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Contents

Irina Gorlovskaya
Regulation of the Securities Market in the Russian Federation 3-09

Vladimir Šimović, Dušan Bobera, Matija Varga
Market Liberalization of Natural Gas Supply and Distribution and Sustainable Development of the Energy Sector 10-21

Ferenc Farkas, Gulzhan Buldybajeva
Corporate Social Responsibility in the International Context: A Learning Process for Kazakh Oil Companies 22-29

Aleksandar Grubor
Marketing Aspects of Socially Responsible Business 30-36

Nenad M. Vunjak, Vedat Zulfiu, Penekeh Pechu Tangiri
An Empirical Study on Partners Selection in Supply Chain Management 37-46

Siniša Ostojić, Savo Bakmaz
Impact of the Development of Voluntary Pension Funds on the Financial Markets - the Experience of South America 47-59

Dejan Jakšić, Kristina Mijić
The Role of Company Performance Analysis in the Regional Development in Vojvodina 60-69
Regulation of the Securities Market in the Russian Federation

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Abstract

The article deals with the problems of regulation of the securities market of the Russian Federation. The regulation of securities market is an adjustment of the activities of its members for specific purposes. The author differentiates between three stages of state regulation of the securities market: (1) the stage of the subject-institutional regulation (1992 – 1996); (2) the stage of the functional regulation (1996 – 2008); and (3) the gradual transition to mega regulation (2004 – present). The first stage was characterized by the absence of a unified approach to the regulation of the securities market and its participants, or uniform rules for issuance and trading of securities. The second stage was marked by the legal framework of regulation, i.e. major regulatory agencies, and licensing requirements were defined by professional securities market participants. The third step is the concentration of the functions of government regulation in the Federal Financial Markets Service. This article deals with the basic problems of the present stage of securities market regulation in the Russian Federation and ways of solving them.

Keywords

Regulation of the securities market.

Introduction

The securities market is the integral part of the financial market. Its main function is the re-distribution of financial assets from the economic entities with surplus, i.e. investors, to economic entities with requirements for operating assets, i.e. issuers by means of securities. Securities market exists only within the economic system; however, the few past decades display the lowering of the dependency of securities market on the real economy: the non-core speculative function becomes dominant and, for this reason the risks of securities market participants grow (Perez, 2011). The benefits of securities market regulation were confirmed during the financial crisis in 2008-2011, which is the most significant in the history of worldwide economic crises. The main feature of this financial crisis is the global character of influence caused by the globalization of financial markets. For the first time, the growth speed of crisis was increased by one of the most mature market countries – the USA. This situation was caused by the lack of regulation and risk control in the financial area, and also by the growing interest in the structural financial products based on securities (Abakumov & Ivanova, 2011).

1. Historical overview of the regulation on the Russian securities market

Securities are a historical phenomenon. They were invented in the 13th–14th centuries as the way to solve contradictions between the growing amount of international trading and the possibility to use the real metal based cash in this trade. Securities became a specific form of economic relations. In the 17th-18th centuries, securities started being used for mobilization of cash for particular purposes. The issuers of these securities included both countries and the private companies. The absence of the regulation pertaining to issuing and circulation of securities in this historical period caused the first crises on the securities market. Later, all countries came to the understanding of the necessity of regulating securities
markets, the definition of the securities and their issuing and circulation rules in specialised laws. In the post-Soviet countries, the securities markets started developing in the last two decades. Despite the similarity of their development conditions, there are some significant differences in their regulation. We shall elaborate the securities market regulation in more detail, taking the Russian Federation as an example.

The regulation of securities market is an adjustment of the activities of its members for specific purposes (Gorlovskaya & Ivanova, 2013). The history of Russian securities market includes three stages of state regulation of the securities market: (1) the stage of the subject-institutional regulation (1992 – 1996); (2) the stage of the functional regulation (1996 – 2008); and (3) the gradual transition to mega regulation (2004 – present).

In the first stage, the privatization of national and municipal companies was the main factor of securities market development. This period saw the beginning of the formation of the regulatory framework of the subject-institutional approach to securities market regulation. The meaning of the subject-institutional approach was that the government defined a small list of securities market participants whose activities were subject to regulation. This list included the issuers of securities during the privatization, investment institutions and stock exchanges. There were several types of stock certificates during the privatization: regular certificates, privileged certificates of “A” and “B” types and “golden” certificates. They were distributed among the employees of the companies and also sold at auctions. The procedure of issuing these stock certificates was excessively simplified. In addition to that, all joint-stock companies were able to issue stock certificates to raise their charter capital. They did not submit issuing reports, so they were able to issue unlimited amounts of securities.

The state had a comprehensive list of investment institutions, subject to state regulation: financial brokers, investment advisers, investment companies and investment funds. Financial brokers accounted for the major part of investment institutions. They combined their activities with investment counseling. This can be explained by the most liberal licensing terms, and demand for mediation and consulting services to the investors in the privatization. Since dealership was not licensed at this time, the financial brokers freely entered into purchase and sale of securities on their own behalf and for their own account, without needing a license of the investment company. More than three thousand business structures were formed on the Russian stock market from 1990 to 1995 (Mirkin, Kuchinsky, & Andrianov, 1997). Several agencies were involved in the regulation of the securities market (the Ministry of Finance, the State Committee for Property Management, the Central Bank of Russia, the Federal Securities Commission), with overlapping objects of reference. They used inconsistent methods and instruments of regulation. There were no common objectives of regulation. Most of the participants on the securities market operated without the governmental control. Development of the accounting infrastructure of the securities market had spontaneous nature (Gorlovskaya & Miller, 2012).

Prior to 1993 there was no special instrument governing registration of holders of registered securities. Gaps in the regulation based on the subjective-institutional approach created conditions for the emergence of financial pyramids and fraud (Alaberdeev & Latov, 2010). Information isolation of issuers and professional participants contributed to the high risks on the securities market. Imperfection of the subject-institutional approach to business regulation in the securities market required the development of new objectives and principles of the governmental control based on the functional approach.

In the second stage, the legal and regulatory framework of securities market regulation changed significantly. The target governmental regulation objectives included:

- the creation and effective functioning of mechanisms of attracting investments to the private sector of the Russian economy, especially in the privatized enterprises,
- financing the federal budget deficit on the basis of securities market related, non-inflationary methods of financing specific long-term projects,
- the creation of reliable mechanisms and financial instruments of public investing,
- prevention of social unrest and conflicts that may arise as a result of transactions in the securities market, by protecting the rights of participants in the securities market, and especially the rights of investors,
- creation in Russia of a civilized market of securities and its integration into global financial markets, providing a defined position of the Russian market on the international capital markets, and
control of surrogates and securities fraud, and suppression of illegal activities on the securities market.

1996 saw the adoption of the Federal Law on Securities Market № 39-FZ, which identified:
- the basic rules and steps of issuing stock certificates and corporate bonds,
- the basis of information disclosure by issuers,
- a list of licensed professional activities on securities market, and
- requirements for stock exchanges.

The functional approach to regulation of securities market participants was applied on the basis of this law, so the list of licensed activities changed fundamentally. It began to include brokerage, dealership activities, activities on management of securities, depository activities, registry activities, organization of securities trading and clearing activities. The professional securities market participants became required to pass the new licensing procedures, change the technology, and form a new internal regulatory framework for their operations. As of 1996, individual entrepreneurs were no longer permitted to act as professional participants on the Russian securities market. Accounting system was established in the securities market, which includes depositories and registrars (Lanskov, 2005). Finally, it was enforced that the stock certificates be issued only in book-entry form, and the features of accounting change of ownership in the depositories and registrars were defined.

In the period from 1996 to 2004, Russia saw a division of business organizations on the securities market on the professional participants engaged in activities regulated by law, and professional participants that did not have this status:
- business organizations regulated by the Government (professional securities market participants performing seven types of activities described in Federal Law on Securities Market № 39-FZ; management companies and specialized depository of investment funds and non-governmental pension funds regulated by the Federal Law on Investment Funds № 58-FZ,
- business organizations unregulated by the state that did not undertake responsibility to consumers, government, and society (business structures such as pyramid schemes; business organizations-participants of the FOREX market, some investment advisors, etc.) (Gorlovskaya & Gimmadiyeva, 2010).

To regulate the securities market, a special state body was created – the Securities and Exchange Commission under the Government of the Russian Federation. It was later transformed into the Federal Securities Commission (FSC), and then to the Federal Service for Financial Markets (FSFM). In addition to state control in Russia, six self-regulated organizations of professional securities market participants were formed based on their function: NAUFOR, PARTAD, PFA and others. Their role is increasing due to the need to redistribute powers between the state and the professional community regarding the control over the activities of professional participants (PARTAD, 2013).

This period was characterized by the development of collective investment institutions. The activities of investment funds and mutual funds were highly risky, and therefore require special attention from the state. The Federal Law on Investment Funds № 58-FZ was adopted. It identified the possibility of the establishment and operation of joint-stock investment funds, as well as public mutual funds, of closed and interval type. The second stage produced the following results:
- the creation of the legal foundation of the securities market, the adoption of the Federal Laws on Securities Market, on Joint Stock Companies and on Investment Funds,
- transition from subject-institutional approach to the functional regulation,
- tightening requirements for issuers and professional participants,
- the development of organized forms of securities trading on the two main venues - the MICEX and RTS.

These results enabled the movement to the third stage of development of securities market: the formation of mega regulation of securities market began in 2004. The Federal Securities Commission (FSC) was transformed into the Federal Service for Financial Markets (FSFM). It received the authority...
to regulate most of the segments of the securities market. In 2013, the regulatory function fully transferred to the Central Bank of Russia.

Regarding the issuers:

- Establishment of rules and standards of issuing of securities (corporate stocks, bonds, investment units, Russian depositary receipts). For example, the issue of stocks and bonds comprising the steps of:
  - deciding on placement of equity securities,
  - approval of the decision to issue equity securities,
  - state registration of securities,
  - placement of securities,
  - state registration of the report on the issue of securities or submission of notices on the issue of equity securities to the registering authority.
  - state registration of securities issue prospectus is accompanied by registration of their catalogue in the case of placement of securities by public offering or by private subscription among a circle of persons whose number exceeds 500,

- Regulation of securities trading;
- Establishment of rules for keeping registers of securities owners;
- Defining the scope and order disclosure of information by issuers; and
- Prohibition of the use of insider information.

Regarding the professional securities market actors:

- Licensing and certification of financial market professionals. The Russian stock market professional activities can be performed on the basis of a license of professional participant, a stock exchange license, or a license for keeping a register of holders of securities. On the collective investments market, there are licenses needed for investment fund, management company and specialized depositary. The regulation is performed by the establishment of licensing requirements of following conditions:
  - compliance with existing legislation on securities to protect the interests of investors, and advertising,
  - the presence of the internal control system,
  - compliance with the requirements of capital adequacy (e.g., for broker-dealer activities, the norm is around 890 thousand euros),
  - compliance with the rules of combination of activities (e.g., in the keeping of the register of holders of the securities not be combined with any other activities, and such activities as a broker, dealer, custodian and securities management are combined with each other),
  - compliance with the quantitative and qualitative requirements for personnel,
  - compliance with the rules on disclosure of information, and
  - availability of necessary package of documents for internal implementation.

Regarding the investors:

- creation of the system protecting the rights of securities holders and enforcing the compliance of their rights by issuers and professional participants of securities market in order to reduce the investor’s risks, and
- prohibition and suppression of activities of persons engaged in illicit entrepreneurial activities on the securities market.

Regarding the qualified investors:

- identification of qualified investors,
- procedure for recognition of their status, and
- restrictions on activities.
The present state of the Russian securities market can be characterized as follows:

- The market largely operates book-entry and equity securities (stocks, corporate bonds, government and municipal securities);
- The main market participants are legal entities, with a growing number of institutional investors;
- Organized (exchange) market is the dominant form;
- Technology used by professional securities market participants is in most cases electronic (paperless);
- There is a tendency to transition to online trading in the brokerage services;
- Russian market is part of the world financial market (production and circulation of ADR, GDR, Eurobonds, and the activity of Russian professional participants in the foreign markets).

At the same time, the Russian securities market has the problems that are still not fully resolved. In Russia, there are still not clearly defined target settings of regulator as it is observed in the legislation of European countries, and there is no separation and consolidation of rule-making and monitoring functions for appropriate levels of regulation. According to the IOSCO recommendations, the targets of the state regulator should include: protection of property rights to the assets involved in the exchange of the securities market; creation of conditions for overcoming asymmetry of the information on the securities market; creation of conditions for reduction of systemic risks; and creation and maintenance of the conditions of competition on the securities market. Furthermore, the targets of self-regulatory organizations include: the definition of licensing requirements and conditions for professional participants offering and providing services on the securities market, support of the quality of services on the securities market, and insurance (Gorlovskaya & Miller, 2010).

The absence of a uniform policy of securities market regulation has led to division of the market into four main segments:

- the corporate securities market (except securities of commercial banks),
- the bank securities market,
- the state and municipal securities market, and
- the investment funds securities market.

All these segments have specific regulations:


2. There is no common approach to understanding the particulars of the documentary form of the securities issue. For the corporate bond, the documentary production is the issuing in the form of a bond certificate. At the same time, certificates are not provided for state and municipal securities: they are issued as bonds. Documentary government bonds with mandatory centralized custody are issued with a single common certificate for the entire issue, just as corporate bonds. In addition to that, there is no registry of owners for the nominal state and municipal securities. Stocks are issued only in book-entry form. The source of this contradiction lies in the legal field: in accordance with continental legal rules, the Civil Code of the Russian Federation determines the security as a document certifying property rights in compliance with the established form and obligatory requisites. The exercise or transfer of these rights is possible only upon presentation of the security. Securities include: government bonds, bonds, bills, checks, deposit and savings certificates, bank savings, book to bearer bills of lading, stocks and privatization securities. Definition of the emission of a security in the Federal Law on Securities Market № 39-FZ is based on the common law: the stocks and most of the bonds may be issued only in book-entry form, and cannot be used for the implementation and transfer of rights. This form of the existence of a security is the subject of heated debate among lawyers, as the book-entry securities do not meet the legal criteria of the classical security, and therefore cannot be considered as property. Meanwhile, in Russia there is no problem of immobilization of certificated securities.
3. There is still no uniformity in the regulation of the issuing and circulation of securities in different sectors. For example, the release of corporate securities in the Federal Financial Markets Service is accompanied by registration of the decision to issue it, but in the case of the free circulation of securities – by securities prospectus release. Release of state and municipal securities registration is accompanied by three documents - the General Conditions of Issue, the Conditions of Issue, and the Decision to Issue Securities, so that there are different stages of the issue defined for different types of securities.

Conclusion

Financial market of the Russian Federation development strategy defines its target until 2020 as the accelerated economic development through quality improvement of competitiveness of the Russian financial market and forming of the independent financial centre at its basis. This centre should be able to concentrate a supply of a wide range of financial instruments, the demand for financial instruments by domestic and international investors, and thus create conditions for the formation of prices of such financial instruments and their respective assets in the Russian Federation. To achieve this, the securities market of the Russian Federation has a number of things to be done: creation of a single consistent legal framework of the securities market; construction of a system of prudential supervision of the professional securities market participants; and development of a system of the issuance and circulation of derivative financial instruments and securitization of financial assets regulation.

Thus, the Russian stock market went through three stages of development and is on the threshold of a new stage associated with mega-regulation financial markets. Existing problems of the Russian securities market and possible solutions must take into account the formation of Russian corporations:

- The strategy of behavior in the financial markets (in planning the issuance of new equity securities and derivatives, depository receipts).
- In case of dividend policy.
References

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Market Liberalization of Natural Gas Supply and Distribution and Sustainable Development of the Energy Sector

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Abstract
This article examines and briefly describes the concept, objectives and role of market liberalization of natural gas supply and distribution in the sustainable development of the energy sector and demonstrates the liberalization of the market model of supply and distribution of fuel on the example of the Republic of Croatia in several sections. Different types of alternative fuels for heating are presented, along with the income and substitution effects, the market for distribution and supply of natural gas in Republic of Croatia, the participants in the natural gas market, the current legislation, and the formation of prices for all market participants, and improvement measures. Also, the article presents the method of calculating the selling price of consumed gas for priority consumers, the method of calculating the cost of consumed gas for tariff consumers, and rates. The article presents recommendations for the full liberalization of the market supply and distribution of natural gas, highlighting the need to strengthen legislation and supervision to avoid instability in the energy sector as well as the eventual emergence of an energy crisis, all in with the aim of relating to the sustainable development of the energy sector.

Keywords
Model, liberalization, fuel type, market supply and distribution of natural gas, income effect and substitution effect, price formation, sustainable development, energy sector.

Introduction
This article comprises several sections. It presents a real-life model of the contemporary natural gas market on the example of the Republic of Croatia, with the gas market participants, the legislation currently in force, price calculation and implementation for all natural gas market participants, and a model of improvement measures as a contribution to natural gas market liberalisation in Croatia (and elsewhere), with the aim of supporting the sustainable development of the energy sector of transition countries (Croatia and others). The supply and distribution of natural gas as an energy source in these countries features as service classified in the area of microeconomic. In economic terms, the production process is completed when the natural gas reaches the final consumer, and the process of liberalising the

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1 Natural gas supply includes supplying tariff consumers and priority consumers.

2 Natural gas distribution is the transport of natural gas through the distribution system, for delivery to final consumers, but excluding the delivery itself. Natural gas distribution is a legislated, and the supply, i.e. delivery to retail and priority consumers is a primarily market-based.
natural gas market is principally launched in order to secure a level playing ground. The process of natural gas market liberalisation should not only remove the obstacles existing in the supply process, and improve the current legislation, but also provide support to the sustainable development of the energy sector of a transition country (sustainability of gas resources, sustainability of the pricing concept in recession and transition, etc.). Some of the more significant specific features of the service market of natural gas supply and distribution include manifest characteristics of natural monopoly, great fluctuations of sold quantities depending on weather conditions, global warming, recession, and the rising purchase price of natural gas. It is essential to have as realistic “numeric picture” of the size of the natural gas market of a transition country (such as Croatia) (Hrvatska energetska regulatorna agencija, 2008). It is vital to emphasise that the characteristic of the natural monopoly is not fully applicable, as the natural monopoly is paired with “price regulation” so that it is more efficient to let the natural monopolist serve the natural market than let a company act as competition. As regards the sustainability of a transition country’s energy sector sustainability, it is important to identify which types of heating fuel are the most important, and it must be therefore considered which energy sources are vital in the energy market according to various criteria, but primarily in relation to the sustainable development criterion. The energy sources whose consumption should be considered include natural gas (Prirodni plin, n.d.), fuel gases (propane, butane, biogas, liquefied gas, associated petroleum gas, liquefied natural gas, municipal gas and mixed gas), light distillate oil, bunker oil, firewood and electric power. The passage below analyses only the most important characteristics.

