In sum, retail companies that expand globally would have a greater incentive to use e-business to leverage their existing IT capabilities for a competitive advantage. This leads to the following hypothesis.

H3. Firms with greater international scope are more likely to achieve a greater extent of e-business use.

Financial resources constitute another important factor recognized in the innovation literature. In this study, we tailor this factor to financial resources specially committed to e-business. Implementing e-business requires investment in hardware, software, system integration, and employee training. Sufficient financial resources dedicated to e-business helps companies to obtain these necessary resources and develop them into superior e-business functionalities. Thus, firms

with greater financial commitment are more likely to achieve successful e-business implementation and thus tend to achieve a greater extent of usage. Hence, we have the following hypothesis.

H4. Firms with greater financial commitment are more likely to achieve a greater extent of e-business use.

Environment Context. Competitive pressure refers to the degree of pressure that the company feels from competitors within the industry. The use of e-business may induce changes of industry structure through disintermediation and reintermediation, offer new means of competing and altering competition rules through lock-in, electronic integration, and brick-and-click synergy. Thus, competitive pressure plays a significant role in pushing firms toward using e-business.

H5. Firms facing higher competitive pressure are more likely to achieve a greater extent of e-business use.

Regulatory support is another critical environmental factor that tends to affect innovation diffusion. This concept is similar to government policy theorized to affect IT diffusion in Umanath and Campbell (1994) and empirically tested in Dasgupta et al. (1999). The latter found that companies operating in an environment where government policies are restrictive have low IT adoption.

H6. Firms facing higher regulatory support are more likely to achieve a greater extent of e-business use.

Linkage from E-Business Use to E-Business Value. We draw on the RBV to explain the connection between usage and value. RBV suggests that the greater the extent of IT use, the greater the likelihood that organizations will create IT capabilities that are rare, inimitable, valuable, and sustainable, thereby contributing to value creation (along with organizational compliments). Through deeper usage in organizations, IT creates asset specificity, which provides a competitive advantage. A classic model for general IS success developed by DeLone and McLean (1992) suggested that there tends to be a strong link between system use and system impact.

H7. Firms with greater e-business use are more likely to generate higher e-business value.

E-Business Value. The ultimate goal of using e-business is to improve the business performance of the organization. As shown in the value hierarchy of Figure 1, e-business helps companies develop appropriate functionalities to leverage the Internet's characteristics. E-business functionalities are categorized into two groups: front-end functionality and back-end integration. Back-end integration helps firms achieve technology integration and enables information sharing within the firm and along the value chain. Thus, one would expect that superior front-end functionality and back-end integration help firms improve business performance. This leads to the following hypothesis.

H8. Greater e-business capabilities, including both front-end functionality and back-end integration, are positively associated with higher e-business value.

Although both have the potential to create e-business value, front-end functionality and back-end integration may vary in importance, as suggested by the resource-based theory. Front-end functionality is public and open on the Internet, and thus could be easily observed and imitated by competitors. As a result, front-end functionality could become commodity-like as more competitors adopt e-business. In comparison, the process of back-end integration is far more difficult to imitate, because its success requires quality complementary resources. In addition, the integration process is often tailored to a firm's strategic context and woven into the organization's fabric, which is not transparent to competitors. Therefore, we propose the following hypothesis.

H9. Back-end integration will have a stronger impact on e-business value than front-end functionality.

International Effects: Differences between Developed and Developing Countries. Given that the Internet is an open platform with global connectivity, we believe it is important to incorporate an international dimension in this study.

H10. The strength of the antecedents of e-business use and value will differ for developed and developing countries.

4. MEASUREMENT MODEL

The development of the measurement model included successive stages of theoretical modeling, statistical testing, and refinement (Straub 1989). Measurement items were developed on the basis of a comprehensive review of the literature as well as expert opinion. We then tested multi-indicator constructs using confirmatory factor analysis (CFA)[1]. Based on the assessment of CFA, the measurement model was further refined and then fitted again.

Several constructs deserve further explanation. First, technology competence is instrumented not only by physical technologies, but also by IT human resources that possess the knowledge and skills to implement e-business. Such a design is consistent with the theoretical rationale discussed. Our study used the major items in the first three dimensions to instrument front-end functionality, and the fourth dimension corresponded to our back-end integration.

[1]For the purpose of testing the robustness of our measurement model, we also ran eyploratory factor analysis on all indicators. Principal component analysis with equamax rotation yielded a consistent grouping with CFA.

Table 1: Measurement Model: Factor Loadings, Reliability, and Convergent Validity

Measurement Model: Factor Loadings, Reliability, and Convergent Validity			
Constructs (reliability)	Indicators	Loadings	Convergent validity (t-start)
Technology competence (0.81)	TC1	0.79***	46.76
	TC2	0.79***	37.10
	TC3	0.71***	24.90
International scope (0.81)	FS1	0.64***	36.65
	FS2	0.86***	160.80
	FS3	0.78***	52.66
Financial commitment to e-business (0.83)	FR1	0.86***	29.07
	FR2	0.82***	15.84
Competitive pressure (0.86)	CP1	0.87***	74.04
	CP2	0.87***	73.89
Regulatory support (0,80)	RE1	0.68***	21.30
	RE2	0.69***	24.87
	RE3	0.71***	22.91
	RE4	0.74***	30.76
Back-end integration (0.86)	BI1	0.87***	80.53
	BI2	0.86***	79.54
E-business use (0.78)	EU1	0.64***	18.44
	EU2	0.50***	6.67
	EU3	0.46***	4.85
	EU4	0.83***	35.95
	EU5	0.75***	13.55
Front-end functionality (0.80)	FF1	0.63***	15.92
	FF2	0.65***	25.76
	FF3	0.67***	26.00
	FF4	0.72***	24.31
	FF5	0.68***	20.46
Impact on sales (0.88)	IS1	0.86***	76.46
	IS2	0.84***	51.62
	IS3	0.81***	41.92
Impact on internal operations (0.90)	II01	0.89***	81.85
	II02	0.91***	123.42
Impact on procurement (0.87)	IP1	0.85***	50.11
	IP2	0.85***	74.50
	IP3	0.79***	37.90
** p < 0.10; ** p < 0.05; *** p < 0.01.* Insignificant factors are dropped (FS4 and FS5).			

To empirically assess the constructs theorized above, we conducted CFA using structural equation modeling. We assessed construct reliability, convergent validity, discriminant validity, and validity of the second-order construct. The measurement properties are reported in Table 1.

(1) Construct Reliability: Construct reliability measures the degree to which items are free from random error and therefore yield consistent results. In our measurement model (Table 1), all constructs have a composite reliability over the cutoff of 0.70, as suggested by Straub (1989).

(2) Convergent Validity and Discriminant Validity: Convergent validity assesses the consistency across multiple operation. As shown in Table 1, all estimated standard loading are significant ($p<0.01$), suggesting good convergent validity. To assess the discriminant validity-the extent to which different constructs diverge from one another-we used Fornell and Larcker's (1981) criteria: average variance extracted for each construct should be greater than the squared correlation between constructs.

Table 2: Measurement Model: Second-Order Construct

Table 2 Measurement Model: Second-Order Construct				
Second-order construct	First-order construct	Loading	t-stat	Composite reliability
E-business value	Impact on sales Impact on internal operation Impact on procurement	0.865*** 0.805*** 0.844***	77.68 44.08 55.52	0.88
* p < 0.10; ** p < 0.05; *** p < 0.01				

(3)Validity of the Second-Order Construct: Table 2 shows the estimation of the second-order construct, e-business *value*. The paths from the second-order construct to the three first-order factors are significant and of high magnitude, greater than the suggested cutoff of 0.7. Our model has a very high T ratio of 0.99, implying that the relationship among first-order constructs is sufficiently captured by the second-order construct. Therefore, on both theoretical and empirical grounds, the conceptualization of e-business *value* as a higher-order, multidimensional construct seems justified. In summary, our measurement model satisfies various reliability and validity criteria. Thus, constructs developed by this measurement model could be used to test the conceptual model and the associated hypotheses proposed earlier. Empirical tests are on the Integrated Model of E-Business Use and Value.

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5. ANALYSIS AND INTERPRETATIONS

We tested the conceptual model by structural equation modeling using both the full sample and the sample split between developed and developing countries. Although theory and prior research led us to expect differences, we did not know a priori that there would be differences between the full and split samples; therefore, we needed to do the analysis for both. It also enabled us to relate our finding to the broader IT literature.

The strong statistical power enhanced our confidence in the result of hypotheses rtesting, which is based on the examination of the standardized paths shown in Figure 2. For e-business use, five of six TOE factors-technology competence, size, financial commitment, competitive pressure, and regulatory support- have significant paths leading to the dependent construct. Size has a negative path, while the other factors have positive paths. The path associated with international scope is positive but statistically insignificant (p>0.10).