Natural gas is flammable, explosive, and non-renewable. The important characteristic of natural gas for the sustainable development of the energy sector is its lowest environmental impact. The disadvantage is that, due to its low density, it is difficult to store and transport. For supply and distribution, the consumer needs to be connected to the gas distribution system, and also install gas installation and burners.

On the liberal gas market, natural gas can be substituted or supplemented by gas fuels: propane, butane, liquefied gas, petroleum gas, liquefied natural gas, municipal gas and mixed gas. Possible supplements or substitutes include light distillate oil, bunker oil, firewood and electric power. The basic characteristics of bunker oil and distillate oil are that bunker oil is environmentally

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3 Natural monopoly is secured through price regulation.
4 Extremely low sales in summer and high sales in winter.
5 …resulting in rising prices of the supply and distribution of natural gas.
6 The natural monopoly is based on the exclusive right to exploit particular natural resources.
7 Natural gas is a fossil fuel consisting of methane, which is the simplest hydrocarbon, odourless and tasteless.
8 At the current pace of exploitation of natural gas as an energy source, its deposits will last for another hundred years. Natural gas is used for heating, industry, electric energy, production, cooling, cooking, as an alternative to fuel oil, and as an automotive fuel.
9 Natural gas is the most common fossil fuel, and its combustion produces less carbon dioxide per joule of energy than the combustion of fuel oil or coal. Natural gas is one of the greenhouse gases, and when released into the atmosphere, it makes a stronger impact on the greenhouse effect than carbon dioxide itself, but in much smaller quantities. Methane oxidises in the atmosphere and remains in it for about 12 years, compared to carbon dioxide, which is already oxidised and effective for 100 to 500 years. Natural gas mostly consists of methane, whose impact on radiation is 20% greater than the impact of carbon dioxide. Due to this characteristic, one ton of methane in the atmosphere captures the same amount of radiation as 20 tons of carbon dioxide, but remains in the atmosphere for a 8 to 40 shorter time. Also, combustion of natural gas produces much less sulphur dioxide and nitrogen oxides than the combustion of any other fossil fuel, which is especially important for environmental preservation. Combustion of the natural gas does not produce mercury, which is another contribution to environmental preservation.
10 Transport is possible through pipelines, which are unfit for trans-oceanic transport. The supply and distribution of natural gas has no other transport options but pipelines.
11 Liquefied gas is a mixture of gaseous paraffinic and olefinic hydrocarbons (propylene, butylene, isobutene and isobutylene).
12 Liquefied natural gas varies in composition, depending on its origin and the geographic area it comes from. It is usually transported in natural, i.e. gaseous form through gas pipelines, or liquefied, by special LNG barges (custom built vessels for transporting liquefied gas). The explosion range is 5% to 15% concentration in the air.
13 The energy efficiency of light distilled oil is lower than that of natural gas, so that technical solutions are highly various. A great advantage of oil is the fact that the retail buyers have their own storage facilities and are not forced to use the service of external network supply, i.e. external gas suppliers and distributors.
acceptable, and the substitute or supplement is natural gas. Bunker and distillate oil require costly custom-made reservoirs. As regards the price of distillate oil, there is a specific pricing procedure, set by the Government of Croatia \textsuperscript{14}. It is important to note, however, that the energy efficiency of distillate oil is lower than that of gas. \textsuperscript{15}

Coal is unacceptable for households as a supplement or substitute, because of the excessive environmental impact, storage space, transport costs to the household, and advanced payment (Ugljen, n.d.). \textsuperscript{16}

Given all these known characteristics, firewood \textsuperscript{17} is the most acceptable substitute or supplement to natural gas supply and distribution. There are many types of wood used for heating, and beech is the firewood of choice. Wood can be regarded as a renewable energy source, and the selling price of firewood is currently somewhat lower than the selling price of natural gas.

Electric heating is more expensive than other options, but it definitely has its advantages. \textsuperscript{18} Electric heating is costly, but this is not a reason for avoiding its use. Electric energy has a relatively high cost of supply and distribution. For instance, the decisions on pricing in Croatia are made by the Government.

The above mentioned energy sources, especially firewood and electricity, can serve as substitute or supplement in natural gas supply and distribution provided that they are present in sufficient quantities.

1. The income and substitution effect with the sustainable development of the energy sector

For a full liberalisation of supply and distribution of natural gas on the market of a transition country (such as Croatia), along with the sustainable development of the energy sector it is important to initiate

\textsuperscript{14} The sales price of distilled light oil is approximately 30\% higher than that of natural gas. These reservoirs are mostly installed on the floor, but there are also hanging models. Compared to the gas heating system, the maintenance cost of distilled oil is not negligible either.

\textsuperscript{15} For this reason, we often find different technical solutions. Two different versions of distillate oil combustion have appeared on the market recently. A great advantage of distillate oil heating is that we are not forced to use the services of external supply network. Distillate oil is easy to store in a separate part of the house, thus enabling long-term heating planning of heating costs.

\textsuperscript{16} Coal is a combustible black or brownish-black sedimentary rock usually occurring in rock strata in layers or veins called coal beds or coal seams. The harder forms, such as anthracite coal, can be regarded as metamorphic rock because of later exposure to elevated temperature and pressure. Coal is composed primarily of carbon along with variable quantities of other elements, chiefly hydrogen, sulphur, oxygen, and nitrogen. Coal is mined and primarily used as fuel.

\textsuperscript{17} Unlike bunker and distillate oil, wood does not contain ingredients such as sulphur, whose combustion produces sulphur dioxide, which, by further oxidation in the atmosphere, turns into sulphuric acid, i.e. environmentally detrimental acid rain. Using firewood for heating enables possible deficiency in energy sources which are transported from forests, and are subject to created political shortages, like gas shortage. As an energy source, wood comes from the region and is less subject to such created shortages and naturally renewable. As an energy source, wood is regarded as environmentally tolerable, because the CO\textsubscript{2} emission occurring during combustion is equivalent to the amount of CO\textsubscript{2} absorbed during growth. Renewal of forest resources is possible in a relatively short period, provided that it is appropriately managed.

\textsuperscript{18} Wood heating is an environmentally friendly, cost-effective and safe heating method. The threshold fuel value of wood is approximately 13.4-14.5 GJ/t. With increased humidity, the heating power of wood is reduced due to waste of heat on the evaporation, so that the recommended firewood should contain no more than 20\% humidity. Wood combustion process consists of the following stages: (1) wood is heated to approximately 100\°C when the humidity evaporates; (2) rather than emitting, wood uses up the heat from the stove. The second stage is pyrolysis of carbohydrates in the wood, when larger carbohydrate molecules start decomposing to more easily evaporable smaller molecules at the temperature of 100\°C - 300\°C. At the temperature range of 300\°C - 600\°C, evaporable carbohydrates, comprising 75\% if firewood start burning, and most of the heat is emitted at this point. After the evaporation of humidity and combustion of carbohydrates, the remainder, in the form of charcoal, burns at temperatures higher than 600\°C.

\textsuperscript{19} Electric power is completely transformed into heat, without any losses, which is not the case with classical heating methods, where the chimney or pipeline networks are the cause of loss of a significant amount of heat. Electric heating is the most convenient for automatic regulation, i.e. using as much energy as needed and when needed, rather than regulating the room temperature by opening windows or, at the other hand, suffering cold. Calculations and practice in the northern regions of Europe and America show that it is the cheapest to install and use. Electric power is completely transformed into heat by means of electric heaters, without any loss in the transporting network or chimneys. On the other hand, losses in some types of heating installation may reach over 25\%. A special feature of contemporary electric heaters is the possibility of incorporating high-tech electric or electronic components. One group of these components is used for protecting people and property from possible injuries and damage due to possible malfunctions. The consumers’ fear of electricity is justified only in terms of properly mounted electric installation, which is often disregarded in houses and flats, so that a variety of unprofessional improvisation can be found. If the electric installation is done in compliance with regulations, there is no danger.
the process of pricing impact. The income and substitution effect are choices made by the consumer on the market (Karić, 2006, p. 122). The two arms of the total pricing impact also feature as two concurrent motives encouraging consumers to change the volume and structure of their own consumption. Therefore, the total pricing impact on the required amount and consumption equals the sum of income effect and substitution effect. The income effect refers to the change in consumers’ real income, and thus their real purchasing power due to the change in the price of one of the products from the product group that is purchased. The nominal income is then assumed to remain unchanged. Additional real income gained by the reduction in cost can be used for purchasing any product, including the same product whose price is reduced. It is the effect that the change in the price of a commodity has on the consumers’ real income, and thereby the purchased amount and consumption of this commodity. The substitution effect refers to the change in the demand and consumption of a commodity arising as a consequence of the change in the price of this commodity. In relation to other commodities, it may mean additional purchase of a commodity which is now, after price reduction, cheaper in comparison with its substitutes. For instance, trading companies involved in the supply and distribution of natural gas on the Croatian market are positively affected by the income effect and the effect of substitution with other energy sources for several reasons, as they increase solvency and reduce financial costs. In turn, consumers with financial problems reduce expenditure in the household budget and do not aggravate their financial crisis. As regards the substitution effect in the case of supply and distribution of natural gas, special attention must be devoted to security conditions, which also favourably affects sustainability.

<table>
<thead>
<tr>
<th>Commodity Type</th>
<th>Income Effect</th>
<th>Substitution Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas</td>
<td>Normal</td>
<td>Higher consumption of the same commodity and other commodities</td>
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<tr>
<td></td>
<td>Price Drop</td>
<td>Lower consumption of the same commodity and other commodities</td>
</tr>
<tr>
<td></td>
<td>Price Rise</td>
<td>Higher consumption of the same commodity and lower consumption of other commodities</td>
</tr>
<tr>
<td>Wood</td>
<td>Inferior</td>
<td>Lower consumption of the same commodity and higher consumption of other commodities</td>
</tr>
<tr>
<td></td>
<td>Price Drop</td>
<td>Higher consumption of the same commodity and lower consumption of other commodities</td>
</tr>
<tr>
<td></td>
<td>Price Rise</td>
<td>Lower consumption of the same commodity and higher consumption of other commodities</td>
</tr>
</tbody>
</table>

Source: The author’s summary based on Pindyck & Rubinfeld, 2005

2. The concept of liberalism and natural gas market in a transition country

Liberalism is a school in the development of economic thought, devoted to the objective which is at the same time firm and flexible. Liberalism claims that integration is achieved by the application of market economy which should secure a free flow of commodities, services and labour (Teorije integracije, n.d.). The fundamental doctrine of economic liberals claims that the regime of economic freedom as they imagined it will almost automatically guide direct production by means of competition to channels that will secure as effectively as possible the socially required commodities and services. The profit motive is the reason for attempts to suppress competition and liberalism on the market. The name of Adam Smith is inseparable related with initiating this change, but Adam Smith was far from being an uncompromising advocate of laissez faire (let everyone do as they want and let everything go on as it does), for he believed that an individual’s activity is (as) free (as possible) from political limitation. He argued that there is a natural tendency in everyone to increase their own wealth by striving to satisfy their own needs. Free economic processes thus create and endless spiral of ever-expanding change.
guided by the “invisible hand” (Dewey, 2004, p. 14). The liberalisation of the natural gas market must enable all companies involved – or to be involved – in gas supply to conduct this activity in any market segment in compliance with legal conditions which must also regulate the sustainability of development of the energy sector (e.g. the natural gas market). In conducting the activities of supply and distribution of natural gas, nobody is entitled to hinder companies on a liberalised market, and gas consumers can, in that case, choose the most convenient supplier present at the liberalised gas market.

It is important to establish what “contemporary natural gas market” refers to: a set of natural gas buyers, i.e. end users of a gas supply system and gas suppliers, who set energy source and service provision prices through real or potential mutual action. Market size refers to its geographical boundaries. (Pindyck & Rubinfeld, 2005) The natural gas market can be viewed geographically and reaches the final points of installed gas distribution system, i.e. to the connected final consumers (both households and companies). A more detailed picture of the gasified area of Croatia is available at Hrvatska stručna udruga za plin (2008), which also shows that the gas distribution system will be expanding within Croatia, thus expanding the gas market. Gas market expansion will result in a rise in the number of customers, i.e. natural gas consumers. Furthermore, it shows that the gas distribution system towards southern Croatia and Dalmatia is under construction. As regards the main pipelines, the map shows that the gasified area in Croatia measures 2,113 km in length (Hrvatska energetska regulatorna agencija, 2008).

3. Natural gas market participants and sustainable development on the example of the Republic of Croatia

Microeconomics focuses on particular segments of the economic system, studying individual markets and the behaviour of individual subjects. It studies the behaviour of individual consumers, households and companies on a particular market, supply and demand trends, prices of individual products and services provided by small, medium sized and large companies, trade unions and governmental agencies for economy, and the status of individual industries (Karić, 2006, p. 4). Supply and distribution are tightly regulated industries by the provisions of the Gas Market Act (The Official Gazette of the Republic Croatia, 2008). Participants on the natural gas include gas producers, transport system operators, distribution system operators, gas storage system operators, terminal operators, gas suppliers, gas market intermediaries, gas market agents, transport system operators, gas retailers and final consumers. Other participants on the natural gas supply and distribution market include regulatory bodies, the Government of Croatia, counties, cities and municipalities (The Official Gazette of the Republic Croatia, 2009). A participant like the Croatian Energy Regulatory Agency, established under the Regulation Act is one of the major players, because, in accordance with its mandate, it actively participates in the field of consumer protection in several ways. The Agency deals with issues related to consumer protection, the relevant regulations and their effects on consumer protection, and initiates regulative changes in the field of consumer protection, by addressing individual complaints and objections made by consumers, based on public authorisation under the Act on the Regulation of Energy Activities, for the market, which is a set of buyers and sellers who determine the prices of products or product groups through their actual or potential mutual actions, and a major part in the supply and distribution of natural gas in Croatia is played by 38 supply and distribution trading companies, with differently organised service delivery patterns. Their service provision may be organised as trading companies for distribution services only, or trading companies for natural gas supply and distribution services. Ownership also influences the provision of natural gas supply and distribution (which is also

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20 For instance, by monitoring energy dealers, monitoring the energy dealers’ quality of service in terms of consumer protection, in accordance with the provision of the Energy Act and the legislation regulating the performance of individual energy-related activities, and by cooperating with competent Ministries and inspections, in accordance with particular laws, through the Consumer Protection Councils, whose members are representatives of Consumer Protection Associations, in implementing the system of regulating energy-related activities.

21 Consumers raise the issue of protecting their rights by means of submitting complaints, objections, letters and other communications related to the work of energy dealers – electric energy, district heating, natural gas and fuel oil. CERA’s decisions in these disputes are executive, and the dissatisfied party may file a complaint by initiating legal proceedings before the Administrative Court of the Republic of Croatia. The Government is also an important factor, as it uses CERA’s proposal when making decisions on the pricing of gas supply and distribution services to tariff consumers.
important), as the trading companies vary in ownership structure, that is, may be owned by: cities or municipalities, private persons, or the state i.e. the Croatian Electric Power Public Utility. These trading companies are influenced on the market by the local and county governments, which grant concessions for activity renewal. These should be legislatively channelled to energy sector sustainability.

4. The natural gas market: prices, mandatory conditions and relationships between participants.

All the conditions of natural gas supply are regulated by: the Energy Act, the Gas Market Act, the Public Procurement Act, the Consumer Protection Act, the Metrology Act, the Public Roads Act, the Inflammable Gases and Liquids Act, the Fire Prevention Act, The Act on the Regulation of Energy Activities, the Rules of the Natural Gas Market Organisation, and the General Conditions of Natural Gas Supply and Gas Distribution Network. The technical condition for operation, management and development of the distribution system, and connection to other parts of the gas system, are regulated by the Network Rules of the Natural Gas Distribution System.

Out of all the listed contracts, the greatest significance in Croatia belongs to Contracts for Supply of Natural Gas to Households, which are offered to suppliers and distribution operators, Contracts for Sale of Natural Gas to Priority Natural Gas Buyers, and Contracts for Transport of Natural Gas. There are two active natural gas suppliers on the market. The natural gas market is regulated from production, transport services, supply and sale service, storage service, nomination of required quantities for payment of balancing energy supply separately or together with the distribution operator. On the other hand, after all of the listed participants, stand the final customers, i.e. natural gas consumers.

What is the model of price formation of natural gas in a transition country (for instance, Croatia) in relation to the sustainable development of the energy sector? Croatian industry pays a higher cost per cubic metre of consumed gas than households. In some countries of the European Union, the cost of gas per cubic meter for households is much higher than for industry. In the neighbouring EU countries, the cost of gas per cubic meter is higher for household than for industry, whereas in the eastern countries (Serbia and Bosnia-Herzegovina), it is lower for households than for industry, like in Croatia. Croatia produces 70% of its own gas consumption, and 30% is imported from abroad. The retail price of gas in Croatia is formed differently for trading companies, tariff consumers and priority consumers. Costs of supply and distribution services are defined separately. The following elements are used for determining

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22 The most important are the General Conditions of Natural Gas Supply. The General Conditions of Natural Gas Supply regulate: (1) the procedure of issuing the Energy Compliance Certificate for connection and creating the conditions for connection to the gas supply system; (2) creating the conditions for connection to the gas supply or transport system; (3) monitoring the quality of service and quality of gas supply; (4) mutual relationships between energy subjects and system users; (5) measurement conditions; (6) consumption calculation and collection of supplied natural gas; (7) conditions for the application of natural gas limitation of discontinuation of supply; and (8) procedures of identifying and charging for unauthorised consumption of natural gas. “The General Conditions of Natural Gas Supply”, the Government of the Republic of Croatia, Article 29, Paragraph 1 (General Provisions) of the Energy Act.

23 To perform these actions, the participating parties regulate mutual relationships by making the following contracts: (1) Contract for Connecting to the Distribution System between the distribution system operators and natural gas producers or the final consumers; (2) Contract for Connecting to the Transport System between the transport system operators and the distribution system operators or natural gas producers or the final consumers; (3) Contract for Natural Gas Distribution between the natural gas suppliers and distribution system operators for the final consumers; (4) Contract for Natural Gas Transport between natural gas suppliers or natural gas dealers with transport system operators; (5) Contract for Natural Gas Supply between natural gas suppliers, who are also the licensees of the public service of natural gas supply and natural gas suppliers; (6) Contact for Sale of Natural Gas between natural gas suppliers or dealers or natural gas producers and other natural gas suppliers and dealers; (7) Contract for Natural Gas Supply between dealers and final consumers of natural gas; (8) Contract for Payment of Balancing Energy between natural gas operator and balance group leader; (9) Contract for Natural Gas Storage between storage system operators and natural gas suppliers who supply natural gas to other suppliers or consumers; and (10) Contract for Purchase of Balancing Energy between natural gas market operators and balancing energy suppliers. Legislation also regulates the extension of natural gas supply contracts, procedure of supplier change, quality of natural gas service quality, right to objections, calculation measuring points, calculation and fee collection of delivered natural gas, and damage compensation.

24 The price of gas produced in Croatia is much lower than the price of gas imported from Russia or other countries. With such formed prices, priority customers cannot compete with their products against products from the EU countries or neighbouring countries, and demand that the Government of Croatia intervene in natural gas price formation. Production, i.e. priority trading companies are demanding price cuts of natural gas daily.
the selling price of gas: (1) the purchase price of natural gas; (2) transport costs; (3) natural gas storage costs; (4) distribution margin determined by the Government of Croatia as proposed by CERA; (5) supply service cost (while the gas quantity is raised for the measured calorific value); and (6) variable calorific value. Finally, 25% VAT is added at the end of all the listed items.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Selling price of natural gas for priority consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of natural gas for the threshold value of 33,338.35 KJ/m³</td>
<td>3.32 kn/m³</td>
</tr>
<tr>
<td>Storage service cost</td>
<td>0.05 kn/m³</td>
</tr>
<tr>
<td>Transport service cost</td>
<td>0.25 kn/m³</td>
</tr>
<tr>
<td>Distribution service cost</td>
<td>0.30 kn/m³</td>
</tr>
<tr>
<td>Supply service cost</td>
<td>0.12 kn/m³</td>
</tr>
<tr>
<td>Total price before tax</td>
<td>4.04 kn/m³</td>
</tr>
<tr>
<td>Selling price of natural gas</td>
<td>1.01 kn</td>
</tr>
<tr>
<td>Total</td>
<td>5.05 kn/m³</td>
</tr>
</tbody>
</table>

Source: The authors’ compilation, modified and based on the rates for household consumer rates, set by the Government of Croatia, based on CERA’s proposal.

Table 2 shows the price calculation for priority consumers, whereas Table 3 shows the price calculation for tariff consumers. According to the Government’s decision, price for priority consumers is 3.56% kunas.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Selling price of natural gas for priority consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of natural gas for the threshold value of 33,338.35 KJ/m³</td>
<td>1.70 kn/m³</td>
</tr>
<tr>
<td>Storage service cost</td>
<td>0.22 kn/m³</td>
</tr>
<tr>
<td>Transport service cost</td>
<td>0.30 kn/m³</td>
</tr>
<tr>
<td>Distribution service cost</td>
<td>0.09 kn/m³</td>
</tr>
<tr>
<td>Supply service cost</td>
<td>2.31 kn/m³</td>
</tr>
<tr>
<td>Total price before tax</td>
<td>2.58 kn</td>
</tr>
<tr>
<td>Selling price of natural gas</td>
<td>2.89 kn/m³</td>
</tr>
</tbody>
</table>

Source: The authors’ compilation, modified and based on the rates for household consumer rates, set by the Government of Croatia, based on CERA’s proposal.

The cost for supply and distribution of natural gas for retail customer is determined by the Government of Croatia, based on CERA’s proposal, at the price applicant’s request.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Trends in the sales price of gas supply and distribution without VAT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/07/1997 till 31/01/1997</td>
<td>0.31 kn/m³</td>
</tr>
<tr>
<td>01/01/1998 till 31/03/2001</td>
<td>0.31 kn/m³</td>
</tr>
<tr>
<td>01/04/2001 till 31/07/2001</td>
<td>0.33 kn/m³</td>
</tr>
<tr>
<td>01/08/2001 till 31/08/2002</td>
<td>0.33 kn/m³</td>
</tr>
<tr>
<td>01/09/2002 till 30/04/2009</td>
<td>0.35 kn/m³</td>
</tr>
<tr>
<td>01/09/2004 till 01/01/2009</td>
<td>0.36 kn/m³</td>
</tr>
<tr>
<td>01/09/2009 till 31/12/2010</td>
<td>0.38 kn/m³</td>
</tr>
</tbody>
</table>


25 Based on the decision of the Board of Directors, the Croatian Energy Regulatory Agency adopted: (1) the tariff system for natural gas distribution without the amounts of tariff items and (2) the tariff system for natural gas distribution with the exception of priority customers without the amounts of tariff items. The methodology for establishing the tariff system for natural gas distribution and supply without the amounts of tariff items defines: (1) methods and criteria for setting tariff items for natural gas distribution and supply; (2) formula and elements for setting the maximum allowed profit margin, (3) table of tariff items; (4) the procedure of applying for amendments of tariff amounts; (5) tables for cost monitoring; (6) tables for content presentation of maximum allowed profit margin calculation; (7) tables for monitoring gas acquisition costs; and (9) documents and information that energy entities are obliged to submit to the Croatian Energy Regulatory Agency. Article 1 of the Act on the Regulation of Energy Activities, Issue 177/04 of the Official Gazette of the Republic Croatia, March 26, 2007.

26 The maximum allowed profit margin for setting the tariff items for gas distribution is calculated based on two regulation years and for the regulation year, taking into account: (1) costs of materials, services, energy and small inventory; (2) purchase cost of natural gas for covering the loss of natural gas from the distribution system; (3) day-to-day investment maintenance; (4)
Based on Table 4, it can be concluded that natural gas prices doubled from 1997 to 2010, so that the price in 2010 was 2.35 kunas per cubic meter. Monopoly regulation is based on the return on capital rate, and the Regulatory Agency sets the maximum allowed price so that the return rate can be competitive or fair in some way, which is called return rate regulation. The maximum allowed price is based on the expected rate of return that the company will earn. A fair rate of return must be based on the company’s real capital cost, and this cost depends on the Regulatory Agency’s actions. The Regulatory Agency uses the following formula to set prices:

\[ P = \frac{AVC + (D + T + sK)}{Q} \]

where

- \( AVC \) – average variable cost
- \( Q \) – quantity produced
- \( s \) – maximum allowed return rate
- \( D \) – amortisation
- \( T \) – tax
- \( K \) – current equity.

The distribution service cost should be approximately 0.60 kunas per cubic metre. (Pindyck & Rubinfeld, 2005, p. 351) The discrepancy between the measurement and loss of natural gas in the distribution network may amount up to 10% of the purchased quantity of gas, with a rising trend. The Rules of the Natural Gas Market Organisation elaborate the rules of natural gas utilisation in detail, which was not taken into account. As regards the natural gas supply and distribution cost, the amount of tariff items is also set without calculation, i.e. administratively, producing a negative impact on the development sustainability of the energy sector. An example of this is controllable through the presentation of trading company X, based on set administrative prices. The trading company distributes and supplies 28,000 consumers with natural gas, currently purchasing around 70 million cubic metres of natural gas and employing 74 workers.

<table>
<thead>
<tr>
<th>Table 5 Revenue overview of the observed company X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue from the sales of natural gas: 158,000,000 kn</td>
</tr>
<tr>
<td>Revenue from other services: 100,000,000 kn</td>
</tr>
<tr>
<td>Revenue from connecting, monitoring and disconnecting gas installations: 3,000,000,000 kn</td>
</tr>
<tr>
<td>Revenue from the incentive measures of the Government of Croatia for cost reduction: 3,900,000,000 kn</td>
</tr>
<tr>
<td>Revenue from connection fees: 1,500,000,000 kn</td>
</tr>
<tr>
<td>Revenue from interest: 2,200,000,000 kn</td>
</tr>
<tr>
<td>Revenue from collected damages, written off liabilities etc.: 1,300,000,000 kn</td>
</tr>
<tr>
<td>Total: 170,000,000,000 kn</td>
</tr>
</tbody>
</table>

Source: The authors’ compilation, based on the observed company X’s set administrative prices

Table 5 shows the revenues of the observed company X from the sales of natural gas, connecting, monitoring and disconnecting gas installations, the incentive measures of the Government of Croatia for cost reduction, connection fees, interest rates, collected damages, written off liabilities and revenues from other services offered by the observed company.
Table 6: Expenditure overview of the observed company X

<table>
<thead>
<tr>
<th>Costs</th>
<th>Amount (kn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs of sold natural gas</td>
<td>136,000,000</td>
</tr>
<tr>
<td>Costs of loss in network</td>
<td>6,800,000</td>
</tr>
<tr>
<td>Costs of materials, fuel and electric power consumption</td>
<td>2,100,000</td>
</tr>
<tr>
<td>Costs of spare parts</td>
<td>100,000</td>
</tr>
<tr>
<td>Costs of services, telephone, maintenance, vehicles, mail and heating</td>
<td>700,000</td>
</tr>
<tr>
<td>Costs of certification, vehicle registration fees and advertising</td>
<td>700,000</td>
</tr>
<tr>
<td>Amortisation</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Costs of meter reading, remunerations for the Supervisory Board, insurance and contributions</td>
<td>4,500,000</td>
</tr>
<tr>
<td>Labour costs</td>
<td>9,000,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>169,900,000</strong></td>
</tr>
<tr>
<td><strong>Net profit</strong></td>
<td><strong>100,000</strong></td>
</tr>
</tbody>
</table>

Source: The authors’ compilation, based on the observed company X’s set administrative prices

Table 6 shows the observed company’s expenditures, meaning costs of sold natural gas, loss in network, materials, fuel and electric power consumption, spare parts, services, telephone, maintenance, vehicles, mail, heating, certification, vehicle registration fees, advertising, amortisation, meter reading, remunerations for the Supervisory Board, insurance and contributions, and labour costs. It must be highlighted that transport costs of natural gas are calculated at special rates, for peak daily load. According to the decision of the Government of Croatia, daily peak $T \text{m}^3/\text{day}$ is 5.13 kn per $T \text{m}^3$ per day in November, December, January and February; medium $T \text{m}^3/\text{day}$ is 4.265 kn per $T \text{m}^3$ per day in October, March, April, May and June, and basic $T \text{m}^3/\text{day}$ is 2.58 per $T \text{m}^3$ per day. Natural gas transport cost in the sold natural cost is also administratively set, and additionally burden the supply and distribution, not being set per measure unit, i.e. $T \text{m}$ of natural gas. A single day in a month may burden the transport costs by discrepancy unaffected by supply and distribution. Income from the sale of natural gas is 158,000,000 kn, and the cost of purchased natural gas and loss in the distribution network is 142,800,000 kn.

5. The role of opening the natural gas sector in sustainable development

In order to initiate the liberalisation of the natural gas market, i.e. start the process of introducing “healthy” competition on the natural gas market (e.g. in Croatia), the first step to take is amending the natural gas supply and distribution prices in accordance with the set amounts of tariff items, and also, change the price of natural gas transport in accordance with the purchased quantities of natural gas (e.g. in Croatia), bearing in mind that the selling price for supply to priority customers and selling price for tariff customers is a significant cost in production and significant expenditure household income. The sales and acquisition agreement for natural gas also define the nomination of balancing energy as an obligation of supplier and distributors (according to current legislation). The nominated quantities must be in compliance with contracted quantities, and possible discrepancies are paid for.

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27 The liberalisation of the natural gas supply and distribution market started badly for trading companies currently present on the market, and it can be stated that trading companies dealing in natural gas supply and distribution are dissatisfied with the current way of forming the selling price of natural gas, which certainly does not lead to the sustainable development of the energy sector. Natural gas supply agreements include penalty payment provisions for irregular drawing, and the allowed difference between the quarterly drawn amount of natural gas and quarterly contracted amounts is 20% for households, and 15% for priority customers. Each supplier, and also supplier which is also a distributor, will pay for the drawn amount, which means that all the risk of changes in weather changes and unforeseen temperature changes. A further disadvantage is that suppliers and distributors pay natural gas storage fees set by the Government, and the supplier designated for acquisition has storage facilities rented until 2014. With the completed interconnection, the opportunity to sell natural gas to priority buyers and rent storage facilities will be open for other suppliers as well.
Table 7  Natural gas selling prices and distribution service prices

<table>
<thead>
<tr>
<th>Trading company</th>
<th>TARIFF GROUP – TG</th>
<th>TARIFF MODEL – TM1</th>
<th>TARIFF ITEMS –Ts (before VAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ts1 [kn/Sm³]</td>
</tr>
<tr>
<td>1. GRADSKA PLINARA KRAPINA, Frana Galovića 5</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.430</td>
</tr>
<tr>
<td>2. DUKOM, Dugo Selo, Josip Zorića 70</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.410</td>
</tr>
<tr>
<td>3. HUMKOM, Hum na Sutli, Lastine 1</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.410</td>
</tr>
<tr>
<td>4. ZAGORSKI METALAC, Zabok, Celine 2</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.400</td>
</tr>
<tr>
<td>5. RADNIK, Križevci, Kralja Tomislava 45</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.379</td>
</tr>
<tr>
<td>6. ZELINSKE KOMUNALIJE, Svetog Ivana Zeline, Katarine Krizmanić 1</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.356</td>
</tr>
<tr>
<td>7. KOMUNALIJE-PLIN, Đurđevac, Radnička cesta 61</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.345</td>
</tr>
<tr>
<td>8. GRADSKA PLINARA ZAGREB-OPSKRBA, Zagreb</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.341</td>
</tr>
<tr>
<td>9. KOMUNALNO PITOMAČA, Pitomača, Vinogradska 41</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.330</td>
</tr>
<tr>
<td>10. PLIN VTC, Virovitica, F. Rusana 2</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.330</td>
</tr>
<tr>
<td>11. TERMOPLIN-NOVI MAROF, Novi Marof, Varaždinska 48</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.315</td>
</tr>
<tr>
<td>12. ELEKTROMETAL, Bjelovar, Ferde Rusana 21</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.310</td>
</tr>
<tr>
<td>13. MEDIJMURJE-PLIN, Čakovec, Mihovljska 70</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.306</td>
</tr>
<tr>
<td>14. KOMUNALAC, Kopriwnica, Mosna 15</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.300</td>
</tr>
<tr>
<td>15. IVKOM-PLIN, Ivanec, Vladimirina Nazora 96/b</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.285</td>
</tr>
<tr>
<td>16. TERMOPLIN, Varaždin, V. Špinčića 78</td>
<td>household</td>
<td>TM1. All tariff consumers of the tariff group</td>
<td>2.275</td>
</tr>
</tbody>
</table>

Source: The authors’ compilation, based on Vlada Republike Hrvatske, 2012

All the indicators so far show that the market is the best way or organising economic activities, and any Government’s interference with the action of the market forces of supply and demand occurs for two reasons: (1) to stimulate effectiveness and (2) to ensure fairness (Karić, 2006, p. 142). When considering incentives to effectiveness, it is important to point out that the Government of Croatia does not control natural gas prices; rather, they pass decisions on prices, thereby ensuring efficiency for tariff customers, ensuring fairness at the same time, i.e. subsidising a part of the supply and distribution costs, which is a mechanism leading to sustainable development of the energy sector. Based on Table 7, showing the selling price of natural gas and the price of natural gas distribution service, it can be seen that the Krapina Gasworks charges the highest price of 2.430 kn/Sm³, whereas the Termoplins Gasworks in Varaždin is the cheapest, at 2.275 kn/Sm³. Other prices can be compared based on the table.

The process of liberalising natural gas supply in Croatia may begin by separating supply from distribution of natural gas. Performing the activity of supply and distribution requires obtaining concessions from the Counties where the activity is to be performed. It is still unclear what influence or consequences the new regional system will have, and the separation procedure is currently mandatory only for larger quantities of 100,000,000 m³ a year. The current legislation should be amended so that the supply and distribution should be separated on the entire market. The distribution is carried out through pipelines, the quality of natural gas is defined, so that the safety conditions ought to be met at all points as provided by law and current regulations. For this reason, a unified distribution price for natural gas should be set on the geographic area of the Republic of Croatia.
According to real data, the regulated natural gas distribution activity\textsuperscript{29} remains a great measurement mystery, as the loss in the network from the acquisition point to the final delivery point ranges from 0 to 16.5\% of the total quantity delivered to the final consumer.\textsuperscript{30}

**Conclusion**

The liberalisation process has begun, and its full implementation requires strengthening legislation and supervision, so as to avoid the instability of energy sector and possible emergence of energy crisis, which is directly related with the presented research into correlation with the sustainable relation of the energy sector in a transition country (on the example of Croatia)\textsuperscript{31}. The structure of the selling price of natural gas and the bears of supply risk on the natural gas market should be changed gradually (and by no means progressively). The natural gas supplier cannot bear the risk of storage services; rather, it should be distributed between the suppliers. Liberalisation of the natural gas supply will enable sale from the producer to the consumer with or without storage. The natural gas supplier would secure sufficient amounts of natural gas. Once the liberalisation of natural gas supply takes hold, all consumers will know that they have the opportunity to use environmentally and economically most convenient energy source, and that they are buying an energy source with the lowest carbon dioxide emission for the same amount of delivered energy. Wood does have the same lowest carbon dioxide emission, but the consumption of natural gas will preserve our forests.

Liberalising the natural gas market in a broader sense would enable choosing between natural gas suppliers and open the opportunity to keep inventories on our territory, depending on the price movement on the global market. At the global level, liberalising the natural gas market would enable each customer to opt for a clean, convenient, environmentally and economically most acceptable energy source. In addition to all of the above, the process of liberalising the natural gas market should include a collaboration of scholars and scientists, with the main objective to create profit with secure and reliable delivery of natural gas on the market, and eventually, sustainable development of the energy sector.\textsuperscript{32}

**References**


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\textsuperscript{29} Successful liberalisation of the natural gas distribution activity in Croatia is further aggravated by losses of natural gas in pipelines. These losses may occur from the entry point from the production plant into the pipelines, or takeover point at the Croatian border, to the exit point, i.e. the final (priority or tariff) consumer. The distribution price is significantly lowered as the entire cost of natural gas loss is at the operator’s expense.

\textsuperscript{30} Such drastic discrepancies point to the need to change legislation and distribute the cost of the measurement discrepancy between suppliers, transport system operators, and distribution operators. Thus set administrative price of distribution service in the work of the current operator incurs commercial losses. For instance, in case of acquisition of 70,000,000 m$^3$ of gas, with 5% measurement discrepancy, the cost is 6;930;000 kunas. On the natural gas market in Croatia, legislation and its legislation is mostly in the hands of experts formally educated in machine engineering and mining, which reduces the efficiency and effective market liberalisation. The economic significance and full understanding that the customer is king is neglected by most experts, thus additionally frustrating the operation of current suppliers and distributors of natural gas. The aim of liberalising the natural gas supply market is to reduce the price of natural gas, improve services and enable each customer to choose a supplier offering secure and reliable supply. The selling prices of natural gas supply are always best formed by competition, which is hindered by the ineffective regulation, i.e. CERA.