E-business value is also shown to have significantly positive associations with front-end functionality and back-end integration. Hence, Hypothesis 8 is supported. To test hypothesis 9, we compared the standardized path from front-end functionality to e-business value with standardized path from back-end integration to e-business value. Back-end integration is found to have much higher magnitude than front-end functionality (0.239*** versus 0.141***). Thus, Hypothesis 9 is supported.

Within the TOE framework, technology competence, financial commitment, competitive pressure, and regulatory support are found to have significant influence on the extent of e-business use. Among these, technology competence appears to be strongest factor.

As indicated by their significant and positive paths in Figure 2, firms with higher levels of technology competence tend to achieve greater extent of e-business use, as do firms facing competitive pressure and regulatory support. Among all the TOE factors, technology competence is the most significant factor, as indicated by its path loadings and significance levels ($p < 0.01$), followed by regulatory support. Within the organizational context, our study reveals a negative effect of firm size on e-business use. While it has been commonly believed that large firms have more slack resources for committing required investments, our results show that large firms are also burdened by structural inertia, possibly due to fragmented legacy systems and entrenched organizational structures. Our model has controlled for technological and financial resources, and thus the net effect of firm size in our model might be dominated by structure inertia. These results suggest that the proposed research model in Figure 2 is a useful theoretical framework for explaining factors that affect the use of e-business by companies.

2. The linkage from e-business use to e-business value is found t be significant, suggesting that use would be a "missing link" if not included.

As theorized earlier, firms with higher e-business use-tend to achieve greater value from e-business use tend to achieve greater value from e-business. Our results from both the full sample and the split sample consistently show a significant and positive linkage from e-business use to e-business value. This means that higher degrees of e-business use are associated with improved business performance. This also confirms the earlier postulation that actual use may be the "missing link" to IT payoff. This significant linkage also supports our research design, in which use and value are evaluated together in one model.

3. Both front-end functionality and back-end integration contribute to value creation of e-business.

Using a large dataset, our analysis has identified two ways in which e-business creates value-front-end functionality and back-end integration. This finding is supported by the significant and positive linkages from front-end functionality and back-end integration to e-business value. Front-end functionalities help firms provide timely information to customers, facilitate personalization and account management, expand existing channels, and improve transactional efficiencies; back-end integration enables technology integration within the organization and facilitates information sharing with suppliers and business partners. As a result, these two types of e-business capabilities help firms improve performance by affecting intermediate achievements such as customer intimacy in the front end and operational excellence in the back end; both are critical for firms to achieve performance improvement.

4. The importance of two factors-competitive pressure and regulatory support-differs across developed versus developing countries. This finding confirms that economic environment shape e-business use.

This result might be explained as follows. First, competitive pressure is statistically significant for developed but not for developing part of the country. Such a difference could be explained by the distinct market environments of developed and developing part of the country. Prior research has shown that information asymmetry exists in less-developed markets, and market imperfections and inefficiencies may weaken the pressure from competitors. In developed area of the country, however, markets have evolved into mature stages over time, characterized by more transparent information flow and more stable legal frameworks and government policies. Therefore, firms in developed countries can obtain more information about competitors, e-business development, which may force them to adopt e-business to avoid competitive decline. Second, although the path loadings of regulatory support appear to be significant in both subsamples, more sophisticated analysis (group analysis) reveals that it is relatively more important in developing countries. This finding is related to the above discussion, that markets in most developing part of country are characterized by information asymmetry and immature institutional structure. As a result, government regulation (e.g., legal protection of online transactions), or the lack thereof, tends to be a greater force in developing countries. In light of these varying behaviors across the two subsamples, we have learned the significant role that economic environments play in shaping the extent of e-business use. This finding further confirms the usefulness of the proposed conceptual model for studying e-business, as economic environment is an important factor within the TOE framework.

These results have several important implications for management. First, they offer a useful framework for managers to assess the *technological* conditions under which e-business is launched to better pursue business value. It is important to build up technology competence includes tangible technologies, intangible managerial skills, and human resources. Further, IT managers have struggled for ways to create value from Internet technologies. Our study sheds light on ways to realize value from e-business-greater breadth and depth of use, customer-facing Web functionalities on the front end, and tight integration on the back end.

In particular, our empirical results highlight the importance of *back-end integration* among various back-office databases and enterprise systems, and information sharing with business partners. Our analysis has identified this as a major source of e-business value. It will become even more important as e-business develops into deeper stages, as suggested by the results that the significant of back-end integration is more pronounced in developed countries that seem to be at deeper stages of e-business development. These findings could serve as useful guidelines foe firms to develop their e-business capabilities. This is especially important in the retail industry, where firms have been building various legacy systems and using multiple IT platform over the years.

Furthermore, managers need to assess the appropriateness of e-business to certain *organizational* characteristics (e.g., size scope), as suggested by our empirical findings. This implies that potential value of e-business investment could be affected by structural differences. Effective e-business programs rely on necessary organizational reconfiguration and business processes reengineering. As Internet technologies diffuse and become necessities, these organizational capabilities and structural differences will be even more critical. In particular, managers in retail firms with a wider scope should pursue e-business usage more proactively, given the greater potential to achieve benefits from e-business. This implication should be of special interest for retailers seeking global expansion into different regions and market segments. Such expansion means that retailers would face greater coordination tasks and could leverage e-business initiatives to facilitate coordination and achieve resource integration.
Finally, our study also offers implications for *policy* makers. Regulatory support has emerged as an important factor for e-business use and value. This is even more important for de-

veloping countries. During our study, companies frequently cited significant obstacles to doing e-business, including inadequate legal protection for online transactions, unclear business laws, and security and privacy concerns. While this was important for all countries, it was a much more significant factor for developing countries. It also pointed to the need for establishing a broad legal and institutional framework that supports e-business. Governments, therefore, could accelerate the diffusion of e-business by establishing supportive business laws to make the Internet a trustworthy business platform (e.g., dealing with transaction fraud, promoting credit card use). This is particularly important at early stages of e-business development in an economy. Technological innovations are considered the primary driver of improvements in industrial productivity. Yet if promising innovations cannot be widely deployed, then the benefits resulting from their invention will be curtailed.

6. CONCLUSIONS

Grounded in the innovation diffusion literature and the resource-based theory, this study has theoretically developed and empirically evaluated an integrative research model incorporating technological, organizational, and environmental factors, for assessing e-business use and value at the firm level. While these issues were typically studied separately in the literature, our results suggest that usage and value are closely link, indicating that this unified perspective helps us gain a more holistic picture of the postadoption diffusion and consequence of e-business. To realize e-business value, firms need to facilitate the usage of e-business in various value chain activities.

For e-business use, our study has examined six factors, within the TOE framework, as drivers of e-business use. Some of these factors play different roles across different economic environments. This finding shows that, while e-business is a global phenomenon, its use is moderated by local environments. For e-business value, our study has demonstrated that the extent of e-business use and e-business capabilities, both front-end functionalities and back-end integration, contribute to value creation of e-business, but back-end integration has a much stronger impact.

In summary, this study has developed an integrative theoretical framework for assessing e-business use and value, beyond initial adoption.

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APPLICATION OF MUNDELL-FLEMMING MODEL IN CONDITIONS OF EUROZONE COUNTRIES FROM FISCAL PERSPECTIVE[1]

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ABSTRACT

The main goal of this paper is to test applicability of the Mundell-Flemming model on one of the newest members of common currency union in Europe, the Slovak republic. Basic structure of IS-LM-BP model is adjusted for specific conditions of the Eurozone, especially presence of fixed exchange rate due to common currency euro. Additionally, we model fiscal sector in more detailed way due to the fact that in case of common currency union the fiscal policy is able to positively or negatively affect final output of the economy. Contrary to the standard model, we use short-term interest rate as a tool of monetary policy while we distinguish between exogenous part of money stock - domestic credit, and an endogenous part represented by a foreign credit.

KEYWORDS: Mundell-Flemming model, fiscal policy, monetary policy, Eurozone

1. INTRODUCTION

In the recent years the new open economy macro models (NOEM) have spread in the economic literature and have been widely used not only by academic researchers but also by policy makers. The traditional Mundell-Flemming model (referred as the MF model) has been used mostly in the economic theory for teaching purposes. Yet, as argued in Huang (2010): "up to now, the main conclusions obtained from NOEM shows no radical difference from those of the Mundell-Flemming model or Dornubsch model." Furthermore, so far it has been considered to be a traditional approach to apply basic MF model on conditions of the Slovak economy (Luptáčik et al., 2005; Luptáčik et al., 2006; Ivaničová, 2006).