\textsuperscript{31} The liberalisation process of Croatian natural gas market has so far resulted in a rise in the purchase price of natural gas, which is the fault of legislation. In order to liberalise the Croatian natural gas market, it is a priority to optimise the price of supply and distribution of natural gas, improve the security and reliability of supply and enable customers to choose the suppliers by themselves. Further flow of activities in the process of liberalising natural gas supply and distribution on the Croatian market requires separation of the natural gas supply service from the natural gas distribution service. Achieving unified (regulated) price of the natural gas distribution service by the existing companies, the services of supply and distribution of natural gas should be separate, but also imply the same quality, security and reliability levels. The natural gas supply service would enable each (priority and tariff) customer a free choice of the most favourable bidder.
Vladimir Šimović et al. Market Liberalization of Natural Gas Supply and Distribution and Sustainable Development of the Energy Sector


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Corporate Social Responsibility in the International Context: A Learning Process for Kazakh Oil Companies

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Abstract
The article gives an overview of the new developments of Corporate Social Responsibility (CSR) in Kazakhstan. As a developing country, Kazakhstan is introducing a lot of new business and management terms, one of them being CSR. The term is used only in the multinational companies that have experience at the international level, and understand the importance of good CSR activities. Nowadays, it is the image and the reputation of the company that shows its benefits to the region they operate in. For the joint venture multinational companies operating in gas and oil industry, the CSR concept is a new phenomenon which needs significant efforts from all the stakeholders to introduce it for the benefit of society. The article demonstrates some practical consequences of learning organizational characteristics of corporate social responsibility at those companies, which are in the early stage of CSR system implementation.

Keywords
Corporate social responsibility, learning organizations, oil industry, Kazakhstan.

Introduction
Corporate social responsibility (CSR) – the term in Kazakhstan is as young as the country itself. Though CSR has not been legally defined in Kazakhstan yet, we realize that it is both the continuing commitment by companies to operate ethically in accordance with its legal obligations and invest into sustainable development of the community they operate in, and obligation of the governments to encourage cooperation to contribute to those goals (Baker, 2005).

In 1991, Kazakhstan was the last country of the former Soviet Republics to declare its independence. Large scale institutional changes have occurred in the country during this short period. A great amount of time and effort has been devoted to establish a friendly relationship with other countries (Bophinger, 2001). Over the 20 years of its development, Kazakhstan has reached significant success in all areas. To give an example, the GDP has increased almost 15 times – from 700 USD in 1994 to 11,000 USD in 2012 (Akhmetov, 2012).

The main driver behind Kazakhstan's economic growth has been foreign investment, mainly in the country’s booming oil and natural gas industries. Since gaining independence from Soviet rule in 1991, Kazakhstan has received more than 18 bn USD in 2010 of foreign direct investment – the highest per capita indicator in the former Eastern Bloc. The exploitation of the largest oil field in the world, Kashagan, will make Kazakhstan one of the major producers of hydrocarbons not only on the regional, but also on the international level. The technology of exploitation in this industry is very much environment-oriented (A dictionary for Petroleum Industry, 2007). Production of crude oil and natural gas con-
densate from the oil and gas basins of Kazakhstan amounted to 79.5 million tons in 2010, up 4% from the production in 2009. Kazakhstan raised oil and gas condensate exports to 72 million tons in 2010, which makes almost 91% of the produced oil in 2010. Gas production in Kazakhstan in 2010 amounted to 37.4 billion cubic meters. At the moment Kazakhstani gas is supplied to Russia only; however, another independent pipeline is said to be planned for construction to China in the year 2013. Expected amount of Kazakh gas to be supplied to China is 10 billion cubic metres (Agency for Research on Investment, 2012).

After gaining independence, Kazakhstan did not have the financial or technical capabilities to develop the gigantic oil fields such as Tengiz and Kashagan. That is when it was decided to attract foreign investors, i.e. companies that have the experience and the resources necessary to develop these fields. Companies such as Tengizchevroil and NCOC are both under the production sharing agreement, which are accounted to zero tax obligations for the developing period. Both of these companies have taken the responsibility of exploiting the oil fields and also have undertaken the social responsibility before the people and the community of the region. Taking this responsibility has caused many of planned and unplanned implications for business companies who are struggling with consequences of different national and organizational cultures on a daily basis.

1. The business environment in Kazakhstan

In Kazakhstan, a rapidly developing country, the business environment is typically characterized by powerful business enterprises, a legal environment aimed at ethical behaviours on the part of business, and societal expectations that businesses should be more ethical and socially responsible. Along with that, the organizations in developing countries need to be more competitive; therefore, the issues of customer service and satisfaction are of great importance. Thus, in decision making processes, companies try to avoid actions that may breach any regulation or impact their reputation negatively in order to avoid consumer dissatisfaction. The business of the twenty first century – whatever its size – is going to be part of a global business community, affecting and being affected by social change, events and pressures from around the world. Whether the business entity is large or small, its linkages to customers, suppliers, employees and communities around the world are likely to be more numerous, diverse and important to its success. This is why the relationship between business, government, and society is significantly important to understand both as a citizen and a manager. Such a relationship becomes more and more complex as the whole world is now moving towards a system where most nations will play to the ‘same rules’, for the time being those of global capitalism. However, in a very competitive global market, the companies of extractive industry must strive to portray a picture of themselves as highly socially responsible companies. Active involvement in socially beneficial programs provides extra advantages to the company.

This study examines the concentration of corporate social responsible practices by Tengizchevroil Co. in Kazakhstan. There is a short example of NCOC (North Caspian Operating Program) program as one of the first investments which have had a direct social orientation at an oil firm in Kazakhstan (NCOC, 2012).

The strategy that NCOC has undertaken is the sustainable development. The widely accepted definition was first introduced in the United Nations’ 1987 Brundtland Report: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. It is about effective coordination of three constituent parts: environmental sustainability, economic sustainability and societal sustainability. NCOC believes that, in order to achieve the best overall results, the three elements should all be considered when a project or development occurs. The idea of sustainable development is widely implemented in Kazakhstan, especially since it has been emphasized by the President N. Nazarbayev in the “Kazakhstan-2030” Strategy. (Corporate Social Responsibility in Kazakhstan, 2012)

First and foremost, NCOC not only believes in managing its business safely and responsibly, in the industrial part of the project, but it is also committed to fulfilling its social and environmental responsibilities. Such commitments require close collaboration with the government, the regional authorities, the community groups etc. In case of NCOC, its commitment to social project is not just a mere window-dressing, to give an example the Electric power line from Atyrau Heating and Power Plant to “Nursaya” Substation crossing over the navigable Ural River and smaller channels of Sadok and Yaik Islands.
School #7 was handed over on 31 August 2011 and is fit to provide senior secondary education on the basis of an 11-year educational period. The SIP (Social Investment Project) design included construction of the school building for 640 students, a boiler house with metal discharge chimney, a transformer substation, open sports grounds and landscaping (Corporate Social Responsibility in Kazakhstan, 2012). Furthermore, this study also tests the motives and the most influential factors in their concentration of involvement in CSR. The primary motivating factor is the belief that CSR can increase long term profitability and sustainability of the company as well as enhance the reputation of the organization. “The main driver behind Kazakhstan’s economic growth has been foreign investment, mainly in the country's booming oil and natural gas industries” (World Bank Report, 2003). This strong statement has represented very well the strategy of corporations in the initial period of privatization process in this country. Over the past few decades, non-governmental organizations (NGOs) have gained prominence as an essential segment of emerging civil society in Kazakhstan, similar to other developing countries. This (global) tendency has been helped by the unparalleled acceleration of globalization, which has created new opportunities for NGOs in their quest for sustainable development around the world (Stohl & Stohl, 2010). From an estimated number of about 200 in the early 1990s, there were about 8,000 NGOs in Kazakhstan in the year 2010 (Makhmutova & Akhmetova, 2011). Comparing with other post-socialist countries, this number is apparently not so high (for instance, there are more than 74,000 organizations of such type in Hungary; on the other hand, their number in Serbia has already exceeded 20,000), but they have an important role in knowledge generation and transfer between corporation and community.

2. CSR in the international context

Current CSR situation in Kazakhstan differs from the one in other countries. Since the major industry of the country is oil, the international oil companies were at the same time developers of CSR policies in Kazakhstan. The major problem with corporate social responsibility at the moment is the lack of communication; the companies donate great amounts of currency, and since there is no controlling agency that can ensure the companies and the community that what has been donated reaches the object of its intention, such inconsistency puts the whole idea of CSR at risk. So the question lays as what is CSR for Kazakhstan and in Kazakhstan? Until 2005, national business structures understood CSR as a one-time money donation or philanthropy act. The CSR framework was shaped by the codes of conduct of multinational corporations operating in Kazakhstan (Egemberdiyeva, 2010).

In one of her latest articles (Kanter, 2011), the well-known management professor from the Harvard Business School, Rosabeth Moss Kanter, has made a very simple statement: “Great companies think differently.” Differently – from other companies. The question is: how do they differ from others? This paper argues that the corporate social responsibility concept is one of the most characteristic features of this differentiation. Especially in the case of such a “delicate” industry as the oil and gas is.

The common sense definition of CSR could be “it is what companies do beyond their core business”. The word “responsibility” implies a duty to someone and the word “social” is referred to society; therefore, to interpret the term, it is the duty of the company to society. In our case, we will try to investigate the CSR in the oil and gas industry, where the appropriate word would be “sustainability”. Obviously, the broadest context of the CSR concept is the sustainable development in close connection with ethical aspects, environmental protection and new challenges of different social marketing actions (Dudás, 2008). It is necessary to emphasize the importance of business sector and its social influences. The powerfulness of this aspect has been prioritized within the industry of oil and gas, as a robust actor of energy business around the globe. Well worth taking into consideration for the sector are the outcomes of an EU sponsored research. It has been stated: “Modern energy organisations have established the vision to raise the employee s’ awareness and understanding of the global problems, and the ways in which the behaviour of individuals and the organisations in general can influence the environment on the global level.” (Nikolić, Danković, & Galjak, 2012)

The very staring point of CSR principles was the Carroll CSR pyramid (Carroll, 1999), which provided elements of financial, legal, ethical and philanthropic responsibility. Responding to this idea, David Wood has declared three elements of context: legal, public and managerial. According to several authors, the simplest definition of CSR is: “The development of the region the company operates in.” (Wood, 1991, p. 691)Over the decades of CSR history, other scholars from different countries have
been in the same platform – that CSR is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large (Puncet & Ashish, 2012; Frydman, Gray, & Rapaczynski, 1996; Chew & Stuart, 2005). Social responsibility is the responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that:

- is consistent with sustainable development and the welfare of society,
- takes into account the expectations of stakeholders,
- is in compliance with applicable law and consistent with international norms and behaviour, and
- is integrated throughout the organization (Merritt, Michael, & Heller, 2006).

Another theoretical approach has described the CSR as a process where the company wants to play a role in the government structure, and influence corporate decision making in accordance with their own interests. Of course, a company’s pursuit of its own self-interest does provide social benefits (Subhasis, 2009).

Finally, there is the “official” definition taken from the European Commission. It says declaratively: “CSR is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on voluntary bases.” (Commission of the European Communities, 2002).

Now, if we look at international experience from the viewpoint of Hungary and try to compare it to that of Kazakhstan, this research and experiences show practically no difference in the attitude towards the general idea of CSR (Radácsi, 2011). On the basis of the Central European experiences, this author draws up the “CSR Scena” (See Table 1). One of the most important contributions to CSR literature in the Hungarian context was the publication of Philip Kotler’s book (Kotler & Lee, 2007), vital for the interest in strengthening the CSR concept in Hungarian multinational companies, such as MOL (Hungarian Oil Co.). As a part of the European Union, Hungary has a two-decade history of dealing with the issue of CSR. However, it is again the multinational companies that take on the responsibility before the people and the community, and the local businesses get away with just a one-time donation, and think that they have done their part on the social responsibility. To give an example, Mercedes opened its plant in the city of Kecskemét. The government released the company from tax obligations for the development period of 5 years. In return, the company took on a very responsible attitude towards corporate social “sustainability”.

### Table 1 Stakeholder organizations of the CSR map: The “CSR Scena”

<table>
<thead>
<tr>
<th>business organisations</th>
<th>non-profit organisations</th>
<th>business networks</th>
<th>the media and www portals</th>
<th>the academic sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>knowledge intensive business services</td>
<td>NGOs for civil society</td>
<td>Chambers of Commerce</td>
<td>higher education institutions</td>
<td></td>
</tr>
<tr>
<td>consulting firms and agencies</td>
<td>company foundations</td>
<td>CSR task forces</td>
<td>CSR research institutions</td>
<td></td>
</tr>
<tr>
<td>organisations of CSR meetings and conferences</td>
<td>co-productive innovative organisations</td>
<td></td>
<td>scientific and professional journals</td>
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<tr>
<td></td>
<td>hybrid organisations for business – NPO cooperation</td>
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</tbody>
</table>

**Source:** Radácsi, 2011

### 3. CSR from the learning perspective

Dealing with the theory and practice of corporate social responsibility concept from the viewpoint of companies in developing countries, it seems to be relevant to use the organizational learning concept. Studies in this field are mainly concerned with analysing learning processes within organizations. Some of the theoretical approaches have described the CSR as a process of learning where the company wants to play a role in the government structure. They want to influence corporate decision making in accor-
dance with their own interests. Of course, a company’s pursuit of its own self-interest does provide social benefits. Judging by the consequences of these theoretical and practical efforts, it could be stated that this business sector should have been pioneered within the management learning process. The knowledge transfer from big international (multinational) companies to their joint ventures and subsidiaries operating in developing or new market countries shows the evidence of management development at both levels, national and corporate (Farkas, Póor, & Engle, 2011).

The adaptation of corporate social responsibility is bound to have an impact on a firm’s corporate culture. It requires the development of new shared values, norms, and strategic goals that are very actual issues in the oil industry companies in new market-oriented countries. The learning processes are a special case in this respect. These are not simply internal processes (to include the CSR into the business) that take place within an organization. They are also based on new dialogue with stakeholders. It requires totally new types of learning, involving the key players of the business and social community into this learning process. Taking into consideration the “delicate situation” of the developing countries (like Kazakhstan) the task is difficult, sometimes even confusing. The expert at this academic and practical question, Jacqueline Cramer (who is a professor and was a Minister of Housing, Spatial Planning and Environment in The Netherlands) suggests using the experiences of NIDO program in the practice (Cramer, 2005). This international program has provided strong evidence that the integrated levels of organizational learning processes (individual, group and organizational) are equally needed for institutionalization of learnt CSR elements. It could be said for virtually all of the companies involved in the NIDO program that it represents the integrative mode of organizational learning.

In the special case of CSR, learning process is produces an outcome, the CSR reporting system. Corporate social reporting has often been conceived as the „practical side” of corporate social responsibility (Gond & Herrbach, 2006). Corporate social reporting has the same roots as corporate social responsibility, and can be linked to social audit process. At the corporations of oil and gas industry the social audit represents an extremely important corporate learning tool. The use of the corporate social reporting systems means that the following should be implemented:

- strategic perspective,
- interactive feature of the system,
- bottom-up approach in the daily operation,
- ethical logic standards,
- publicity to the community, and
- meeting accountability requirements.

The next part of this paper gives an example of applying the learning character of the concept of corporate social responsibility in the operation of extractive industries in developing countries. The collected examples and cases have demonstrated how difficult it is to implement the importance of balanced character of CSR systems into the learning processes. For this reason, the focus should be on replying the question: Is the organizational learning process able to offset the „dark side-like nature” of CSR, especially in the oil industry?

4. Organizational learning for avoiding the “dark side” of CSR

As the history of Corporate Social Responsibility concept proves, CSR has both positive and negative potential impacts (Guenther, Hoppe, & Poser, 2007; Morsing, 2006). The negative impacts have been said to be the dark side of this management concept. The appearance of the dark side is especially dangerous within pollution-intensive industries such as oil and gas, mainly in developing countries of the world, as emphasised by Belal in his paper about another developing country, Bangladesh (Belal, 2008) and the 2003 report of the World Bank (Ettenbotough & Shyne, 2003). The social and environmental impact (health and safety risks and large-scale air pollution) of the oil and gas industry affects the image or reputation of the company. Therefore, building a sustainable corporate image is of importance for the industry. When one company suffers damage to its image, the industry in total can be affected. Oil extraction activities have caused heavy damage to the environment on more than one occasion. The oil production process consists of upstream and downstream operations that include activities such as drilling, well construction, well testing, oil treatment and transportation through pipelines to the customer.
Land, farms, animals, forests and seas are affected by the extensive growth in oil and gas production, transportation and distribution. The impacts of these processes may be partly natural, and partly social. The natural consequences are perceptible and tangible (like air pollution, low farm production, or polluted water). However, social impacts seem to be indirect. Negative impacts of CSR are illustrated by these social effects on local communities. The oil and gas industry shows very diverse examples from the developing world. The firm’s relationship with their community via operation and community development programs hide many possible conflicts. Local individuals and groups are struggling for donations of international oil companies, for services and infrastructure provided by MNCs; community leaders try to exclude the other actors of the community, etc.

Originating from aspirations of these countries, new concepts for tailoring CSR to the demands of developing world are continually emerging. For example, it suggests that the oil TNCs are making considerable contribution to community development in the Niger Delta in Africa that reflects the changes to the new CSR model. Idemudia writes: “A South-centred CSR perspective has both been instrumental to the maturation of contemporary CSR agenda as well as generating fresh critical insights into the limits and strengths of CSR initiatives in developing countries.” (Idemudia, 2011). The black side of CSR should successfully be counterbalanced with other new models that have been published, like the Global Memorandum of Understanding (GMoU). One of the main partners of this initiative is Chevron (the mother company of Tengizchevroil). The implementation of the GMoU by Chevron shows a good example of community development as a part of modern CSR concept (Spence, 2011). Chevron model of the GMoU represents a radical departure from the past, from the earlier models in terms of benefits, both to the communities and company. These experiences are applicable to other Chevron investments like Tengizchevroil in Kazakhstan. The necessity of organizational learning between Chevron and its sister companies is obvious.

Similar outcome of new type of corporate social responsibility programs was developed for the oil and gas industry in India under the scheme of Oil and Natural Gas Commission. Oil companies in India have manifested CSR in a variety of ways, most of which have been quite innovative in the field of community development, promoting excellence, environmental management, preserving national heritage and other CSR-related issues (KPMG, 2005).