We would like to contribute to this branch of economic literature by taking the standard model used in Luptáčik et al. (2005) and Huang (2010) and adjust it for conditions of a common monetary union. As the Slovakia has become a member of the Eurozone in 2009 the process of upgrading the traditional models on specific conditions of the common monetary union is a necessary step to be taken by economic researches. Our new version of the MF model resembles some features of the model proposed and tested by Páleník et al. (2011) but we decided to go deeper into problems of fiscal and monetary policy as done before.

In particular, the main focus of this paper is to assess the empirical predictions of MF model in explaining economic development of new member countries of the Eurozone, in our case the Slovakia.

2. THEORETICAL BACKGROUND

The MF model is an extension of the basic IS-LM model suitable for small open economies with inclusion of international financial capital flows accounted in the balance of payment statistics. The model used in this paper is designed for the analysis of macroeconomic policy, in particular fiscal and monetary policy, in a small open economy that is a price taker in import markets and in specific cases as well as in export prices.

Contrary to the standard model we assume that the domestic price is a tool that enables economy to achieve its equilibrium, not the short-term interest rate. Thus we place ourselves into the environment of fully flexible domestic prices.[2] The short-term interest rate is fully under control of the monetary authority as well as the domestic credit. Transmission mechanism between short-term interest rate and the long-term interest rate that affects investment decisions in the IS curve is modelled as a single equation.

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[2] This assumption results from the reasoning related to the theory of the optimal currency area. In the environment of fixed nominal exchange rate adjustment processes in the external sector depends on the relative prices of tradable goods between domestic and foreign economy. From this reason we would like to analyze the impact of changes in monetary and fiscal policy on the required change of the domestic price level. Clearly, the slow price adjustment process creates imbalances in this environment.

2.1. Extended Mundell-Fleming model

The basic setup of the MF model used in our analysis is described by a system of three following equations:

IS curve:

$$0 = C(Y,T) + I(IR^S, IR^{L*}, P, Y) + G(Y, T) + X(Y^*, P, P^*) - M(Y, P, P^*) - Y \quad [1]$$

LM curve:

$$0 = MD(Y,IR^S) - m(DC + FC) \quad [2]$$

BP curve:

$$0 = X(Y^*,P, P^*) - M(Y, P, P^*) + CFA\ IRD(IR^S, IR^{S*}) \quad [3]$$

where $C(Y,T)$ stands for consumption, $I(IR^S, IR^{L*}, P, Y)$ for investments, $G(Y, T)$ for government expenditures, $X(Y^*, P, P^*)$ for domestic export, $M(Y, P, P^*)$ for domestic import, Y for domestic output, $MD(Y,IR)$ for domestic demand for real money balances, $m(DC + FC)$ for domestic money supply, $CFA\ IRD(IR^S, IR^{S*})$ for capital and financial account of the domestic balance of payments.

The IS curve represents set of equilibriums in the market for goods and services depending on different combinations of interest rate and output. The LM curve represents set of equilibriums in the money market depending again on different combinations of interest rate and output. The standard IS-LM model for closed economy is extended by BP curve that represents set of equilibriums in the foreign trade and capital markets and is modeled by basic domestic balance of payments equation.

Contrary to the standard model that takes government spending as an exogenous variable we would like to take a closer look on the impact of the changes in fiscal policy on different economic variables. Therefore we model government expenditure as a function of taxes, exogenous government expenditure and total domestic product. We assume that there is a positive relationship between taxes and total domestic product, thus in case of higher product the total amount of taxes collected from the economic agents should rise.

Additionally, the level of taxes should have an influence on the level of private consumption, thus the total domestic consumption depends negatively on the taxes and positively on the level of domestic product. The higher domestic tax rate decreases real income of domestic households, thus the total consumption goes down.

Based on the reasoning above, the concrete form of the equations included into the IS-LM-BP model is described as follows:

IS curve:

$$C = c_0 + c_0 Y + c_2 T$$
$$C = g_0 + g_1 T + g_2 Y$$
$$I = i_0 + i_1 IR^S + i_2 Y$$
$$Q = q_0 + q_1 Y + q_2 P^* + q_3 P$$
$$X = x_0 + x_1 Y^* + x_2 P^* + x_3 P$$

LM curve:

$$MD = md_0 + \phi Y + \lambda IR^S$$
$$MS = m(DC + FC)$$
$$MS = MD$$

BP curve:

$$Q = q_0 + q_1 Y + q_2 P^* + q_3 P$$
$$X = x_0 + x_1 Y^* + x_2 P^* + x_3 P$$
$$CFA = cf_0 + cf_1 \left[\frac{IR^S - IR^{S*}}{IRD} \right] \quad [4]$$

where c_0 stands for autonomous consumption, Y for domestic product, T for taxes, g_0 for autonomous government expenditure, i_0 for autonomous investments, IR^S for short-term nominal interest rate, Q for import, X for export, P for price level, md_0 for autonomous real money demand, CFA for capital and financial account of the balance of payments, RP for risk premium. Asterisks indicate foreign variables.

The coefficients associated with the variables included into the model may be interpreted as elasticity of those economic variables with respect to the change in the other specific variables. For example, the coefficients c_1 and c_2 thus represent elasticity of consumption with respect to the domestic product or taxes, respectively. All of the coefficients may turn out to be of positive or negative values. However, according to the economic theory we generally assume the following:

$$c_1 > 0, c_2 < 0, g_1 < 0, g_2 > 0, i_1 < 0, i_2 > 0, q_1 > 0, q_2 < 0, q_3 > 0,$$
$$x_1 > 0, x_2 > 0, x_3 < 0, \phi > 0, \lambda < 0, m > 0, cf > 0_1 \quad [5]$$

In accordance with the standard economic theory we should use long-term interest rate as a variable that influences investment decisions of the companies. Yet, we would like to analyze impact of changes in the monetary policy not only from the perspective of changes in money supply (as done in the standard models) but also from the perspective of changes in the nominal interest rate as it currently serves as the main monetary tool in the environment of inflation targeting.

From this reason the use of the short-term nominal interest rate in the LM curve seems to us to be more appropriate. At this point we explicitly assume that there exists a strong link between the short-term and long-term interest rate that may be formulated as in equation for long-term interest rate.[3] Moreover we assume that the international capital flows are mostly determined by interest rate differential in the short-term, thus the short-term domestic and world interest rate enters the balance of payments equation.

The LM curve in our model has its specific characteristics. As we would like to examine the impact of changes in monetary policy on the domestic economy in the open economy environment we model domestic money supply as a product of domestic and foreign credit. While the total amount of the domestic credit may be influenced by the monetary policy decisions the amount of the foreign credit is determined by the interaction of the domestic economic agents with foreign environment. From this reason the domestic credit will serve as a tool for monetary policy in case of the monetarist transmission mechanism.

For the specification of the real exchange rate we use standard purchasing power parity theory that states the following:

$$RER = ER\frac{P^*}{P} \qquad [6]$$

where ER stands for nominal exchange rate which is defined as amount of units of domestic currency in exchange for one unit of foreign currency.

In case of countries that are not members of the common currency area the Eurozone the real exchange rate will be computed as stated in [6]. Yet, since the accession of the domestic country to the Eurozone the evolution of the common currency euro will not affect the evolution of the foreign trade or international capital flows in the full scale. For our purposes we assume that by adoption of the euro the domestic country does not face exchange rate risk and the nominal exchange rate, thus ER is fixed to unity for all time periods.[4] The evolution of the external trade is therefore affected by the changes in relative prices of the tradable goods. The influence of domestic and foreign price level on the export and import is modeled separately without loss of generality.

The flows of capital recorded in the capital and financial account are not any more under the influence of the changes in nominal exchange rate. Moreover we assume that the relative prices of domestic and foreign goods do not influence the evolution of the capital and financial account. Only the interest rate differentials in short term interest rates may have an influence on the capital flows between domestic and foreign country.

In the system of equations described in [1], [2] and [3] we work with the set of dependent, independent and policy variables. As there are three basic equations that describe the full system of linear equations in order to achieve full identification of the system we specify three dependent variables: Y as the domestic output, P as the price of domestic tradable goods and FC as the foreign credit. In addition to this we have set of policy variables that serve as an economic tool of fiscal or monetary policy: T as the taxes, DC as the domestic credit and IR^S as the short-term interest rate. All other variables represent independent variables and are exogenously specified.
In the theoretical part of this paper we briefly discuss implications of IS-LM-BP model. For this part the basic concepts of the derivation of the implicit function are used.