As we could see in the earlier part of this article the CSR practice is a new challenge for large Kazakh firms. It raises a question: how could we interpret both sides of this business phenomenon? Are there symptoms of the black side? Is there any chance for corporations to avoid them? First of all, it must be stated that the Kazakh Presidency and Government do everything for avoiding other side of CSR practice:

- Kazakhstan joined the EITI (The Extractive Industries Transparency Initiative) in October 2005. Consequently, Kazakhstani Government has accepted the multi-stakeholder initiative, involving business, government, international organizations, promoting transparency and accountability of the revenues from extractive industries;
- The national legislation has guaranteed protection for all business entities (domestic and international investors, local producers, and labour force; at the same time, the guarantee has been extended to direction of national security, defence, environmental safety, healthcare as important elements of knowledge transfer from another sectors (Yerkebulanov & Saginova, 2011).
- The other special project within the oil and gas industry (e.g. Caspian Revenue Watch), which started for the whole geographical region, is to reduce the dark side of industrialization (Lam, 2012). However, the initiative for the community development conducting by the Open Society Institute was eventually not completely successful (Haufler, 2006). The main idea of transparency and social responsibility has been incorporated into the daily business in Kazakhstan.
- Due to many reasons, the transnational oil companies in Kazakhstan have not been the target of negative or anti-corporate campaigns, as in the case of other developing countries (mainly in Africa and Latin-America). Many times in these countries, the poor CSR performance of transnational oil corporations and the inadequate CSR package have overshadowed the benefits of good initiatives. One of the most notable researchers into this topic, Michael J. Watts, pointed one and a half decades ago to “… the current political economy of the oil industry, new bodies of research on the relations between oil and human rights violations, which include case studies of the human rights records of transnational and joint-venture oil operations.” (Watts, 2005)
Taking many reasons into consideration, naturally, including the need to have a declared legal system, to join international movement, and to be part of high-sounding projects, it is not enough to avoid the impending dangers and mistakes either for the society or for the companies. It is necessary to take permanent, significant efforts for the sake of averting CSR aspects that want to be effective. The focus for business community investment tends to be on some of the further issues around health, the environment and economic development, and much more focus on building or supporting civil society, which is also subject of organizational learning’s agenda in Kazakhstan (Spence, 2011; Amagoh & Kabdiyeva, 2012).

Conclusion

By the mainstream evidence of this article, CSR covers the relationship between corporations (or other large organizations) and their societies with which they interact. CSR also includes the responsibilities that are inherent on both sides of these relationships. CSR defines society in its widest sense and on many levels, to include all stakeholders and constituent groups that maintain an ongoing interest in the organization’s operations.

The change of business environment forces the companies to carry out radical organizational changes. These transformations have reached the large Kazakh corporations (including joint ventures like the Tengizchevroil). “When giants learn to dance” as Rosabeth Moss Kanter referred to the American corporations in the eighties. (Kanter, 1989) This metaphor is actually valid for the Kazakhstani reality.

Regarding corporate social responsibility plans and actions used, the most appropriate question is the information and communication channels that the positive messages from the TCO to the society should be conveyed about the „early winnings” of corporate social responsibility concept: logos, short banners, informational materials and presentations, commercials and media advertisements, independent reports on companies, records of journalists, publication of corporate reports, CSR-award, CSR-events, CSR-webpage, forums and blogs, CSR-applications in social media, and publication of the code of ethics (Ásványi, 2012).

Understanding the local relevance of these possibilities, communication is extremely necessary, because communication is “the soul of the CSR” (Lehtimaki, Kujala, & Heikkinen, 2011). The TCO has a very appealing technical presentation of CSR on the company website, notwithstanding, the lack of a well-constructed plan for communication of CSR actions. The recommendation regarding this statement has first priority: a correct plan for two different types of cases to be worked out, i.e. the regular daily operation of CSR actions and processes. Follow-up action such as distribution must take place, and every stakeholder and group of community should be informed on how Tengizchevroil thinks about the corporate social responsibility and what it does for its success.

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Marketing Aspects of Socially Responsible Business

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Abstract
The concept of holistic marketing links effective relationship marketing, integrated marketing, internal marketing and socially responsible marketing. Marketing implementation in the second decade of the 21st century increasingly highlights the significance of its social responsibility, bearing in mind the changes in ways of conducting modern marketing activities.

Effective internal marketing in the changed business milieu is deemed achievable only by taking into account the aspects of socially responsible business practices. It is up to the marketers themselves to estimate the extent to which their marketing programmes are socially responsible, notably by considering the relevant factors affecting a raise in the level of corporate social responsibility.

Changes in consumers' and employees' expectations, legal and regulatory environments, measures taken by executive and monetary authorities, as well as the increased sensibility of investors to socially responsible business result in noticeable changes in marketing practices.

Keywords
Marketing, socially responsible business.

Introduction
Marketing environment is currently in the process of intensive and dynamic changes, especially when the relationship between marketers and social community is taken into account. Expert literature emphasises the need for a different approach to activities through which marketers achieve a significant influence on the environment, i.e. social community in which they realize their programmes. There are ever more present demands for companies to take responsibility when implementing marketing activities that affect both internal and external environment.

Socially responsible business is in best interest of the company itself as well as society at large, because it includes marketing aspects that create business reputation, enhance motivation and loyalty of customers and other stakeholders. Modern marketing has brought about significant changes in how profit is understood, for profit is now interpreted as a reward for good business performance while broader interests are also served. The thing is that companies should set long-term business goals, in contrast to previous focus on short-term performance and marketing effects, because short-term goals cannot ensure achievable long-term marketing goals. In addition, changes in the marketing concept include growing ecological and social awareness among marketing managers.

1. The concept of socially responsible business

Expert literature interprets the notion of socially responsible business quite ambiguously, just as there is no complete congruence among the views on what activities such business includes. Having in mind that the concept of socially responsible business has not yet been fully determined, there are certain differences in how modern countries define and apply it, which has resulted in the emergence of different models and incentive mechanisms.
Results of the studies carried out in developed countries indicate that consumers tend to give importance to other aspects of business besides products and services companies offer, because they do not want their purchasing decisions to help development of companies that cause harm to society. This way companies are expected to meet their business targets without endangering the welfare of the community they operate in.

There are some noticeable differences in European, North American an Australian theory and practice of socially responsible business. Theorists and managers from continental Europe have a broader understanding of socially responsible business, which is based on three cornerstone points: labour relations, responsibility towards the environment and human rights. European understanding of corporate responsibility, in terms of corporate citizenship, puts the business practice of companies first and then it considers their contribution to social development. The starting points in the North American, Australian and British approach to social responsibility are philanthropy and active attitude towards social community. This further implies promotion of the mutual benefit, i.e. the ‘win-win’ principle. This kind of approach to social responsibility appreciates the aspiration of companies to generate profit but while resolving the ongoing and open social issues.

In the countries known as ‘The Asian Tigers’, the view of social responsibility and corporate citizenship emphasizes the relationship between the company and its employees. In other countries in the southeast of Asia that are not so highly developed, socially responsible business implies, above all, involvement of multinational companies in meeting the challenges of social development and welfare. This is practically seen in focus on development of entrepreneurship while appreciating the demands of social responsibility, primarily in the policy of products, services and corporate management, which is taken for granted in developed economies (Kubr & Rochlin, 2010).

Domestic experts view socially responsible business as a managerial approach within which the company strives to simultaneously meet goals from three different perspectives:

- economic performance enhancement,
- environment protection,
- social welfare.

The managerial approach mentioned seeks out to meet the expectations of employers, employees and all interested stakeholders in general. This view of socially responsible business requires acceptance of the three key pillars: economic, social and ecological (Lončar & Rajić, 2008).

The World Business Council for Sustainable Development defines corporate social responsibility as ‘the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce, their families and the local community and society at large’ (World Business Council on Sustainable Development, 2009).

European Commission also took part in defining corporate social responsibility in the Green Paper issued by the Commission. It states that ‘being socially responsible means not only fulfilling legal expectations, but also going beyond compliance and investing “more” into human capital, the environment and the relations with stakeholders’ (Commission of the European Communities, 2001).

Corporate social responsibility could also be described as a concept whereby companies voluntarily contribute to a better, healthier and more prosperous business environment, as well as society at large and the natural environment. Socially responsible company fulfils legal expectations but goes beyond compliance and invests in concern for modern society, human capital, natural environment and relations with stakeholders (Filipović & Kostić-Stanković, 2008, p. 284). Besides that, within the concept of corporate social responsibility, companies in their aspirations for profit are not only responsible to the shareholders but also to all groups and individuals affected by the generated profit in any sense (Melović, 2007, p. 17).

Irrespective of corporate social responsibility definitions, what should be kept in mind is the principle of voluntariness embedded in the essence of its application. Even though it is not codified by the law, corporate social responsibility also includes business performances which are regulated within the legal framework. The embracement of corporate social responsibility is inevitably reflected in the choice of values the company pleads for.

There are three general approaches to corporate social responsibility recognized in expert literature, all of which address differently the question of whether companies should be actively involved in
resolving social issues, as well as who they are responsible to in doing so. The approaches in question are as follows (Bahtijarević-Šiber, Sikavica, & Pološki-Vokić, 2008, p. 565):

- the traditional approach, advocated by Nobel Prize winner Milton Friedman, according to which the only goal of a company is to increase profits because profit is actually the sole social responsibility companies have,
- the stakeholder approach, which points to the awareness of managers that long-term business success depends on the alignment of interests and needs of different stakeholders,
- the affirmative and proactive approach, which indicates that companies should instigate actions that will serve the environment, shareholders, as well as society at large.

Corporate social responsibility differentiates between mandatory and optional responsibilities the companies have (Lončar & Rajić, 2008). Mandatory responsibilities include certain standards the companies should meet while conducting their regular business operations. On the other hand, optional responsibilities do not refer to the realization of regular business activities, but they represent the way companies differentiate themselves against their competitors.

Finally, implementation of the concept of socially responsible business implies a higher level of social responsibility but also higher operating costs. Modern marketing theory and practice indicate that appreciation of the needs of the natural environment and society as a whole is not inconsistent with the realization of profit, on the contrary, it leads to increased competitiveness of companies.

2. Holistic marketing

In the evolution of the marketing concept, the concept of holistic marketing holds a distinctive position. The point is that the changes in the marketing environment in the last decade have resulted in new practices and ways of doing business. Modern companies need a new approach to business and competitiveness to adequately respond to the new demands of the marketing environment. Accordingly, a new, more comprehensive i.e. cohesive approach has been developed, which represents a step forward in comparison to the traditional marketing concept.

Development, design and implementation of marketing programs represent the basics of holistic marketing whereas these activities are viewed in a broader context and effects of interdependence are attributed to them. Holistic marketing starts from the premise that everything matters and accordingly has a broad and integrated approach to marketing practices. Marketing literature insists on the following important components of the holistic concept (Kotler & Keler, 2006, p. 17):

- relationship marketing,
- integrated marketing,
- internal marketing, and
- socially responsible marketing.

The concept of holistic marketing represents relatively new approach which accepts and appreciates the content and complexity of marketing activities in modern companies. Comprehensiveness and functionality of the concept of holistic marketing are shown in Figure 1.
Relationship marketing aims to establish and develop close and long-term relationships with individuals and organizations that could have any influence on realization of marketing effects. Building and improving relations does not only include consumers, but also suppliers, intermediaries and other partners in the marketing process. Promotion of relationship marketing creates strong economic, technical and social ties between interested parties.

Relationship marketing emphasizes the need to foster relations through active change in customer relationship management and partner relationship management, having in mind that the main participants in the realization of marketing activities are consumers, employees, marketing partners as well as potential investors.

The result of well established relationship marketing is a specific marketing asset called marketing network. Marketing network is formed by the company and its interested stakeholders such as buyers, employees, suppliers, intermediaries, marketing agencies, academics and others. What is typical of marketing network is that it builds mutually beneficial business relationships. This further implies that companies no longer compete directly with each other but the competition takes place between marketing networks and the greatest beneficiary is the company with the best network.

Integrated marketing includes development of marketing activities and unifying of integrated marketing programmes with a goal to create, communicate and deliver value to final consumers. Marketing programme is understood as a set of decisions made in order to increase the value of marketing activities, primarily through optimal combination of marketing mix instruments.

Decisions concerning the instruments of the marketing mix cannot be changed with the same ease and speed. Decisions about prices and promotions can be changed relatively easily and in a short period of time, while the decision making about new product development and creation of efficient distribution channels is more of a long-term character. From the short-term perspective, companies do not change their decisions about marketing mix instruments as often as it may initially appear.
Two main postulates of integrated marketing are the interconnectivity of numerous marketing activities in communicating and delivering value, and coordination of all marketing activities with a goal of maximizing their overall effects. Integration requires development of marketing systems which will fulfill the needs of demand management, resource management and network management.

Internal marketing as a component of holistic marketing is directed towards general acceptance of the marketing principles within the company, primarily by the top management. Internal marketing is in the function of recruitment, training and motivation of such personnel who will be able to satisfy consumers in the best possible way. Marketing managers are becoming increasingly aware that internal marketing is equally important, and in some cases even more important than external marketing. Internal marketing is particularly evident in the service business.

Internal marketing is implemented in business practice on two levels. On the first level, different marketing functions (product planning and development, marketing research, distribution and promotion) are to have coordinated actions. The second level of internal marketing implementation refers to general acceptance by all organizational units and departments within the company, which is to instigate the recruited personnel to think like buyers. Regardless of the organizational solution of marketing within corporate structure, marketing above all is to be promoted as a core business orientation, which implies general acceptance of marketing thinking.

### 3. Socially responsible marketing

Socially responsible marketing is an important component of the holistic marketing concept because it denotes the acceptance and appreciation of broader interests, business ethics, environmental protection, legal and socially acceptable realization of marketing activities. Relationship of cause and effect in marketing programme implementation is no longer exclusively linked to the organizational structure of the company but has been moved into a wider social context. Besides that, marketing managers are expected to embrace their role and responsibility in achieving the overall social welfare.

A number of terms had been used during the course of development of socially responsible marketing such as human marketing, ecological marketing or green marketing before the professional community adopted the term social marketing. This concept assumes that companies should identify the needs and interests of selected market segments in the process of implementation of their marketing activities, and strive to meet them in a superior manner compared to competitors, but at the same time, companies also need to strive to achieve and improve the welfare of their customers and society at large.

The concept of social marketing requires managers to appreciate the social and ethical dimension of the realization of marketing activities and programmes. In business practice, this can be reflected in finding ways to align often conflicted interests to generate profit, meet the needs of customers and recognize the broader social interests.

The concept of social marketing can manifest in different ways in business practice. A well-known example of successful realization of this concept is cause-related marketing. Cause-related marketing is...
seen as a corporate activity in which the company’s image, product or service is used to establish market relationship or partnership with a cause, or a series of causes, which results in mutual benefits (Earle, 2000).

Cause-related marketing enables companies to improve their reputation, raise brand awareness, gain customer loyalty and achieve better sales effects along with a more positive promotion through mass media. Recognition of positive effects of corporate integration into selected marketing environment includes a rational and emotional acceptance of marketing practices by consumers, which is best exemplified by business results of the company Avon.

Recognition of corporate social responsibility and socially responsible marketing, both by professional community and the general public is increasingly coming to the fore. It is believed that only by applying socially responsible marketing companies can achieve their mission in terms of consumer satisfaction, self satisfaction and satisfaction of stakeholders. Marketing requirements of stakeholders may vary (Stanković & Stošić, 2008, p. 26):

- consumers demand availability of goods that are non-defective and safe to use, fair price and truthful promotional messages,
- society expects social goals not to be negatively affected by the accomplishment of marketing goals,
- equity owners expect profitable combination of marketing mix instruments.

Even though the listed interests of stakeholders may initially appear to be conflicted, from the long-term perspective they are not. What should be kept in mind is that marketing business function is the very one that needs to clearly highlight this point, because otherwise, this function is to take greatest responsibility for this kind of oversight.

Conclusion

Business practice, just as the results of a number of research studies indicate that marketing aspects of corporate social responsibility are not an expense but they manifest as an investment which brings companies a number of benefits that are not only financial. On the other hand, corporate behaviour that is not in compliance with social responsibility principles often resulted in a variety of repercussions that any marketing activities have failed to eliminate.

In modern marketing theory and practice, corporate social responsibility is increasingly being recognized as fundamental business approach and significant strategic marketing orientation in function of gaining competitive advantage in a dynamic and uncertain marketing environment. Marketing aspects of corporate social responsibility also imply certain adjustments within the framework of strategic marketing in terms of changes in marketing performance evaluation criteria.

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References


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An Empirical Study on Partners Selection in Supply Chain Management

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Abstract
The purpose of this paper is to test and scrutinize the factors that suppliers, manufacturers and distributors/retailers consider most important in the decision processes of choosing their Supply Chain (SC) partners. This is a hypothetical-deductive study, where the results are based on a survey of 525 managers (with 101 responses) within the forestry, manufacturing and wholesalers/retailers industries, with more than 50 employees, from Statistics Sweden (www.scb.se) using the Swedish standard industrial classification (SNI) codes. Contrary to previous studies, the paper has applied a broader, quantitative survey methodology, considering the entire SC rather than segments of the SC and hence provides deeper knowledge about the functionality of the system as a whole. Business and Marketing Experience (BME), Information technology (IT), Cultural Similarities (QS), Education and Experience of Chief Executive Officer (E. CEO), Core Competence (CC) and Geographical Location (GL) are the factors that differentiate these three groups of actors (suppliers, manufacturers and distributors).

Keywords
Partners Selection, Supply Chain Management; Supply Chain.

Introduction
In recent years, business practitioners have been overwhelmed with new techniques/models and tools to increase competitiveness in a turbulent business environment and the integration of supply chain management (SCM) systems, amongst others, has been the subject of significant debate and discussion. Although the origin of supply chain (SC) can be traced as far back as the early 1980s (Cooper, Lambert, & Pagh, 1997), it gained prominence in practical application during the last decade. This may be partly due to the fact that the creation of possibilities involves new technology and new information, which is now available.

As organizations seek to develop partnerships and more effective information links with trading partners, internal processes become interlinked and span the traditional boundaries of firms (Power, 2005). This thus, requires not only the integration of the internal business processes but also the integration of processes and IT capabilities amongst partners.

Integration, which is a pre-requisite for SC and SCM, is a very complex concept that is difficult to oppose simply because its logical opposites are disintegration and sub-optimization, which nobody favors (Mouritsen, Skjøtt-Larsen, & Kotzab, 2003), or at least is not encouraged for competitive purposes in the recent world of business. Studies (Cooper et al., 1997; Mouritsen et al., 2003) suggest that the SC
is primarily an event that has been fabricated internally to compete for organizational power and prestige. Although the SC is not a discernible object in its own rights but a struggle over (Mouritsen et al. 2003), there is definitely a need for integration of business operations in the SC that goes beyond logistics (Cooper et al., 1997). Jonsson (2008) extended the concept of integration to incorporate partnership relation in strategic sourcing while Fisher (1997) related the demand characteristics of the product to either functional or innovative.

In most industries today, it is not enough to optimize internal structures and infrastructures based on business strategy but to carefully link internal processes to external suppliers and customers in unique SC’s (Frohlich & Westbrook, 2001). This creates a network of inter-connected companies sharing information for improved performance. Firms are, therefore, faced with the management of an extended enterprise, with shared destiny as a network of processes, relationships and technologies creating inter-dependence – SCM. Many authors have put forward several definitions of SCM which will be discussed hereinafter, but we will, however, adopt the definition of Mentzer et al., (2001), who defined SCM as:

“The systematic, strategic coordination of the traditional business functions within a particular company and across businesses within the SC, for the purposes of improving the long-term performance of the individual companies and the SC as a whole”. We choose this definition because it is comprehensive and gives a vivid picture of the SC and its processes.