[4] Based on the data on international bilateral trade published by the Eurostat, the majority of export and import of goods from or to Slovakia, Slovenia and Estonia flows comes from the member states of the Eurozone. As the bilateral data on capital and financial account are not available we are not able to confirm or reject the hypothesis that the majority of international capital flows for countries such as Slovakia, Slovenia or Estonia also comes from the member states of the Eurozone. For our purposes we will assume that this is the case. rate, foreign long-term interest rate, changes in government deficit and inflation rate. The equation for the long-term interest rate is used instead of the LM curve. According to the authors: "The standard Mundell-Fleming model contains an LM-curve which is replaced by a long-term interest rate equation in our model, since during the 1980s the major monetary policy pursued in the various countries was an interest rate policy." As in our model we would like to investigate the effect of using the monetary transmission mechanism as well as interest rate policy we do keep LM curve in the model and we do not use the link between short term and long term interest rate described in the model of Douven and Plasmans (1996). The one possible extension of the model would be to consider long-term interest rate in the IS curve which is specified by the equation used in Douven and Plasmans (1996).

2.2. Implicit function theorem

Let us assume that there is vector of dependent variables y and vector of independent variables x where $y = y_1, y_2,... y_m$ and $x = x_1, x_2,... x_n$. If is an implicit function of many variables then may be written in the following form:

$$g(x_1, x_2,... x_n, y) = 0 \quad [7]$$

Let us first examine the case when there is only *one dependent variable* y and *n independent variables* $x = x_1, x_2,... x_n$. In this case we may write differential form of the implicit function in the form of $g(x_1, x_2,... x_n, y) = 0$ as following:

$$\frac{\partial g}{\partial x_1} dx_1 + \frac{\partial g}{\partial x_2} dx_2 + ... + \frac{\partial g}{\partial x_n} dx_n + \frac{\partial g}{\partial y} dy = 0 \quad [8]$$

In case we would like to examine change in y for specific x_i, where $i = 1, 2,..., n$ we set $dx_j = 0$ for $j = 1, 2,..., n$ where $i \neq j$. Thus the partial derivative with respect to the x_i is expressed as following:

$$\frac{\partial g}{\partial y} \frac{dy}{dx_i} = - \frac{\partial g}{\partial x_i} \quad \rightarrow \quad \frac{dy}{dx_i} = - \frac{\partial g / \partial x_i}{\partial g / \partial y} \quad [9]$$

Let us now proceed to the case when there are *m dependent variables* $y = y_1, y_2,... y_m$ and *n independent variables* $x = x_1, x_2,... x_n$. In order to be able to solve for a unique solution for dependent variables $y = y_1, y_2,... y_m$ it will take m equations to describe system of y variables:

$$\begin{aligned} & g_1 (x_1, x_2,... x_n, y_1, y_2,... y_m) = 0 \\ & g_2 (x_1, x_2,... x_n, y_1, y_2,... y_m) = 0 \\ & ... \\ & g_m (x_1, x_2,... x_n, y_1, y_2,... y_m) = 0 \end{aligned} \quad [10]$$

If we write this system of m equations in differential form in matrix notation, we get that:

$$D_x g(x, y)_{m \times n} \, dx_{n \times 1} + [\, D_y g(x, y) \,]_{m \times n} \, dy_{m \times 1} = 0 \quad [11]$$

The system of m equations in matrix form may be further elaborated as following:

$$\begin{aligned} & [\, D_y g(x, y) \,]_{m \times m} \, dy_{m \times 1} = D_x g(x, y)_{m \times n} \, dx_{n \times 1} \\ & dy_{m \times 1} = - [\, D_y g(x, y) \,]^{-1}_{m \times m} \; D_x g(x, y)_{m \times n} \, dx_{n \times 1} \end{aligned} \quad [12]$$

Let us assume that we would like to investigate effect of changes in x on y, thus finding the partial derivatives of x with respect to y. To find this out, we reformulate [] as following:

$$\left[\frac{dy_1}{dx_i}, \frac{dy_2}{dx_i}, ..., \frac{dy_m}{dx_i} \right]^T_{1 \times m} = - \left[D_y g(x, y) \right]^{-1}_{m \times m} \left[D_{x_i} g(x, y) \right]_{m \times 1} \quad [13]$$

In order to be able to solve for a unique solution of the system of m equations the matrix of first derivatives $D_y g(x, y)$ must be invertible.[5]

Matrix filled with derivations of first order as in [] is called Jacobian, thus $D_y g(x, y) = J$. We may rewrite the solution to the system as described in [] in the following way:

$$\left[\frac{dy}{dx_i} \right]_{m \times 1} = - J^{-1}_{m \times m} \left[\frac{dg(x, y)}{dx_i} \right]_{m \times 1} \text{ for } i = 1, 2,..., n. \quad [14]$$

[4] As the data for the money market rate were not available for France we used data on short-term government bond yields published by International Monetary Fund.

[5] There are two basic conditions that must be satisfied in order to $D_y g(x, y)$ to be invertible: (1) matrix $D_y g(x, y)$ is a square matrix and (2) $\det D_y g(x, y) \neq 0$. The first condition in always satisfied in a case when there are exactly m equations for m dependent variables. For the second condition to be satisfied we need to check the value of the determinant analytically.

In order to find inverse of the Jacobian matrix we may proceed in different ways. Based on the basic mathematical algebra the inverse of the Jacobian matrix may be expressed in following way:

$$J^{-1} = \frac{1}{\det(J)} adj(J) \quad \text{where} \quad adj(J)J = \det(J)I \qquad [15]$$

In order to be able to compute adjugate matrix in general form we firstly compute matrix C_{ij} called cofactor $C_{ij} = (-1)^{i+j} M_{ij}$, where $M_{ij} = \det(M)_{(n-1)\times(-1)}$ while M is created from J by deleting $i-th$ row and $j=th$ column. Then $adj(A) = C^T \iff adj(A)_{ij} = C_{ji}$.

As we will mostly deal with a system of $m = 3$ equations we describe algorithm for computing adjugate matrix 3×3 Jacobian matrix.

$$J^{-1} = \begin{bmatrix} a & b & c \\ d & e & f \\ g & h & k \end{bmatrix}^{-1} = \frac{1}{\det(J)} \underbrace{\begin{bmatrix} A & B & C \\ D & E & F \\ G & H & K \end{bmatrix}^T}_{adj(J)} = \frac{1}{\det(J)} \underbrace{\begin{bmatrix} A & D & G \\ B & E & H \\ C & F & K \end{bmatrix}}_{adj(J)} \qquad [16]$$

$$\text{where} \quad \begin{array}{lll} A = (ek - fh) & D = (ch - bk) & G = (bf - ce) \\ B = (fg - dk) & E = (ak - cg) & H = (cd - af) \\ C = (dh - eg) & F = (gb - ah) & K = (ac - bd) \end{array} \qquad [17]$$

The final solution to the system of implicit functions for dependent variables is presented in the following form:

$$v - \left[\frac{dy}{dx_i}\right]_{3\times1} = -\frac{1}{\det(J)} \underbrace{\begin{bmatrix} A & D & G \\ B & E & H \\ C & F & K \end{bmatrix}_{3\times3}}_{adj(J)} \left[\frac{dg(x,y)}{dx_i}\right]_{3\times1} \qquad [18]$$

2.3. Application of the implicit function theorem on the Mundell-Fleming model

In order to be able to analyze impact of changes in policy variables on endogenous variables in our model we use concept of derivation of the implicit function as described in the previous section. The first step is to compute determinant of the matrix of the first derivation or of, more precisely, Jacobian matrix.

The system of equation as described in the [1], [2] and [3] may be rewritten in the following form by using the concept of total derivation.

$$\begin{bmatrix} C_T + G_T & I_{IR^S} & X_{Y^*} & 0 & X_{P^*} - M_{P^*} & 0 \\ 0 & MD_{IR^S} & 0 & -m & 0 & 0 \\ 0 & cf_1 CFA_{IR^S} & X_{Y^*} & 0 & X_{P^*} - M_{P^*} & cf_1 CFA_{IR^{S*}} \end{bmatrix}_{3\times6} \begin{bmatrix} dT \\ dIR^S \\ dY^* \\ dDC \\ dP^* \\ dIR^{S*} \end{bmatrix}_{6\ 1} + \begin{bmatrix} (C_Y + I_Y + G_Y - M_Y - 1) & (X_P - M_P) & 0 \\ MD_Y & 0 & -m \\ -M_Y & (X_P - M_P) & 0 \end{bmatrix}_{3\times3} \begin{bmatrix} dY \\ dP \\ dFC \end{bmatrix}_{3\times1} = 0 \qquad [19]$$

Determinant of the Jacobian that is used later on in the [] is of the following form:

$$D_J = m \underbrace{X_P - M_P}_{-} \underbrace{M_Y}_{+} - \left[-m \underbrace{X_P - M_P}_{-} \underbrace{\left(C_Y + I_Y + G_Y - M_Y - 1\right)}_{+\ +\ +\ +\ -} \right] = m_Y \underbrace{X_P - M_P}_{-} \underbrace{\left(C_Y + I_Y + G_Y - 1\right)}_{+\ +\ +} \overset{?}{<} 0 \qquad [20]$$

Finally, the adjugate matrix to the Jacobian matrix is of the following form:

$$adj(J) = \begin{bmatrix} m\ X_P - M_P & 0 & m\ X_P - M_P \\ mM_Y & 0 & -m(C_Y + I_Y + G_Y - M_Y - 1) \\ MD_Y\ X_P - M_P & -(X_P - M_P)(C_Y + I_Y + G_Y - 1) & -(X_P - M_P)MD_Y \end{bmatrix}_{3\times1} \qquad [21]$$

In the following section we would like to analyze impact of changes in policy variables on the endogenous variables in domestic economy, such as domestic product, price level or foreign credit.

2.3.1. Change in taxes as a fiscal policy tool

In order to describe how the changes in fiscal policy affect endogenous variables in our model we will proceed as described in the previous section. Firstly, we use relationship between Jacobian matrix as in [15] and adjugate matrix to Jacobian matrix as in [16] in order to specify signs of the vector v described in [18].

In the following theoretical analysis while we do not compute exact values of the elements of the vector v we are interested in the direction of the change, thus in the signs of the elements of the vector v. For our purposes the subscript of the vector v represent exogenous variable which is subject to the derivation. Thus, vector v_t consists of the elements that describe the impact of changes in taxes on our endogenous variables.

$$\begin{bmatrix} \frac{\partial Y}{\partial T} \\ \frac{\partial P}{\partial T} \\ \frac{\partial FC}{\partial T} \end{bmatrix} = \frac{-1}{m\left[\underset{-}{(X_P - M_P)}\left(\underset{+}{C_Y} + \underset{+}{I_Y} + \underset{+}{G_Y} - 1\right)\right]} \begin{bmatrix} m\ X_P - M_P & 0 & -m\ X_P - M_P \\ mM_Y & 0 & -m(C_Y + I_Y + G_Y - M_Y - 1) \\ MD_Y\ (X_P - M_P) & -(X_P - M_P)(C_Y + I_Y + G_Y - 1) & -(X_P - M_P)MD_Y \end{bmatrix} \begin{bmatrix} (C_T + G_T) \\ 0 \\ 0 \end{bmatrix} \quad [22]$$

$$\begin{bmatrix} \frac{\partial Y}{\partial T} \\ \frac{\partial P}{\partial T} \\ \frac{\partial FC}{\partial T} \end{bmatrix} = \frac{-1}{m\left[\underset{-}{(X_P - M_P)}\left(\underset{+}{C_Y} + \underset{+}{I_Y} + \underset{+}{G_Y} - 1\right)\right]} \begin{bmatrix} (C_T + G_T)m\ (X_P - M_P) \\ (C_T + G_T)mM_Y \\ (C_T + G_T)MD_Y\ (X_P - M_P) \end{bmatrix} = \begin{bmatrix} -(C_T + G_T)/[(C_Y + I_Y + G_Y - 1)] \\ -(C_T + G_T)M_Y/[(X_P - M_P)\ (C_Y + I_Y + G_Y - 1)] \\ (-(C_T + G_T)MD_Y)/\ m\ [(C_Y + I_Y + G_Y - 1)] \end{bmatrix}$$

We analyze impact of changes in taxes on exogenous variable separately in each case. As a first case we consider change in domestic product due to the changes in tax policy.

Ad case 1 $(\partial Y/\partial T)$**:**

As there are many variables that may have a significant influence on the final result we need to distinguish between four different cases. Which one is able to describe what will happen in real economy depends on the empirical estimations of each single economy.

	$C_Y + I_Y + G_Y - 1 > 0$	$C_Y + I_Y + G_Y - 1 < 0$
$\lvert C_T \rvert > \lvert G_T \rvert$	$dY/dT > 0$	$dY/dT < 0$
$\lvert C_T \rvert < \lvert G_T \rvert$	$dY/dT < 0$	$dY/dT > 0$

In case that the elasticity of consumption with respect to the taxes is higher than the elasticity of government spending, increase in taxes should decrease total product if we assume that total multiplicative effect of increase in product is lower than one (standard case). In other cases the change in fiscal policy may have even positive effect on the total product if specific conditions are satisfied.

Ad case 2 $(\partial P/\partial T)$**:**

As there are many variables that may have a significant influence on the final result we need to distinguish between four different cases. Which one is able to describe what will happen in real economy depends on the empirical estimations of each single economy.

	$C_Y + I_Y + G_Y - 1 > 0$	$C_Y + I_Y + G_Y - 1 < 0$
$\lvert C_T \rvert > \lvert G_T \rvert$	$dP/dT > 0$	$dP/dT < 0$
$\lvert C_T \rvert < \lvert G_T \rvert$	$dP/dT < 0$	$dP/dT > 0$

In the case that the elasticity of consumption with respect to taxes is higher than the elasticity of government spending, increase in taxes should lead to decrease of relative price levels due to increasing domestic prices (we do not distinguish between different types of taxes). In other words, increase in taxes causes relative loss of competitiveness in international environment, thus decrease in real exchange rate (standard case).

Ad case 3 $(\partial FC/\partial T)$**:**

As there are many variables that may have a significant influence on the final result we need to distinguish between four different cases. Which one is able to describe what will happen in real economy depends on the empirical estimations of each single economy.

	$C_Y + I_Y + G_Y - 1 > 0$	$C_Y + I_Y + G_Y - 1 < 0$
$\lvert C_T \rvert > \lvert G_T \rvert$	$dFC/dT > 0$	$dFC/dT < 0$
$\lvert C_T \rvert < \lvert G_T \rvert$	$dFC/dT < 0$	$dFC/dT > 0$

In the case that the elasticity of consumption with respect to taxes is higher than the elasticity of government spending, increase in taxes should decrease foreign credit – more money are needed to be spent home not abroad (standard case).

2.3.1. Change in taxes as a fiscal policy tool

Again as in the previous section while we do not compute exact values of the elements of the vector we are interested in the direction of the change, thus in the signs of the elements of the vector v. Thus, vector v_{DC} consists of the elements that describe the impact of changes in domestic credit (money expansion or contraction) on our endogenous variables.

$$\begin{bmatrix} \frac{\partial Y}{\partial DC} \\ \frac{\partial P}{\partial DC} \\ \frac{\partial FC}{\partial DC} \end{bmatrix} = \frac{-1}{m\left[\underbrace{X_P - M_P}_{-}\left(\underbrace{C_Y + I_Y + G_Y - 1}_{+\ +\ +}\right)\right]} \begin{bmatrix} m\ X_P - M_P & 0 & -m\ X_P - M_P \\ mM_Y & 0 & -m(C_Y + I_Y + G_Y - M_Y - 1) \\ MD_Y\ (X_P - M_P) & -(X_P - M_P)(C_Y + I_Y + G_Y - 1) & -(X_P - M_P)MD_Y \end{bmatrix} \begin{bmatrix} 0 \\ -m \\ 0 \end{bmatrix} \quad [23]$$

$$\begin{bmatrix} \frac{\partial Y}{\partial DC} \\ \frac{\partial P}{\partial DC} \\ \frac{\partial FC}{\partial DC} \end{bmatrix} = \frac{-1}{m\left[\underbrace{(X_P - M_P)}_{-}\left(\underbrace{C_Y + I_Y + G_Y - 1}_{+\ +\ +}\right)\right]} \begin{bmatrix} 0 \\ 0 \\ m\,(X_P - M_P)(C_Y + I_Y + G_Y - 1) \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ -1 \end{bmatrix}$$

There is no impact of changes in domestic monetary policy through increase in domestic credit (monetary transmission mechanism) except on foreign demand. This is a direct consequence of the model setup when there is one to one relationship between domestic and foreign credit in order to achieve equilibrium.

This feature of the model may be considered as a problematic due to ineffectiveness of the monetary transmission mechanism and should be further analyzed when using the model in the field of monetary policy. Contrary to the standard IS-LM-BP model where the interest rate is not used as a policy variable, in our model the role of the money supply as a monetary used is replaced by the short-term interest rate. Thus, the money supply in this model is almost fully neutral.