From the definition of SCM above, it is apparent that it involves an integrated process wherein a number of various business entities i.e. suppliers, manufacturers, distributors, retailers, etc. work together in an effort to acquire raw materials, process them into semi-finished or finished goods and make the final products available to final consumers. However, the scope of this research will be limited to a simple SC. That is a central company with its immediate supplier and retailer. It will examine the basis for the evaluation and selection of partners and factors that influence this process. As shown in figure 1., the research focus is designed to have vertical analysis, which involves grouping of companies into categories (suppliers, manufacturers and distributors).

For the sake of simplicity the existence of companies in more than one SC is being ignored and the survey is carried out from the perspective of the companies’ primary/most important SC as illustrated in figure 1.

![Figure 1](image)

**Figure 1** Focus of the research paper

**Source:** Authors

**Literature review**

Despite the fact that the concept of SC has existed for over twenty years, partners and configuration selection process is still rather unstructured (Ashayeri, Tuzkaya, & Tuzkaya, 2012). Partners’ evaluation and selection is the basis of SC strategic cooperative relations (Bochao, 2010). In order to increase value in any SC, a more comprehensive and integrative approach is required to select the right partners and establish the right configuration along the chain (Ashayeri et. al., 2012). He used an intuitionistic fuzzy
Choquet integral operator based approach to partners and configuration selection. In this approach, a decision making group (DMG) is set up to decide on the selection criteria. A market research is then conducted to evaluate companies that meet these criteria. It is important to establish the basis for the evaluation and selection of SC partners. Factors which can be used to determine the partner evaluation index and to establish SC partnerships are business performance, business structure and production capacity, quality systems and enterprise environments (Bochao, 2010).

Jonsson (2008) described partnership relations as a win/win game wherein partners try together to increase the total competitiveness of the SC. He however, discussed different levels of relationships and used the Kraljic matrix as a means of suppliers’ segmentation.

Fisher (1997) suggests that an effective SC has to be designed with respect to the product that is going to be supplied through the chain. He added that a product can be either functional or innovative, depending primarily on its demand characteristics in terms of life cycle length, demand predictability, product variety, or market standards for lead times and service. Consequently, the individual companies need tools to match the SC partners to their product lines.

Zou, Tseng, Sohn, Song, & Gutierrez (2011) analyzed distributors’ selection based on the rough set theory approach in both equal and unequal weight features and found out that relationship intensity, marketing experience, and the management ability in selecting the distributors were important factors. Moreover, the derived rules also provided critical implication that the entire constituencies in the SC should maintain an intensive relationship with one another throughout the chain.

Wang & Kess (2006) found out that the Finnish manufacturer selected international distributors from China for three reasons: interest in the products, distributor companies were owned and run by young people to minimize the cultural differences and the geographic location of the distributor was a relevant factor. They added that besides factors, such as honesty, reliability, good communication and marketing competency, a competent distributor may be described as one who is ambitious about the future, has the ability to study, take initiative and give commitment.

Al-Khalifa & Peterson (1999) found out that the critical factors in international joint venture partner selection criteria are related to the reputation, experience and personal knowledge of the partner organizations as well as to some of the personal characteristics of their Chief Executive Officer (CEO). They noted that a distinction between “task related” factors and “partner related” factors is important and seem to be related to the ends-means dichotomy. They concluded that, the decision factors in partner selection cannot be regarded as fixed in relative importance or magnitude. Their importance in any given situation is itself a function of the size, culture and experience of the company, and of the education and experience of the CEO.

Ye & Huo (2011), building on the perspective of the balanced scorecard pointed out that it is necessary to take into account economic factors, at the same time balance social benefits factors in choosing indicators system of strategic partner of the SC. They argued that the four dimensions of the balanced scorecard reflect the indicator selection requests for strategic cooperation and that the SC partners must make a long term strategic development planning, persist in innovation based on the concept of cooperation win-win, and take the sustainable development path. They extended the four dimensions to include the strategy dimension and social value dimension.

Bochao (2010) recommended that a comprehensive evaluation index system of partners should form the basis and criteria of the business to comprehensively evaluate its partners. The index should reflect the different properties of the complex system, consisting of the enterprise itself and the environment, as well as an integration orderly composed in accordance with affiliation and hierarchy. He outlined corporate reputation, time to market, product quality, cost control, and service level as important factors which may affect the SC relationships. He asserted that SC partner selection is a multi-objective evaluation technique which contains qualitative and quantitative factors. He used the Analytical hierarchy process (AHP) for partners’ selection. In this model, core competence, cofactors, operating environment and performance factors are the main criteria for choosing partners.

Ashayeri et al. (2012) outlined accelerating pace of business, short product life cycles, quick response to market opportunities, low cost of market entry, increasing mass customization demands and the pressure for globalization to remain competitive, as the reasons for considering a virtual SC (V-SC). In a V-SC the entire partner companies are specialized in their core competencies and have improved the efficiency and effectiveness, greater adaptability, flexibility, agility, and speed requirements.
Life cycle of a V-SC consists of the identification, formation, operation and termination phases.

Methodology

Surveys were selected as the empirical data generating method. Surveys fit into a desire to conduct objective, deductive research with little interviewer bias. In order to increase the respond rate, the authors used list, category, rating, ranking and matrix form of closed questions, making the questions as precise as possible. To ensure that the survey questionnaire operates and functions well as recommended by Bryman & Bell (2007), the authors reviewed the questionnaire several times with experts in this field. Also, a pre-test was then performed with experts and companies in order to avoid misunderstandings during the survey. Most questions used a six-point Likert scale (Not at all important to very important) for SC practices adapted from Keller, Savitskie, Stank, Lynch, & Ellinger (2002). A six-point (rather than a five or seven-point) Likert scale was used to ensure that the respondent made an active choice. It was then transferred into a web-based questionnaire.

All companies were contacted by phone for four weeks and the top management (General Manager, SC, Logistics, Purchasing, Sales/Marketing Managers) were considered appropriate respondents because at least one of these positions exists in almost every company. E-mail addresses were obtained from the company website or from the responsible individual by calling through the switchboard number obtained through (www.scb.se) or company website. Each respondent received a personal e-mail with the web-based questionnaire link making it convenient for the respondent.

The authors selected the population from the list of forestry, manufacturing companies and wholesalers/retailers, with more than 50 employees, from Statistics Sweden (www.scb.se) using the Swedish standard industrial classification (SNI) codes. This ended up with a total of number of 2021 companies. To make the sample representative, the authors used stratified random sampling, selected the appropriate proportion from each of the stratum (manufacturing, forestry and wholesaler/retailers). Out of the 525 companies which were sampled, 101 responded giving a response rate of 19.2%.

Validity, Reliability and Assessing Non-Response Bias

Construct validity is believed to be the most complex and abstract type of validity especially in this type of study. In order to build the construct validity for the paper the questionnaire items were drawn directly or indirectly from the literature reviewed. This was to ensure that it confirms to predicted correlations with other theoretical propositions. Factor analysis in SPSS was further used to confirm this validity. Kaiser (1974) as stated in Parsian & Dunning (2009) recommends accepting values of KMO ≥ 0.5. The KMO and Bartlett’s test yielded values of 0.459 for suppliers, 0.661 for manufacturers and 0.582 for distributors, which averagely is > 0.5. All these values are significant at 1% level of significance. Considering the fact that there is a lack of research and empirical work in this area, these values are considered satisfactory and will act as a springboard for further studies. The reliability of this paper is based on the fact that most indicators selected have been reviewed and tested in previous studies and the scale was adapted from the Likert scale. More so, to ensure inter-observer consistency the result of the survey was exported directly in an excel spreadsheet and opened in SPSS where the analysis was carried out.

Despite the low response rate obtained in this study, low response rates alone do not necessarily suggest response bias. A test of non-response bias is another way of increasing the reliability of a study. According to Krosnick (1999) and Dillman (1991) stated in Sax, Gilmartin, & Bryant (2003), when respondent characteristics are representative of non-respondents, low rates of return are not biasing. Non-response bias refers to a situation in which respondents who fail to return a questionnaire have opinions systematically different from those who return their surveys (Sax et al., 2003). There are two types of non-response bias: Total non-response which refers to individuals failing to return the survey at all and unit or item non-response bias which indicates that the survey was returned incomplete (Sax et al., 2003). Unit or item non-response bias could not be a problem in this research since the questionnaire could not be submitted without completing all items. Total non-response could not be identified because respondents were asked to rate each of the issues on the scale of not at all important (1) to very important (6). Therefore, a positive value indicates that more respondents saw the issue as important rather than an issue of non-response bias.
Empirical findings

Business indicators generally fall in one of the following categories: financial, social, customer, growth or strategy. Prior to the rating of the factors that were outlined from literature as important in the partners’ selection process, respondents were asked to rank, in order of importance, the following 5 business indicators concerning their partner’s business when developing evaluation criteria for the selection of business partners. The scores are on 5. The averages and percentages of the rankings were calculated. Growth, strategy and social indicators were the top three respectively with averages greater than even, while customer and financial indicators were the least important.

- Financial (profitability rate, assets and liability rate, etc.) = 1.88 (37.60%)
- Social (corporate reputation, credit evaluation, social responsibility) = 3.31 (66.20%)
- Customer (Quality level, service level, etc) = 2.37 (47.40%)
- Growth (Learning and innovation, improvement ability etc) = 3.80 (76.00%)
- Strategy (Cooperation idea, Corporate culture, Leader quality, Environmental protection level) = 3.64 (72.80%)

Table 1. shows the scale properties in terms of mean, standard deviation (S.D), skewness and kurtosis of the 101 respondents regarding the 12 factors: Business and Marketing Experience (BME), Business Performance (BP), Production Capacity (PC), Core Competence (CC), Quality System (QS), Enterprise Environment (EE), Cultural Similarities (CS), Geographical Location (GL), Knowledge of Partners’ Organization (KPO), Education of CEO (E.CEO), Corporate Culture and Reputation (CCR), and IT capabilities (IT). The respondents were asked to indicate the extent to which these factors were important to them regarding their business partners when choosing them; where a low-number Likert response would indicate that the factor was not at all important (1), and a high number (6) would indicate a very important factor.

From this table, it can be observed that to suppliers, QS (4.72), BP (4.67), PC (4.56), BME (4.17), IT (4.17) and CC (4.00) are of high value in choosing SC partners. CCR (3.50), KPO (3.50) and EE (3.33) are, to some extent neutral, while E.CEO (2.61), GL (2.56) and CS (2.50) were the three least important.
Also, it can be observed that to manufacturers, QS (4.5), CC (4.42), BP (4.26), PC (4.22) and BME (4.00) are of high value in choosing SC partners. IT (3.88), CCR (3.60), EE (3.44), KPO (3.28) and GL (3.04) are rated averagely, while CS (2.64) and E.CEO (2.56) were the least important. In the viewpoint of retailers, it is indicated that QS (5.00), BME (4.61), PC (4.42), IT (4.42) and BP (4.24) are of high significance to retailers’ in choosing SC partners. CCR (3.36) KPO (3.06) and GL (3.06) were closely rated neutral while CS (2.36) and E.CEO (2.09) were rated low.

The tests of equality of group means (table 2.) measure each factor’s potential before the model is created. Each test displays the results of a one-way ANOVA for the factors (independent variable) using the actors as grouping variable. If the value of significance is greater than 0.05 (5% level), the variable probably does not contribute much to the model. Wilks’ lambda is also another measure of a variable's potential. Smaller values and corresponding large F values indicate that the variable is better at discriminating between groups. These five factors have the smallest Wilks’ lambda and corresponding large F values. It suggests that IT is the best variable, followed by BME, then CC, E.CEO and finally QS.

<table>
<thead>
<tr>
<th>Table 2 Tests of Equality of Group Means</th>
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<tbody>
<tr>
<td>Wilks’ Lambda</td>
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<tr>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>BME</td>
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<tr>
<td>BP</td>
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<tr>
<td>PC</td>
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<tr>
<td>CC</td>
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<tr>
<td>QS</td>
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<tr>
<td>EE</td>
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<tr>
<td>CS</td>
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<tr>
<td>GL</td>
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<tr>
<td>KPO</td>
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<tr>
<td>E.CEO</td>
</tr>
<tr>
<td>CCR</td>
</tr>
<tr>
<td>IT</td>
</tr>
</tbody>
</table>

Source: Authors

Table 3., the Eigenvalues, provide information about the relative worth of each discriminant function. The canonical correlation is the multiple correlations between the predictors and the discriminant function. With two functions, the sum provides an index of overall model fit which is interpreted as being the proportion of variance explained. With a larger eigenvalues for the first function (0.412), means that the first function is more important than the second, (0.233) and it explains 63.9% of the variance while the second function explains 36.1%.

<table>
<thead>
<tr>
<th>Table 3 Eigenvalues</th>
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<tbody>
<tr>
<td>Function</td>
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<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

a. First 2 canonical discriminant functions were used in the analysis.

Source: Authors

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By cross-tabulating the 3 categories with the 12 factors, it can be realized that 4 factors (Core competence, Quality system, Geographical location and IT capabilities) are significant at a 5% level as shown in table 4.

### Table 4  Chi Squares for the three Groups (suppliers, manufactures and retailers) and 12 Factors

<table>
<thead>
<tr>
<th>Actors*Factors</th>
<th>Factors</th>
<th>Value of Pearson Chi-Square</th>
<th>Asymp.-Sig (2-sided) of Pearson Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2*BME</td>
<td>BME</td>
<td>17.636</td>
<td>.061</td>
</tr>
<tr>
<td>Q2*BP</td>
<td>BP</td>
<td>11.068</td>
<td>.086</td>
</tr>
<tr>
<td>Q2*PC</td>
<td>PC</td>
<td>9.699</td>
<td>.287</td>
</tr>
<tr>
<td>Q2*CC</td>
<td>CC</td>
<td>23.836</td>
<td>.002</td>
</tr>
<tr>
<td>Q2*QS</td>
<td>QS</td>
<td>17.526</td>
<td>.025</td>
</tr>
<tr>
<td>Q2*EE</td>
<td>EE</td>
<td>11.433</td>
<td>.076</td>
</tr>
<tr>
<td>Q2*CS</td>
<td>CS</td>
<td>15.422</td>
<td>.051</td>
</tr>
<tr>
<td>Q2*GL</td>
<td>GL</td>
<td>27.305</td>
<td>.002</td>
</tr>
<tr>
<td>Q2*KPO</td>
<td>KPO</td>
<td>8.128</td>
<td>.421</td>
</tr>
<tr>
<td>Q2*E.CEO</td>
<td>E.CEO</td>
<td>9.133</td>
<td>.331</td>
</tr>
<tr>
<td>Q2*CCR</td>
<td>CCR</td>
<td>4.592</td>
<td>.800</td>
</tr>
<tr>
<td>Q2*IT</td>
<td>IT</td>
<td>20.283</td>
<td>.002</td>
</tr>
</tbody>
</table>

Source: Authors

### Conclusion

This study was aimed at testing and scrutinizing the factors that suppliers, manufacturers and retailers consider most important in the decision process of choosing their partners. It has shown that SC actors prefer growth and strategy indicators to financial indicators in this process. In general, quality system, production capacity and business performance were identified as most important. Geographical location, cultural similarities and education and experience of CEO were respectively the last three.

Analysis of these factors with respect to the three groups of actors showed that quality system and IT capabilities were more important to retailers than suppliers and manufacturers; business and marketing experience of company was most important to manufacturers from retailers’ perspective; production capacity, core competence, corporate culture and reputation, geographical location, cultural similarities and education and experience of CEO were most important to manufacturers from suppliers’ perspective.

From the discriminant analysis, IT, BME, QS, E.CEO and CC are factors that are valuable in grouping these three actors. IT, QS and CC were confirmed in the cross-tabulation method and GL was also identified as a distinguishing factor. By using both the discriminant function and the cross-tabulation methods in the analysis, it was showed that in total six factors (BME, QS, PC, CC, GL and E.CEO) are associated with the separation of these three groups of actors. This means that there is a pattern associated with the responses from the individual group of actors regarding these factors. Thus, the manner in which a respondent responded to the questions can identify the company as supplier, manufacturer or retailer. The other factors, though important, are not considered as being significant in the distinguishing attitude giving a 5% level of error.

By considering the averages (means) of responses, QS is the most important to all three groups of actors. The best average is noticed with retailers and FC’s. The particular concern of retailers with quality is due to the fact that they are concerned with the final consumers. If the final product delivered to the market is of low quality, this may tarnish their reputation. Consequently, they will experience a loss of market share. This is evident with exceptionally high value in responses (kurt. = 9.968). This is undoubtedly, the most important factor to retailers. Furthermore, BP, PC and BME are also considered...
of great significance. This implies that the companies assess the organizational procedures, processes and/or resources; the extent of efficient utilization of resources and the extent to which the products can be made available to the market. In particular IT, which is considered valuable to suppliers and retailers, is considered average for manufacturers. Suppliers principally have an extensive use of IT in their business activities. Until when the materials or component parts reach the customers (manufacturers), most of the work requires the use of IT – Request for quotation, transmission of purchase order and advanced shipment notification, electronic settlement advice etc. This may be the reason for the comparatively exceptionally high values associated with suppliers.

The importance of CCR to manufacturers tests and confirms the request of Ye & Huo (2011) to include strategic and social value dimensions in the four perspective of the balanced scorecard for SC partners’ selection criteria. CCR could be accounted for by the fact that manufacturers try to anticipate the probability of the future behavior of their partners by considering strategy and social factors in the selection. This should particularly apply to retailers’ selection because it has an advantage when other companies’ products are available at similar prices and quality. Although CS is not a significant factor, it is more important to manufacturers from suppliers’ perspective, unlike the results of Wang & Kess (2006) findings and the theory of Zou et al. (2011).

In sum, the importance of any of these factors in any situation cannot be regarded as predetermined. This greatly depends on the position and the influence of the company in the SC. Irrespective of which factor had a higher average with respect to any of the supply chain actors, IT capabilities, Business and marketing experience, Quality system, Education and experience of CEO and Core competence are the main factors that can be used to effectively differentiate these three groups of SC actors.

Appendix-Questionnaire

QUESTIONs ON CHOOSING SUPPLY CHAIN PARTNERs

1. The following 5 business indicators concerning your partner’s business are important when developing evaluation criteria for the selection of business partners. Rank them in order of importance (1 for most important and 5 for least important). Please do not use the same rank twice.