2.3.2. Change in short-term interest rate as a monetary policy tool

Again as in the previous section while we do not compute exact values of the elements of the vector we are interested in the direction of the change, thus in the signs of the elements of the vector . Thus, vector consists of the elements that describe the impact of changes in domestic interest rate (monetary expansion or contraction) on our endogenous variables.

$$\begin{bmatrix} \frac{\partial Y}{\partial IR} \\ \frac{\partial P}{\partial IR} \\ \frac{\partial FC}{\partial IR} \end{bmatrix} = \frac{-1}{m\left[\underset{-}{(X_P - M_P)}\left(\underset{+}{C_Y} + \underset{+}{I_Y} + \underset{+}{G_Y} - 1\right)\right]} \begin{bmatrix} m\ X_P - M_P & 0 & -m\ X_P - M_P \\ mM_Y & 0 & -m(C_Y + I_Y + G_Y - M_Y - 1) \\ MD_Y\ (X_P - M_P) & -(X_P - M_P\ )(C_Y + I_Y + G_Y - 1) & -(X_P - M_P)MD_Y \end{bmatrix} \begin{bmatrix} I_{IR^s} \\ MD_{IR^s} \\ cf_1 CFA_{IR^s} \end{bmatrix} \quad [24]$$

$$\begin{bmatrix} \frac{\partial Y}{\partial IR} \\ \frac{\partial P}{\partial IR} \\ \frac{\partial FC}{\partial IR} \end{bmatrix} = \frac{-1}{m\left[\underset{-}{(X_P - M_P)}\left(\underset{+}{C_Y} + \underset{+}{I_Y} + \underset{+}{G_Y} - 1\right)\right]} \begin{bmatrix} m\,(X_P - M_P)\,(I_{IR^s} - cf_1 CFA_{IR^s}) \\ m(M_Y I_{IR^s} - cf_1 CFA_{IR^s}\,(C_Y + I_Y + G_Y - M_Y - 1)) \\ (X_P - M_P)\,(MD_Y I_{IR^s} - MD_{IR^s}\,(C_Y + I_Y + G_Y - 1) - cf_1 MD_Y CFA_{IR^s}) \end{bmatrix} =$$

$$= \begin{bmatrix} -(cf_1 CFA_{IR^s} + I_{IR^s})/(C_Y + I_Y + G_Y - 1) \\ -(M_Y I_{IR^s} - cf_1 CFA_{IR^s}\,(C_Y + I_Y + G_Y - M_Y - 1))/\,(X_P - M_P)\,(C_Y + I_Y + G_Y - 1) \\ -(MD_Y I_{IR^s} - MD_{IR^s}\,(C_Y + I_Y + G_Y - 1) - cf_1 MD_Y CFA_{IR^s})/\,m\,(C_Y + I_Y + G_Y - 1) \end{bmatrix} = \begin{bmatrix} (cf_1 CFA_{IR^s} + I_{IR^s})/(C_Y + I_Y + G_Y - 1) \\ (/(X_P - M_P))[cf_1 CFA_{IR^s}] + (M_Y(I_{IR^s} + cf_1 CFA_{IR^s})/(C_Y + I_Y + G_Y - 1) \\ -1/m[(MD_Y(I_{IR^s} + cf_1 CFA_{IR^s})/\,(C_Y + I_Y + G_Y - 1)) - MD_{IR^s}] \end{bmatrix}$$

We analyze impact of changes in domestic interest rate on exogenous variable separately in each case. As the first case we consider change in domestic product due to the changes in interest rate.

Ad case 1 *(∂Y/∂IR)*:

As there are many variables that may have a significant influence on the final result we need to distinguish between two different cases. Which one is able to describe what will happen in real economy depends on the empirical estimations of each single economy.

	$C_Y + I_Y + G_Y - 1 > 0$	$C_Y + I_Y + G_Y - 1 < 0$
$cf_1 CFA_{IR^s} - I_{IR^s} > 0$	$dY/dIR > 0$	$dY/dIR < 0$

The impact of increase of interest rate depends on the value of total multiplicative effect in the economy. If there is total multiplicative effect lower than one the increase of interest rate leads to decrease of total domestic product (which is in line with the basic macroeconomic theory). Yet, in case of higher multiplicative effect increase in interest rate may lead to increase of total product due to inflow of capital through financial account.

Ad case 2 *(∂P/∂IR)*:

Direct effect of the change in nominal interest rate is ambiguous. We need to distinguish among many possible combinations of values of total multiplicative effect in economy in relationship to other variables. Hence, there are following eight combinations possible:

		$C_Y + I_Y + G_Y - 1 > 0$	$C_Y + I_Y + G_Y - 1 < 0$
$\left\lvert \frac{M_Y\ I_{IR^s} + cf_1 CFA_{IR^s}}{C_Y + I_Y + G_Y - 1} \right\rvert > cf_1 CFA_{IR^s}$	$\lvert I_{IR^s} \rvert > \lvert cf_1 CFA_{IR^s} \rvert$	$dP/dIR < 0$	$dP/dIR > 0$
	$\lvert I_{IR^s} \rvert < \lvert cf_1 CFA_{IR^s} \rvert$	$dP/dIR > 0$	$dP/dIR < 0$
$\left\lvert \frac{M_Y\ I_{IR^s} + cf_1 CFA_{IR^s}}{C_Y + I_Y + G_Y - 1} \right\rvert < cf_1 CFA_{IR^s}$	$\lvert I_{IR^s} \rvert > \lvert cf_1 CFA_{IR^s} \rvert$	$dP/dIR > 0$	$dP/dIR > 0$
	$\lvert I_{IR^s} \rvert < \lvert cf_1 CFA_{IR^s} \rvert$	$dP/dIR > 0$	$dP/dIR > 0$

In most of the cases increase in interest rate should be compensated with higher domestic price level in order the domestic economy to achieve equilibrium. Increase in domestic interest rate is transmitted into higher domestic price level and loss of competitiveness. However, there are specific cases where increase in interest rate should be accompanied with lowering domestic prices (with increasing real exchange rate, respectively).

Unfortunately, there is no simple rule available when first or second case can be applied. Once again, the result of change in short-term interest rate not only strongly depends on the value of total multiplicative effect, the relationship between elasticity of capital flows to the interest rates and elasticity of investments to interest rates is equally important. According to this analysis, the openness of the economy measured by the elasticity of capital and financial flows with respect to changes in short-term interest rate may be a key factor thanks to which the economy will converge to the equilibrium.

Ad case 3 $(\partial FC/\partial IR)$**:**

As in the previous case the direct effect of the change in nominal interest rate is ambiguous. We need to distinguish among many possible combinations of values of total multiplicative effect in economy in relationship to other variables. Hence, there are following four combinations possible:

	$C_Y + I_Y + G_Y - 1 > 0$	$C_Y + I_Y + G_Y - 1 < 0$
$\left\lvert \frac{MD_Y \; I_{IR^S} - cf_1 CFA_{IR^S}}{C_Y + I_Y + G_Y - 1} \right\rvert > MD_{IR^S}$	$dFC/dIR < 0$	$dFC/dIR > 0$
$\left\lvert \frac{MD_Y \; I_{IR^S} - cf_1 CFA_{IR^S}}{C_Y + I_Y + G_Y - 1} \right\rvert < MD_{IR^S}$	$dFC/dIR < 0$	$dFC/dIR < 0$

In most of the cases increase in interest rate should be compensated with lower level of foreign credit in order to economy stay in equilibrium. However, in one specific case when total multiplicative effect in domestic economic is higher than one and high income elasticity in money demand along with high interest rate elasticity in CFA and investments makes total impact of change in interest rate on foreign credit positive.

The economic logic behind the analytical analysis of the model is not so straightforward. Increase in domestic interest rate should trigger increase in capital flow which will be apparent in positive change of capital and financial account. As the domestic assets become more attractive and bought by foreign investors, net foreign stock should decrease due to increase of foreign liabilities.

3. DATA DESCRIPTION AND METHODOLOGY

For the econometric estimation of parameters entering the system of equations described in [2], [3] and [4] we use a three stage least square method (later 3SLS). As the instrumental variables entering the estimation procedure we use all exogenous variables as defined in the section 2 of this paper ($T, IR^S, Y^*, DC, P^*, IR^{S*}$). Three endogenous variables (Y, P, FC) are later used in the process of estimation.

The 3SLS appears to be more efficient to use than the 2SLS if the correlations between residuals of single equations are high. In this case the estimation results provided by 3SLS are asymptotically efficient in the entire system of equations not only in the single equation as in the 2SLS (Cipra, 2008, p. 218). We decided to use 3SLS as some of the correlations in the correlation table appears to be high, thus the 3SLS should provide us with asymptotically efficient results (Table 1). The residuals were computed by using OLS method on each of the eight equations as in [4] separately.

Table 1 Correlation table of residuals from single equations estimated by the OLS

	RESIDUAL1	RESIDUAL2	RESIDUAL3	RESIDUAL4	RESIDUAL5	RESIDUAL6	RESIDUAL7	RESIDUAL8
RESIDUAL1	1.0000	0.3372	-0.3783	-0.3344	-0.1943	0.4074	0.1654	-0.0963
RESIDUAL2	0.3372	1.0000	-0.4990	-0.1471	0.1154	-0.0337	-0.1688	0.2252
RESIDUAL3	-0.3783	-0.4990	1.0000	-0.1977	-0.2211	-0.4213	-0.1652	0.3848
RESIDUAL4	-0.3344	-0.1471	-0.1977	1.0000	0.3179	0.2085	0.0356	0.0022
RESIDUAL5	-0.1943	0.1154	-0.2211	0.3179	1.0000	0.0477	0.4999	0.3061
RESIDUAL6	0.4074	-0.0337	-0.4213	0.2085	0.0477	1.0000	0.4201	-0.1776
RESIDUAL7	0.1654	-0.1688	-0.1652	0.0356	0.4999	0.4201	1.0000	0.3104
RESIDUAL8	-0.0963	0.2252	0.3848	0.0022	0.3061	-0.1776	0.3104	1.0000

There were various sources used for collecting the necessary data. All data were calculated on a quarterly basis and used in nominal terms if not stated otherwise. Data for nominal GDP and its components and balance of financial and capital account were expressed in nominal terms, in millions of EUR and not seasonally adjusted. Those data were taken from the Eurostat database.

Data for M3 money supply were taken from the database of the National Bank of Slovakia, expressed in nominal terms and in millions of EUR. As a proxy variable for the domestic price level of tradable goods the consumer price index was used with year 2005 as a base year available in the Eurostat database.

Data related to tax income were downloaded from the official database of the Ministry of Finance of Slovak republic and were expressed in mil. of EUR in nominal terms. Short-term interest rates were downloaded from the OECD database for Slovak republic as well as main foreign trade partners of the Slovakia.

World short-term interest rate was computed as a weighted average of short-term interest rates of ten main foreign trade partners and their respective weights on total foreign import and export. The data for the structure of export and import on bilateral basis for the Slovakia were available up to year 2009, thus the data for the year 2009 were used for all other consecutive years.

The same principle as in case of world short-term interest rate was used for the calculation of the foreign demand Y^* of the Slovakia. We used data on total import of top 10 trade partners of Slovakia and weighted them by share of export and import of each single trade partner on total export and import from and to Slovakia. Data on total import of each trade partner were taken from the GDP statistics available in the Eurostat database. In case of the USA the data on total import of goods and services available in balance of payments statistics in the Eurostat database were taken. As in the previous case, the index of foreign prices was computed as a weighted average of consumer price indices of top 10 trade partners of Slovakia and their weights on total export and import of those trade partners. Data on domestic credit and foreign credit were taken from the balance sheet of the National Bank of Slovakia.

4. ESTIMATION AND RESULTS

All the results from the 3SLS estimation of the model as described in [4] are provided in the Appendix II. Let us discuss results for the Slovak economy.

Firstly we would like to test statistical significance of the results for the coefficients in each single equation. We consider variable to be statistically significant if the p-value associated with it is higher than 0.05, or 0.10 in specific cases. Contrary to our assumption we observe that the taxes do not affect domestic consumption, only the government expenditures are affected. According to our results, increase in taxes in times of the current crisis should have a negative influence on the consumption, thus the direction of change is correct but the statistical significance is not present in the data. The increase in taxes does go along with increase of government expenditure, thus, positive change in taxes does not bring negative change in government expenditure, however, the statistical significance is again a little questionable.

As the possible explanation of this phenomenon we consider two factors: (1) burst of the current crisis in the 2008, (2) reign of the left-wing party during the period of 2006-2010. While the tax income has been decreasing since the last quarter of the 2008, the government expenditures have risen up to their peak in the second quarter of the 2010. Thus the increasing government expenditures had been accompanied by the decreasing tax income during the some specific time that has been included into our observations.

Second interesting observation may be attributed to the fact that the role of prices, either domestic or foreign, contradicts our economic assumptions. Both of the variables are statistically significant, yet the results suggest that *increase (decrease) in domestic* prices and *decrease (increase) of foreign* prices triggers *increase (decrease)* in total value of import (export). Our results may suggest that the role of the nominal exchange rate was likely to be more influential during the analyzed period. The contradictory behavior of import and export with respect to foreign and domestic prices could be neutralized by a opposite behavior of the nominal exchange rates.

From this perspective our model should be applied on the conditions of the Slovak economy since its adoption of euro, thus for the period of 2009-2012. Unfortunately, the lack of data does not make this kind of analysis possible. On top of that, the use of consumer price indices as a proxy variable for the price of tradable goods in domestic and foreign economy is likely not to be sufficient. Interestingly, world interest rates as well as the domestic short-term interest rates do not play a significant role in determining the capital flows in or out of the Slovak economy. Again, this result may point out to the important role of nominal exchange rate in financial flows which was not accounted for in our model. Other plausible explanation would point out to the structure of the capital and financial account. The more the capital flows are of a long-term character with a strong focus on the direct foreign investments the less likely are those investment decisions affected by the short-term interest rate that has been used in our case.

Let us now analyze possible effects of fiscal and monetary policy on our three endogenous variables as stated in [4].

4.1. Fiscal policy

The coefficients in the Appendix I provide us with exact values of the partial derivations with respect to taxes and total product needed to estimate direct effect of change in taxes on the domestic product, domestic price level and foreign credit. We used them to estimate full effect of changes in fiscal and monetary policy on endogenous variables. Numbers in equations are adjusted for statistically non-significant variables.

$$\frac{\partial Y}{\partial T} = -C_T + G_T \Big/ [\, C_Y + I_Y + G_Y - 1 \,] = -12.3571 \qquad (-25.2112^{*})$$

$$\frac{\partial P}{\partial T} = -C_T + G_T \;\; M_Y \Big/ [\, X_P - M_P \;\; C_Y + I_Y + G_Y - 1 \,] = -0.0095 \qquad (-0.0194^{*})$$

$$\frac{\partial FC}{\partial T} = -C_T + G_T \;\; MD_Y \;/\, m \,[\, C_Y + I_Y + G_Y - 1 \,] = -2.6694 \qquad (-5.4462^{*})$$

According to estimations for the Slovak republic, positive change in taxes goes hand with hand with decrease in domestic product, domestic price level and foreign credit.

When we eliminate coefficients that are not statistically significant we see that the impact of positive changes in tax income on domestic product is still negative. Thus, even though the domestic consumption seems not to be affected by the change in taxes the total domestic product will be affected negatively.

The impact of changes in taxes on domestic price level is very ambiguous. Before adjustment for the non-significant coefficients increase in taxes should be accompanied with decreasing domestic price level. After the reduction we observe that the domestic price level should again decrease due to higher tax income. However, from economic perspective, the change in taxes does not represent an important factor that influences behavior of prices, based on the results of our analysis.

Lastly, the increasing tax income causes negative change in foreign credit. As more money is spend in domestic economy covering the increase in tax income the foreign credit declines.

4.2. Monetary policy

Empirical results for the effect of monetary policy are mostly in line with our assumptions. Increase in short-term interest rate triggers decrease in domestic product. However, as apparent from the Appendix I, there is strong positive relationship between domestic investments and short term interest rate in Slovakia which may be seen as a contradiction to the standard economic theory.

$$\frac{\partial Y}{\partial T} = cf_1 CFA_{IR^s} - I_{IR^s} \;\Big/\; C_Y + I_Y + G_Y - 1 \;\; = -14055.62 \qquad (-20793.17^{*})$$

$$\frac{\partial P}{\partial T} = -1 \Big/ X_P - M_P \;\; [\; cf_1 CFA_{IR^s} + M_Y (I_{IR^s} + cf_1 CFA_{IR^s}) \Big/ C_Y + I_Y + G_Y - 1 \;] \sim -0.0000 \qquad (-0.0000^{*})$$

$$\frac{\partial FC}{\partial T} = -1 \Big/ m \,[\, MD_Y \;\; I_{IR^s} - cf_1 CFA_{IR^s} \Big/ (C_Y + I_Y + G_Y - 1) - MD_{IR^s}] = -3036.31 \qquad (-4491.76^{*})$$

Yet, looking at the evolution of investments and short-term interest rates in Slovakia we see strong co-movement in both series. Again, this causes of this phenomenon links back to the current economic crisis. With burst of the economic crisis in third quarter of the 2008 we observe decline in both investments and short-term interest rate as the latter one has been used as a tool for fighting against the crisis. After the second quarter of 2010 the very slow recovery of domestic economy in terms of increase in investment stock has been and has been accompanied by increasing short-term interest rates. Thus, our model correctly predicts that increase in short-term interest rates should lead to rise in investment stocks.