- Financial (profitability rate, assets and liability rate, etc.)
- Social (corporate reputation, credit evaluation, social responsibility)
- Customer (Quality level, service level, etc.)
- Growth (Learning and innovation, improvement ability etc.)
- Strategy (Cooperation idea, Corporate culture, Leader quality, Environmental protection level)

2. Market research and analysis is an important starting point in our selection of business partners

- strongly disagree  disagree  Neither disagree nor agree  agree
- strongly agree
3. How important are the following factors when selecting your business partners? (see diagram above)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Not at all important</th>
<th>Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business and Marketing experience of company</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Performance (accomplishments of the company)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise Environment (systems/networking infrastructure used within the organization)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural similarities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geographical location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge of Partners’ organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education and experience of CEO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate culture and reputation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT capabilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References


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Impact of the Development of Voluntary Pension Funds on the Financial Markets - the Experience of South America

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Savo Bakmaz
Portfolio Manager, Garant Inc.

Abstract
Beginning with Chile in the early 1980s, ten Latin American countries have carried out reforms of their public pension systems, including the creation of mandatory private pension insurance programs based on personal savings accounts. Pension funds in the region already amount to US$ 230 billion and are, in most cases, important players on local capital markets.

Keywords
Reform of the state pension system, financial markets.

Introduction
In the early 1980s (Mihaita, 2001), more precisely on November 4, 1980, the Government of Chile proposed a Bill to be adopted as the Act on Revised Pension System based on freedom of choice and clearly defined property rights over pension accounts. The Chilean private pension system started functioning on May 1, 1981, and became a model for other countries interested in finding a stable solution that would enable the population to remain financially viable after retirement, by means of replacing the existing public pay-as-you-go pension system with a new, private system, based on individual pension accounts. The new system enabled not only Chile but also other South American countries that followed this example to avoid the financial breakdown threatening all the countries with the public pay-as-you-go social security system. So, Chile launched it pension system reform in the early 1980s, followed by ten more Latin American countries, which meant the creation of mandatory private pension insurance programs based on personal savings accounts. This private pension system had a clearly defined programme, was compulsory for all the employed and managed by specialists, private companies called ‘administradoras de fondos de pensiones (AFPs)’, i.e. pension fund managing companies. In the words of José Piñera, who devised the system during his term in office as the Secretary of Labour and Social Security, the aim of the reforms was “to create a social security system based on personal freedom and solidarity at the same time; a fair social security system and an efficient welfare system for all, for the benefit of all the Chileans and always pursuing the goals of freedom, progress and justice” (Rodríguez, 1999).

1. The Chilean pension system reform as a paradigm for other economies of South America
When the employees' pension fund was established in 1924, Chile became the first country of the Western hemisphere (International Monetary Fund, 2011) to introduce a public funded pension system. This
fund was the predecessor of the Servicio de Seguro Social programme, i.e. social security service, which was the main pension program in Chile until 1981. Two more funds were formed in 1925: one, Caja de Empleados Particulares, for the private sector, and the other, Caja Nacional de Empleados Públicos y Periodistas, for the sector of civil servants and journalists. These national collective funds soon evolved into pay-as-you-go pension systems, where the pensions of the retired were paid by the employed. We shall now briefly deal with the events preceding the bankruptcy of the Chilean public pension system. As early as 1967, the state was spending 18.1% of the GDP on social security. By the early 1970s, the system was no longer under control. Contributions had grown from 16% to 26% of the total paid wages; state contributions to the pension system increased to about 38% of the total revenue, or about 4% of GDP, and implicitly, the system’s debt amounted to over 100% of the GDP. In addition, demographic changes also worked against the Chilean pay-as-you-go system. The ratio of the actively employed to the retired decreased from 10.8 in 1960 to 4.4 in 1970, then 3.2 in 1975, and 2.2 in 1980, when the reforms were introduced. In other words, compared to 1960, when a retired person was “supported” by almost 11 employed, in 1980 this burden was carried by somewhat less than two workers, with a falling trend. The system could not survive, as the deficit resulting from the decline in revenue and growth in expenditure was growing incessantly.

Such an unsustainable situation no longer exists in Chile (Augusto, 2008), where the employees’ pension depend exclusively on their work and functioning of the economy, rather than the government’s ability to tax the future employees. Over the past years, seven other Latin American countries – Peru (1993), Colombia (1994), Argentina (1994), Uruguay (1995), Bolivia (1997), Mexico (1997) and El Salvador (1998) also privatised their pension systems, following the successful Chilean model. Poland was the first East European country to implement such a pension system in March 1999. Let us now take a look into the order of reforming of public pension systems in other economies of South America, as providing the investment efficiency of these sources of funding is of key importance for the success of public pension system reforms.

### Table 1: Pension system reforms in Latin America

<table>
<thead>
<tr>
<th>country</th>
<th>reform launch year</th>
<th>pension system type</th>
<th>number of members</th>
<th>contributors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1994</td>
<td>DC/IA+PAYG</td>
<td>11,307,715</td>
<td>4,563,768</td>
</tr>
<tr>
<td>Bolivia</td>
<td>1997</td>
<td>DC/IA</td>
<td>1,002,986</td>
<td>473,861</td>
</tr>
<tr>
<td>Chile</td>
<td>1981</td>
<td>DC/IA</td>
<td>7,683,451</td>
<td>3,966,992</td>
</tr>
<tr>
<td>Colombia</td>
<td>1994</td>
<td>DC/IA</td>
<td>7,010,267</td>
<td>2,943,490</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>2000</td>
<td>DC/IA+PAYG</td>
<td>1,542,151</td>
<td>--</td>
</tr>
<tr>
<td>The Dominican Republic</td>
<td>2003</td>
<td>DC/IA</td>
<td>1,436,694</td>
<td>755,436</td>
</tr>
<tr>
<td>El Salvador</td>
<td>1998</td>
<td>DC/IA</td>
<td>1,437,474</td>
<td>538,370</td>
</tr>
<tr>
<td>Mexico</td>
<td>1997</td>
<td>DC/IA</td>
<td>37,408,828</td>
<td>13,926,954</td>
</tr>
<tr>
<td>Peru</td>
<td>1993</td>
<td>DC/IA</td>
<td>3,882,185</td>
<td>1,350,775</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1995</td>
<td>DC/IA+PAYG</td>
<td>723,267</td>
<td>415,016</td>
</tr>
</tbody>
</table>

Source: Augusto, 2008

DP: pension system based on defined contributions;
IA: pension system based on individual savings accounts (personal savings);
PAYG: public pension insurance programme

### Table 2: Pension funds on the Latin American capital market

<table>
<thead>
<tr>
<th></th>
<th>pension fund assets in million USD</th>
<th>pension fund share in GDP in 2015</th>
<th>pension fund share in market capitalisation</th>
<th>percentage of state securities in the pension fund portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>29,203,857</td>
<td>30.9</td>
<td>14.5</td>
<td>6.5</td>
</tr>
<tr>
<td>Bolivia</td>
<td>2,298,629</td>
<td>43.5</td>
<td>171.8</td>
<td>37.0</td>
</tr>
<tr>
<td>Chile</td>
<td>88,631,780</td>
<td>89.7</td>
<td>65.8</td>
<td>64.6</td>
</tr>
<tr>
<td>Colombia</td>
<td>19,347,175</td>
<td>24.7</td>
<td>40.6</td>
<td>--</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>1,061,185</td>
<td>10.0</td>
<td>3.9</td>
<td>0.7</td>
</tr>
<tr>
<td>El Salvador</td>
<td>3,469,774</td>
<td>--</td>
<td>69.4</td>
<td>13.0</td>
</tr>
<tr>
<td>Mexico</td>
<td>68,290,750</td>
<td>26.0</td>
<td>37.1</td>
<td>14.7</td>
</tr>
<tr>
<td>Peru</td>
<td>14,413,201</td>
<td>28.1</td>
<td>39.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2,585,893</td>
<td>13.3</td>
<td>962.5</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Source: Augusto, 2008
One significant difference in the annual average return during the life cycle of a personal saving account is the difference of over 25% in the amount of the total pension. It is estimated that, if a male begins work at 25, and retires at 65, with an average compound contribution of 85%. Pensions also include family pensions for widows up to three years younger. The average real annual basis of real return on investment is 5%. The aim of the pension system reform was to gain high return on invested funds in comparison with the initial inputs (see Table 3). These results are explained mainly by the fact that pension funds in many Latin American countries made profits in the periods of appreciation of their assets, including credit instruments, especially state-issued credit instrument, which accompanied their particular process of economic reforms, especially in 1990.

Table 3  Annual return rates of pension funds in Latin American countries (based on current value in USD and inflation rate adjusted)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>-0.69</td>
<td>14.40</td>
<td>-2.12</td>
<td>18.12</td>
<td>3.92</td>
<td>-10.3</td>
<td>-45.2</td>
<td>11.10</td>
<td>4.33</td>
<td>4.62</td>
</tr>
<tr>
<td>Bolivia</td>
<td>5.18</td>
<td>-</td>
<td>3.40</td>
<td>7.06</td>
<td>3.66</td>
<td>8.34</td>
<td>5.23</td>
<td>7.16</td>
<td>5.14</td>
<td>3.96</td>
</tr>
<tr>
<td>Chile</td>
<td>7.27</td>
<td>4.51</td>
<td>-1.09</td>
<td>14.53</td>
<td>3.98</td>
<td>5.72</td>
<td>2.68</td>
<td>11.90</td>
<td>9.10</td>
<td>5.70</td>
</tr>
<tr>
<td>Colombia</td>
<td>9.88</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9.37</td>
<td>10.40</td>
<td>13.23</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>7.35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10.80</td>
<td>2.82</td>
<td>4.71</td>
</tr>
<tr>
<td>El Salvador</td>
<td>5.14</td>
<td>-</td>
<td>-</td>
<td>14.09</td>
<td>7.92</td>
<td>7.65</td>
<td>2.41</td>
<td>4.75</td>
<td>2.28</td>
<td>1.46</td>
</tr>
<tr>
<td>Mexico</td>
<td>8.82</td>
<td>0.82</td>
<td>29.85</td>
<td>12.24</td>
<td>19.47</td>
<td>-3.33</td>
<td>6.24</td>
<td>1.57</td>
<td>7.76</td>
<td>8.45</td>
</tr>
<tr>
<td>Peru</td>
<td>17.75</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>21.24</td>
<td>5.58</td>
<td>18.43</td>
</tr>
<tr>
<td>Uruguay</td>
<td>10.68</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>31.83</td>
<td>3.58</td>
<td>0.12</td>
</tr>
</tbody>
</table>

* years when the second pillar of the pension system was not functioning yet

Source: Augusto, 2008

The future prospects were not equally favourable. The long term success in investment management dependent on appropriate portfolio diversification, but the current Latin American pension fund had not met this condition in full. Quite to the contrary – most of these Latin American pension system concentrated on several classes of assets, and a few issuers (mostly the state and its securities), and their characteristic national economies (see Table 4). This situation is explained by appropriate and comprehensive legislation, which limited investment in corporate shares and international financial instruments, and by the limited development of local capital markets (see Table 4).

Table 4  The portfolio structure of pension funds in Latin American countries in 2006, by issuers and types of assets (%)

<table>
<thead>
<tr>
<th>countries</th>
<th>state securities</th>
<th>foreign securities</th>
<th>private sector securities</th>
<th>bank securities</th>
<th>other securities</th>
<th>securities with fixed return rate</th>
<th>share funds and mutual funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>55</td>
<td>10</td>
<td>14</td>
<td>22</td>
<td>1</td>
<td>83</td>
<td>16</td>
</tr>
<tr>
<td>Bolivia</td>
<td>75</td>
<td>3</td>
<td>10</td>
<td>11</td>
<td>1</td>
<td>98</td>
<td>0</td>
</tr>
<tr>
<td>Chile</td>
<td>13</td>
<td>32</td>
<td>27</td>
<td>27</td>
<td>0</td>
<td>48</td>
<td>52</td>
</tr>
<tr>
<td>Colombia</td>
<td>47</td>
<td>14</td>
<td>20</td>
<td>18</td>
<td>1</td>
<td>77</td>
<td>22</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>64</td>
<td>12</td>
<td>22</td>
<td>2</td>
<td>0</td>
<td>97</td>
<td>3</td>
</tr>
<tr>
<td>El Salvador</td>
<td>0</td>
<td>na</td>
<td>2</td>
<td>98</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Mexico</td>
<td>76</td>
<td>5</td>
<td>0</td>
<td>15</td>
<td>4</td>
<td>96</td>
<td>0</td>
</tr>
<tr>
<td>Peru</td>
<td>73</td>
<td>6</td>
<td>17</td>
<td>2</td>
<td>2</td>
<td>90</td>
<td>7</td>
</tr>
<tr>
<td>Uruguay</td>
<td>19</td>
<td>9</td>
<td>44</td>
<td>28</td>
<td>0</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>Argentina</td>
<td>87</td>
<td>na</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>98</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Augusto, 2008

The aim of this article is to identify problems encountered by the countries that reformed their pension systems when defining the avenues of investing pension funds, i.e. the rules of investing voluntary pension funds. In addition, based on the experiences of the above listed South American countries, we shall identify the imperfection of the capital market imposing high costs of developing new financing sources for pension system. We have done it for each situation in an individual country, including country-specific elements, and analysed the chosen strategies characterised by various degrees of success. It is therefore likely that our comments or remarks do not quite accurately reflect the situation in any of
the above mentioned countries. At the same time, there are general elements in various situations, and identifying these will enable drawing edifying and valuable experiences from these countries, which have just started the structural pension system reforms – reforms that Serbia is yet to face.

2. The key features of the new Chilean private savings account based pension system.

2.1. The guaranteed amount

The system is compulsory for all the employed who started work after January 1, 1983, and offers options to all self-employed workers, like in the previous, state-managed system. The workforce who had been employed before January 1983 had the choice to either remain in the old system, or opt for the new system. The workers who accepted the new system had their contributions transferred from the old state-managed social insurance system, and those who decided to keep the old system have their rights guaranteed by the new legislation.

2.2. Contributions

Every month, the employees deposit 10% of their earnings on their personal pension accounts. This percentage is applied only to the first 22,300 USD (approximately) of their earnings. (As this amount remained unchanged only during the first 18 months of the private pension system, the “mandatory amount” was reduced automatically as the economic development resulted in an increase in real income.) These contributions and earned returns on investment are deductible from personal income tax. All workers can deposit up to additional 10%, which is also tax-deductible. Since, 1987, all the employed had the opportunity to maintain the so-called voluntary savings account, which was also managed by the AFP administrators, but completely independent of the pension account, where workers can invest additional money for savings. Workers with low wages benefit from voluntary savings accounts, as such accounts enable them to invest at little or no cost (AFP usually waives the commissions for their accounts). The employers can also pay contributions, called “contractual deposit” to their employees’ account, which enables them to report it as an operating cost, and deduct the paid contributions from the earned taxable income.

2.3. Freedom of choice

The workers have the freedom to choose the pension fund managing company (AFP) that they find the most suitable. They can also transfer from one AFP to another, twice a year at most. There is a six-month minimum length of membership in one AFP. This regulation was adopted in late 1997, in order to cut administration costs and discourage frequent transfers from one pension fund managing company to another.

2.4. Management

As stated above, the system is run by private AFPs, companies managing voluntary pension funds, which has a particular purpose. Each company secures an investment fund of bonds, shares, and other financial instruments. An AFP and a pension fund are two completely unrelated entities, so that if an AFP goes bankrupt, the pension funds are not compromised. Joining and leaving funds is free, even for foreign companies, provided that certain capital-related conditions are met. AFPs are required to have mandatory provisions, monetary provisions and profit provision. In addition, they are required to submit financial reports to their members free of charge at least on a quarterly basis, plus the pension savings account statement (la libreta), through which the members have insight into the balance on their savings accounts.

2.5. Payments and commissions

AFPs charge a monthly fixed commission ranging from 0 to 2.11 USD, and a commission expressed as a percentage of the members’ taxable income, ranging from 2.49 to 2.95% of the income. The variable commission includes premiums for life and disability insurance which the AFP charges on behalf of
their clients. However, as of 1987, AFPs are not entitled to charge fixed or percentage commissions on assets under receivership or inactive accounts (e.g. accounts to which contributions have not been paid until the moment when the amount of provision was calculated). These changes resulted in distortions in the AFP industry. AFPs are not allowed to offer group discounts, discounts for voluntary contributions, for continued contribution payments, or maintaining a certain balance on the account. The new private system offers the following to its members:

1. **Old age pension**: Men must reach 65, and women 60 years of age to be eligible for this pension. However, once they’ve reached this age, neither men nor women have to retire, nor would they be penalised if they remain employed. There are no other requirements.

2. **Early retirement**: To fulfil conditions for this pension, the employed must have sufficient savings to be able to “buy” the lacking years, which is calculated at least 50% of the average salary over the past ten years of work and minimum 110% of the minimum pension guaranteed by the state.

3. **Disability benefits**: Employees who receive such benefits have to have lost at least two-thirds of capacity for work, and to become eligible for partial disability pension, they need to have lost between one-half and two-thirds of capacity work. Survivors’ pensions are granted to the next of kin of the deceased workers. Should they have no surviving relatives, their savings from the pension account belong to the heirs of their property.

There are three types of pension:

1. **Life annuity**: The workers can use the saved money from their account to “buy” life insurance from insurance companies. This insurance provides a constant income under reasonable conditions.

2. **Fixed-term annuity**: The second option is to leave the money on the account and set up a so-called fixed-term annuity plan, where the amount depends on the average lifespan of the workforce and their dependants. If an employee chooses this option and dies before the fund is exhausted, the remaining amount will belong to the beneficiaries.