Secondly, restrictive monetary policy in terms of increasing short-term interest rate does only have a minor influence over the domestic prices. From this perspective, the monetary policy is neutral with respect to the domestic price level. Finally and not surprisingly, increase in short-term interest rate should be mirrored in decreasing level of foreign assets. As the domestic financial assets become more attractive the investors change their preferences and switch from foreign to domestic assets.

5. CONCLUSION

This paper proposes a new extension of the traditional Mundell-Flemming model for conditions of the common monetary union. Contrary to the standard MF model we use short-term interest rate as main policy tool for expansionary or restrictive monetary policy. Secondly, we incorporate taxes as a main tool for the fiscal policy that may have an influence on the total domestic product. The new version of the MF model is analyzed firstly analytically providing a general solution to the model. Afterwards, we test predictions of the MF model in economic conditions of the Slovak republic during the period of 2006-2011.

With respect to the structure of our model we show that in the presence of the inflation targeting where short-term interest rate serves as a tool of monetary policy the monetary transmission mechanism is ineffective. Secondly, the change in short-term interest rate leads to decreasing total domestic product, increasing price level and decreasing foreign credit. The restrictive fiscal policy resulting in increasing tax income leads to decreasing total domestic product, increasing domestic prices and decreasing foreign credit.

Empirical results for Slovak republic suggest that increase in tax revenues goes hand in hand with decrease of total domestic product. According to the model, the monetary policy as well as the fiscal policy should both leave the domestic price level unchanged. Finally, the effect of the changes in short-term interest rate on the total domestic product is in line with a standard economic theory, where increase in domestic interest rates should lead to decrease in total product.

As the model is calibrated on the data that incorporates birth of the current crisis and its slow vanishing the results only resembles this fact. Furthermore, as a suggestion for a future research we would recommend testing the model on the countries that have been involved in the common monetary union for a longer time than a Slovakia has been.

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Appendix I

System: UNTITLED
Estimation Method: Three-Stage Least Squares
Date: 09/10/12 Time: 08:35
Sample: 2006Q1 2011Q4
Included observations: 24
Total system (balanced) observations 192
Linear estimation after one-step weighting matrix

Determinant residual covariance 4.76E+44

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	91.7048	675.0453	0.1359	0.8921
C(2)	0.5966	0.0370	16.1306	0.0000
C(3)	-0.1414	0.2429	-0.5823	0.5611
C(4)	-936.0372	543.5883	-1.7220	0.0869
C(5)	0.2774	0.1461	1.8982	0.0594
C(6)	0.2021	0.0320	6.3102	0.0000
C(7)	-93.0510	722.4137	-0.1288	0.8977
C(8)	228.7872	52.4495	4.3620	0.0000
C(9)	0.2123	0.0434	4.8965	0.0000
C(10)	-120457.5000	57535.9400	-2.0936	0.0378
C(11)	1.9342	0.4312	4.4857	0.0000
C(12)	2512.1860	908.3518	2.7657	0.0063
C(13)	-1322.6120	366.3617	-3.6101	0.0004

c_sk=c(1)+c(2)*y_sk+c(3)*t_sk
g_sk=c(4)+c(5)*t_sk+c(6)*y_sk
i_sk=c(7)+c(8)*irs_sk+c(9)*y_sk
m_sk=c(10)+c(11)*y_sk+c(12)*cpif_sk+c(13)*cpi_sk
x_sk=c(14)+c(15)*y_star_sk+c(16)*cpif_sk+c(17)*cpi_sk
m3_sk=c(18)+c(19)*y_sk+c(20)*irs_sk
m3_sk=c(21)*dc_sk+c(22)*fc_sk
cfa_sk=c(23)+c(24)*irs_sk+c(25)*ir_w

INST t_sk irs_sk y_star_sk dc_sk cpif_sk ir_w

	Coefficient	Std. Error	t-Statistic	Prob.
C(14)	45017.4200	51180.8600	0.8796	0.3804
C(15)	0.1532	0.0221	6.9400	0.0000
C(16)	-1209.9030	822.9629	-1.4702	0.1434
C(17)	656.3265	270.4074	2.4272	0.0163
C(18)	15061.2400	2473.9660	6.0879	0.0000
C(19)	1.5208	0.1437	10.5825	0.0000
C(20)	-641.6754	185.5987	-3.4573	0.0007
C(21)	2.9703	0.4068	7.3017	0.0000
C(22)	4.0698	0.5135	7.9259	0.0000
C(23)	-591.4551	426.5939	-1.3865	0.1675
C(24)	74.1332	74.2550	0.9984	0.3195
C(25)	286.2582	149.7882	1.9111	0.0577

Equation: C_SK=C(1)+C(2)*Y_SK+C(3)*T_SK
Instruments: T_SK IRS_SK Y_STAR_SK DC_SK CPIF_SK IR_W C
Observations: 24

R-squared	0.924371	Mean dependent var	8737.737
Adjusted R-squared	0.917169	S.D. dependent var	1356.131
S.E. of regression	390.3005	Sum squared resid	3199024
Durbin-Watson stat	1.184965		

Equation: G_SK=C(4)+C(5)*T_SK+C(6)*Y_SK
Instruments: T_SK IRS_SK Y_STAR_SK DC_SK CPIF_SK IR_W C
Observations: 24

R-squared	0.66018	Mean dependent var	2786.208
Adjusted R-squared	0.627817	S.D. dependent var	584.8889
S.E. of regression	356.8222	Sum squared resid	2673764
Durbin-Watson stat	2.24153		

Equation: I_SK=C(7)+C(8)*IRS_SK+C(9)*Y_SK
Instruments: T_SK IRS_SK Y_STAR_SK DC_SK CPIF_SK IR_W C
Observations: 24

R-squared	0.571302	Mean dependent var	3689.488
Adjusted R-squared	0.530473	S.D. dependent var	726.1317
S.E. of regression	497.5601	Sum squared resid	5198886
Durbin-Watson stat	1.784262		

Equation: M_SK=C(10)+C(11)*Y_SK+C(12)*CPIF_SK+C(13)*CPI_SK
Instruments: T_SK IRS_SK Y_STAR_SK DC_SK CPIF_SK IR_W C
Observations: 24

R-squared	0.324131	Mean dependent var	12585.21
Adjusted R-squared	0.222751	S.D. dependent var	1974.961
S.E. of regression	1741.159	Sum squared resid	60632720
Durbin-Watson stat	1.420375		

Equation: X_SK=C(14)+C(15)*Y_STAR_SK+C(16)*CPIF_SK+C(17) *CPI_SK
Instruments: T_SK IRS_SK Y_STAR_SK DC_SK CPIF_SK IR_W C
Observations: 24

R-squared	0.855335	Mean dependent var	12437.35
Adjusted R-squared	0.8336	S.D. dependent var	2137.5180
S.E. of regression	871.8474	Sum squared resid	15202357.0000
Durbin-Watson stat	1.2393		

Equation: M3_SK=C(18)+C(19)*Y_SK+C(20)*IRS_SK
Instruments: T_SK IRS_SK Y_STAR_SK DC_SK CPIF_SK IR_W C
Observations: 24

R-squared	0.8957	Mean dependent var	36353.0400
Adjusted R-squared	0.885713	S.D. dependent var	4121.171
S.E. of regression	1393.219	Sum squared resid	40762248
Durbin-Watson stat	1.719257		

Equation: M3_SK=C(21)*DC_SK+C(22)*FC_SK
Instruments: T_SK IRS_SK Y_STAR_SK DC_SK CPIF_SK IR_W C
Observations: 24

R-squared	-1.07242	Mean dependent var	36353.04
Adjusted R-squared	-1.166621	S.D. dependent var	4121.171
S.E. of regression	6066.135	Sum squared resid	810000000
Durbin-Watson stat	0.381688		

Equation: CFA_SK=C(23)+C(24)*IRS_SK+C(25)*IR_W
Instruments: T_SK IRS_SK Y_STAR_SK DC_SK CPIF_SK IR_W C
Observations: 24

R-squared	0.237726	Mean dependent var	590.0833
Adjusted R-squared	0.165128	S.D. dependent var	527.806
S.E. of regression	482.2633	Sum squared resid	4884136
Durbin-Watson stat	2.032115		

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