3. **Deferred term life insurance**: Essentially, this is a combination of the first two types. When a worker chooses this option offered by an insurance company, the insurance commences on a particular future date. The government’s role in the private system is dual: the first is to manage the system; the second is that the government is the lender of last resort. The pension system reformed established an independent and highly qualified government agency, **Superintendencia de Administradoras de Fondos de Pensiones** (Superintendency of **Pension Fund Administrators**, (SAFP)), to supervise the private pension system and their administrators. Each year, every AFP must guarantee that the real return will not be lower than the average than the average real return of all AFP-s in the last 12 months, with a -2% tolerance. The government has set the limits within which the investments can be made, shown in Table 1. These limitations resulted in very similar investments of different Pension Fund Administrators, but also managed to provide high and secure return on investment rates. Enough time has passed since the implementation of the private pension system for a systematic analysis of their results to be made today. The participation of labour, pension fund assets and pensions earned through this system have increased. The number of employees with a pension account increased from 1.4 million in late 1981 to over 6 million at the beginning of the new millennium, which is an increase of over 400%. The assets have grown to almost 0% of the GDP for the first 20 years since the system was introduced, which is an unusually high percentage for a small developing country where the marked was underdeveloped at the time the reforms were introduced. According to the Chilean economist Robert Fuentes, the assets are projected to reach 134% of the GDP by 2020.
Table 5  Investment limits for Pension Fund Administrators in Chile

<table>
<thead>
<tr>
<th>assets</th>
<th>restrictions set by the Central Bank of Chile</th>
</tr>
</thead>
<tbody>
<tr>
<td>state-issued securities</td>
<td>50 %</td>
</tr>
<tr>
<td>time deposits and securities issued by other financial institutions</td>
<td>50 %</td>
</tr>
<tr>
<td>securities guaranteed by financial institutions</td>
<td>50 %</td>
</tr>
<tr>
<td>Letters of Credit issued by financial institutions</td>
<td>50 %</td>
</tr>
<tr>
<td>public and private corporate bonds</td>
<td>-</td>
</tr>
<tr>
<td>convertible bonds</td>
<td>10 %</td>
</tr>
<tr>
<td>shares of public trading companies</td>
<td>37 %</td>
</tr>
<tr>
<td>shares of real estate companies</td>
<td>-</td>
</tr>
<tr>
<td>shares in real estate funds</td>
<td>-</td>
</tr>
<tr>
<td>shares in corporate development investment funds</td>
<td>5 %</td>
</tr>
<tr>
<td>shares in private investment funds</td>
<td>5 %</td>
</tr>
<tr>
<td>shares in collateralised debt investment funds</td>
<td>5 %</td>
</tr>
<tr>
<td>commercial papers</td>
<td>10 %</td>
</tr>
<tr>
<td>foreign assets:</td>
<td></td>
</tr>
<tr>
<td>(1) fixed income</td>
<td>10 %</td>
</tr>
<tr>
<td>(2) variable income</td>
<td>10 %</td>
</tr>
<tr>
<td>hedging</td>
<td>20 %</td>
</tr>
<tr>
<td>other public trading instruments</td>
<td>1 %</td>
</tr>
</tbody>
</table>

Source: Augusto, 2008

However, one of the most compelling arguments in favour of the quality of the new system is the fact that the number of workforce with early retirement is constantly on the rise. This is a symptom of the success of the new system, for two reasons: the first is that the workers have accumulated enough money on their account to choose this option; the other is the opportunity for the workforce to divide about their work and free time individually. As stated by José Piñera, “Some people want to work forever; others cannot wait to cease working and indulge in their true vocations or hobbies, like writing or fishing… The PRA system, on the other hand, allows individual preferences to be translated into individual decisions that will produce the desired outcome.” When we speak about the amount of an average Chilean pension, the figures we find may seem not particularly high. The absolute amount of an average Chilean pension is between two and two and a half times lower than an average US pension. However, when we consider that the average US salary is 5 times as high as Chilean, we get a clear picture of the benefits provided by the new pension system. The private pension system, which was introduced to resolve the problems of the previous one, has completely fulfilled the expectations. After almost three decades since the introduction, we can say it has achieved a huge success by all standards. Workers in Chile retire with better and more secure retirement pensions. Together with other free market reforms, such as privatisation of public companies, liberalisation of trade, labour reforms and tax reductions, this reform contributed to an incredible development of the Chilean economy in the period up to 2000, when the annual growth rate was almost 7 percent. The savings rate grew from about 10 percent in the late 1970s to 25 percent in the late 1990s. The Chilean pension system reform contributed to the positive functioning of the labour market. Reducing the income tax resulted in lower labour costs, and thus initiated opening new job positions, and relying on the capitalisation system extremely lowered, if not completely eliminated the component of labour tax in the pension system. The employment rate dropped from 15 percent, which was the rate in the 1970s, to below 5 percent. Another thing of extreme importance is the impact that the reform made on the Chilean society. Through their pension accounts, the workers become the owners of a share of Chilean production, and, accordingly, more attached to the idea of free market and free society. This had a great effect on reducing class conflicts and de-politisation of the Chilean economy. Today, pensions do not depend on the government’s ability to tax the forthcoming generations of the employed, nor are they a source of election and pre-election. On the contrary, the pensions depend on the effort invested by the future retirees, with the satisfaction and all the dignity that that entails.
3. Interaction between pension system reforms and financial markets

There is a large body of literature dealing with the research of the correlation between pension system reforms and capital market development. The two general conclusions are of the greatest importance for our analysis. The first one pertains to efficiency: although the development of capital market is not a prerequisite for launching pension system reforms, it is a prerequisite for their long-term efficiency (at least, as long as regulators do not allow all pension funds to invest abroad). Second, the accumulated savings in pension funds may make a positive impact on capital market development (Eich, Gust, & Soto, 2012).

4. The impact of pension system reforms on the development of capital markets.

The development of capital market is connected with the increase in the available classified assets of numerous issuers, and the volume of concluded transactions (a deeper and more liquid capital market). As a result of economies of scale, the growth in the market size enables lowering the costs of informing participants, and reduces trading costs, helping to develop a more efficient system of concluding transactions and supervision of securities, i.e. custody operations.

So, from the aspect of pension funds, the development of capital markets increases the possibility of portfolio diversification (on local markets, primarily on the markets of individual economies), avoiding market distortion, which can cause concern among investors and participants, and which can, in fact, be caused by concentrating their demand on a limited number of financial instruments, i.e. securities. It also enables cost cuts in managing the investments of voluntary pension funds, which, in turn contributes to cost cuts in supervision. However, many pension system reforms in South America were conducted in financial conditions where capital markets of individual countries showed a limited degree of development, exactly because of a very important limitation such as controlled interest rates, controlled prices of security intermediaries (and intermediaries of other financial instruments), regulating taxes that penalise financing project through markets such as investment in financial instruments, legal limitations on developing financial assets indexed depending on inflation movements, limitations on investing in international capital movement, poor corporate management practices, absence, or better to say scarcity of reliable and timely information, weak banking sector high concentration in the financial sector in terms of strength of banking sector only, and inadequate efficiency of the system for concluding transactions and custody operations. In these cases, when there is a possibility to remove these limitations, the functioning costs of pension funds can be lower. However, when the improvements in capital market regulation are not synchronised with the growth of pension funds, the pension fund reform is bound to encounter problems. In practice, it means that the reform of pension systems must be synchronised with the reform of capital market, and the reform of the entire financial system. The effect that the pension system reform may have on the development of capital market can be summarised in four main outcomes: (1) the size of capital market, (2) improved regulation of the capital market, (3) greater transparency and (4) better corporate management practices.

4.1. Capital market size

The size of the capital market will increase with the growth in savings. Actually, savings can grow in both cases either due to growth in total savings or because of the changes in the composition of the total savings. The influence of structural reform of pension systems on the volume of savings depends on the significance of the scope of the strategy used in financing the deficit of unfunded social security, i.e. state-managed PAYG – so far predominant system – exclusively state-managed pension system, and the rate of exchange between internal and external savings. However, even if the reform does not make a significant impact on the total level of savings, the reform can affect the volume of intermediaries’ savings by way of capital market, and the structure, i.e. composition of saving. Accumulation, i.e. growth in savings in the pension funds’ portfolio is particularly likely to significantly influence the trading levels on the capital market. In addition, new financing possibilities emerge parallel with the expansion of the capital market. The aim of investing pension funds is to achieve long-term maximum returns on social security servings, as the these opportunities yield more capital to the members of the system at the moment when the purchased pension insurance matures to be paid as pension. Insurance companies
then sell life annuities to retirees who are the members of the new social security system, which requires investing their technical provisions into financial assets, with a maturity date similar to the disbursement dates for retirement pensions. Thus, the emergence of pension funds stimulates demand for long-term financial instrument, and consequently, creating conditions for the development of this specific market. This is, in fact, the most important explanation for the growth in the bond market noted in the individual countries of this region after pension system reforms.

4.2. Improved financial market
Pension funds’ demand for financial can exert a forceful influence on legislators to amend laws and regulations specific to the capital market. These changes include changes in the taxation system, applied on the issue and purchase of financial instrument, improved functioning of the stock market, and changes in the legislation pertaining bankruptcy and other regulations providing protection for investors.

4.3. Higher transparency level of the capital market
Almost without exceptions, pension funds as participants on the South American capital market are accompanied by gradual but constant rise in the quality and timeliness of information provided to investors. This is explained by the pension funds’ growing demand for better information and also interest shown by various issuers in meeting the imposed conditions by the pension funds as a condition in their own securities. The development of the ranking system of the risk of financial instruments, a growing number of independent entities and analysts providing information on issuers, and far more comprehensive information provided by issuers definitely present a specific characteristic of this phenomenon.

4.4. Enhanced corporate management practices
Pension fund members as shareholders or bond holders can also benefit from better corporate management in companies where they invest. Like in the previous case, this results from both facts – both the direct demands made by pension fund administrators and supervisors, and the decision of a part of issuers to create conditions that will make investing pension funds in financial instruments issued by individual issuers more appealing. At the same time, development of pension funds can help legislators, and development of pension funds can help legislators and regulatory institutions to recognise the importance of strengthening various mechanisms used for protecting investors. This leads to creating better regulating conditions, with the aim of minimising the risk of conflict of interest and strengthening the rights of small shareholders and holders of debt instruments issued by private companies.

5. The challenges of regulating investment plans of voluntary pension funds
Without exception, all reformed economies have adopted clear quantitative regulatory models for investing pension funds. The situation is the same in Serbia. This means, on the one hand, that pension funds can only invest in instruments explicitly approved and quantitatively determined, while on the other, it means that pension fund investments are subject to portfolio diversification under the rules determined by legislation. The legal diversification of the asset portfolio is also covered by Serbian legislation. Apparently, in many cases, these rules are not appropriate. The most significant shortcoming is the ban on investing in financial instruments owned, i.e. shares or their minimum percentage, ban on investing abroad, compulsory investment a certain minimum percentage of the entire portfolio into state financial instruments pledged, and determining a low maximum investment limit for certain types of assets. This imperfection of rules in portfolio diversification is derived from two significant causes (Barr, 2006):
Table 5  Diversification rules of South American pension funds: limitations by asset identification (in % of pension funds)

<table>
<thead>
<tr>
<th>Asset type</th>
<th>Argentina</th>
<th>Bolivia</th>
<th>Chile</th>
<th>Colombia</th>
<th>Salvador</th>
<th>Mexico</th>
<th>Peru</th>
<th>Uruguay*</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixed-income securities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>treasury bonds</td>
<td>nd</td>
<td>100.0</td>
<td>50.0</td>
<td>70.0</td>
<td>nd</td>
<td>40.0</td>
<td>60.0</td>
<td></td>
</tr>
<tr>
<td>central government bonds</td>
<td>50.0</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>50.0</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>local and decentralised</td>
<td>30.0</td>
<td>10.0\b</td>
<td>nd</td>
<td>nd</td>
<td>50.0</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>governments’ bonds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>central bank securities</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>30.0\b</td>
<td>30.0</td>
<td>30.0</td>
<td>nd</td>
</tr>
<tr>
<td>banking sector securities</td>
<td>nd</td>
<td>60.0</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>deposits and bonds</td>
<td>30.0</td>
<td>50.0\b</td>
<td>50.0</td>
<td>32.0</td>
<td>40.0</td>
<td>40.0</td>
<td>40.0</td>
<td>30.0</td>
</tr>
<tr>
<td>mortgage bonds</td>
<td>40.0</td>
<td>50.0\b</td>
<td>50.0</td>
<td>40.0</td>
<td>40.0</td>
<td>40.0</td>
<td>40.0</td>
<td>30.0\c</td>
</tr>
<tr>
<td>corporate bonds</td>
<td>nd</td>
<td>45.0\b</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>40.0\b</td>
</tr>
<tr>
<td>bonds</td>
<td>40.0</td>
<td>nd</td>
<td>45.0</td>
<td>30.0</td>
<td>40.0\b</td>
<td>30.0</td>
<td>40.0</td>
<td>nd</td>
</tr>
<tr>
<td>convertible bonds</td>
<td>60.0</td>
<td>nd</td>
<td>10.0</td>
<td>nd</td>
<td>20.0\b\c</td>
<td>5.0\c</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>cash notes</td>
<td>20.0</td>
<td>nd</td>
<td>10.0</td>
<td>13.0</td>
<td>nd</td>
<td>25.0</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>collateralised assets</td>
<td>np</td>
<td>30.0\b</td>
<td>nd</td>
<td>20.0</td>
<td>20.0</td>
<td>10.0</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Share and mutual funds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>shares</td>
<td>70.0</td>
<td>40.0\b</td>
<td>40.0</td>
<td>30.0</td>
<td>20.0\b</td>
<td>50.0</td>
<td>35.0</td>
<td>nd</td>
</tr>
<tr>
<td>mutual and investment funds</td>
<td>30.0</td>
<td>15.0</td>
<td>25.0</td>
<td>50.0</td>
<td>5.0</td>
<td>20.0</td>
<td>0.0</td>
<td>15.0</td>
</tr>
<tr>
<td>foreign assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>financial assets</td>
<td>20.0</td>
<td>10.0</td>
<td>16.0</td>
<td>10.0</td>
<td>np</td>
<td>np</td>
<td>7.5</td>
<td>na</td>
</tr>
<tr>
<td>foreign currency assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>other approved investments</td>
<td>30.0</td>
<td>5.0\b</td>
<td>10.0</td>
<td>30.0</td>
<td>40.0</td>
<td>5.0</td>
<td>12.5</td>
<td>nd</td>
</tr>
</tbody>
</table>

Source: Augusto 2008
nd: not defined
na: not applicable
\a: maximum 60% of assets not issued by the state, i.e. public sector
\b: maximum possible limitation
\c: financial instrument issued by the Mortgage Bank of Uruguay (Banco Hipotecario de Uruguay)
\d: maximum issue of shares by corporations with variable interest rates
\e: the total assets and convertible bonds cannot exceed 20%
\f: the total assets and convertible bonds cannot exceed 5%

First of all, the newly formed pension systems in South American countries (Impavido & Tower, 2009) marked a significant break with the tradition of social security, and the legislators in many countries were not prepared for facing the new reality of introducing and launching reforms. In addition to their inadequate experience, there was a doubt in the ability of private administrators to cope with the challenges of managing pension funds successfully. As a result, investment regulation was not designed based on the proposed portfolio theory. Instead, the regulators seem to have decided to gradually liberalise the ad hoc strategy by reducing limitation as they move away from the start line of learning, and as their thinking patterns change with the changes in the relationships between market conditions. However, if this type of strategy has no significant costs, legislators must really be capable of recognising the changes in the environment, and also have a high level of flexibility in changing the rules set over the preceding period. The problem was that, in some cases, these conditions were not met, and the pension fund investment, after years are still straightjacketed, which causes increased costs in relation to risk and return.

Second, it is very hard to separate the functioning of pension funds from political pressures. However, along with a significant progress in resolving this problem (which was one of the most significant problems that caused the demise of the traditional, i.e. state-managed pension systems in the region), some cases saw the design of investment rules that acted in contradiction to the objectives of pension programmes. The most apparent evidence of the solution to this problem is the pension funds’ obligation to invest in treasury bonds, on which the pension funds are dependent in certain countries, in the ban on foreign investment, and in constant pressures on pension funds to invest in assets of allegedly “public interest”.

The third significant problem arising from regulating pension funds is uniformity of portfolios. In most countries, pension fund administrators are authorised to offer a singly type of portfolios. Although
these limitations may have significant consequences because all the members are younger and far from the retirement point, it gains importance as the system develops (in terms of maturity for retirement) and share of labour force who are not very diverse it terms of their lifecycle stage, and have diverse preference in terms of investment. Only Chile, and, more recently, Mexico and Peru, have authorised pension fund administrators who can offer different portfolios, better suited to the needs of different lifecycle stages of the voluntary pension fund (Clements, Faircloth & Verhoeven, 2007).

6. The influence of pension funds on the development of financial markets in Serbia

Voluntary pension funds were launched in Serbia in late 2006. Initially, nine pension fund administrators operated on the national market. Yet, slow market development and insufficient incentive from the state resulted in a situation where only five administrators manage nine pension funds. The start-up assets of voluntary pension funds was transferred from voluntary pension insurance funds, and amounted to 1.6 billion RSD. Today, six years later, the assets of voluntary pension funds amounts to just under 15 billion RSD.

![Figure 1 The assets of voluntary pension funds in RSD bn](source: Authors)

The greatest novelty brought on by the Law on Voluntary Pension Funds and Pension Schemes is the separation between the assets of the fund into which the members pay pension contribution on the one hand, and the assets of the Administrator, which invest the raised money in order to gain profit, which, is, in turn, accrued to the members’ individual accounts. The assets of the Administrator and he Fund are completely separated and thus protected, so that the possibility for the Administrators to settle their debts in case of bankruptcy from the Fund’s assets is non-existent. Such an arrangement protects the fund members’ property. The Administrator is obliged to employ permanently and full time at least one portfolio manager and certified internal auditor. The Administrators are obliged to meet the minimum requirements of organisational and technical capacities, as prescribed by the Central Bank of Serbia. The funds’ assets are invested in compliance with the Law on Voluntary Pension Funds and Pension Schemes (Official Gazette of the Republic of Serbia, 2005) and the decisions of the Central Bank of Serbia as the legislative regulators. Ever since the beginning of pension funds’ operations, the funds’ property has predominantly been invested in blue-chip state securities (treasury notes and treasury bonds), so that today, 12.5 billion, i.e. almost 84% of the total 15 billion is invested in government securities. Pension funds have thus already become a significant driving force of economic development, and, along with insurance companies and banks, the most significant players on the financial market. Institutional solutions enable funds to invest funds into higher-risk forms of investment as well, such as shares, real estate, foreign securities and bank deposits; however, despite everything, the national debt of the Republic of Serbia is still the most represented in all funds’ investment structure.
Despite the significant growth in the assets since the beginning of the funds’ operation, the main cause for concern is slow growth in the number of members who pay pension contributions monthly, and the number of users of pension funds.

![Figure 2](image.png)

**Figure 2** The numbers of active members and beneficiaries of voluntary pension funds

*Source: Authors*

According to the data from gathered in late 2011, the total number of employed persons in Serbia was 1.75 million, and under 175 thousand of them, i.e. under 10%, were pension fund users and beneficiaries. In the countries of Western Europe and the countries of South-eastern Europe, this percentage is much higher.

In addition to raising the population’s living standards and economic growth, further development of the voluntary pension funds industry requires investing additional effort into market education, and taking specific and tangible steps in the area of taxation and wage policy in public administration, which could produce significant result in the short or mid-term. All this is aimed at creating a higher amount of funds in the pension system of the Republic of Serbia, in order to minimise the pressure on the national pension fund in the forthcoming period on the one hand, and create additional dinar funds on the domestic capital market for financing public and industrial economic enteritis.

In view of the number of employees in the public sector, further development of the pension funds in Serbia requires finding a model for their higher participation in this form of savings. Joint payments by the employers and employees into pension funds turned out to be one of the successful models in practice. Indeed, practice has shown that the employees are more likely to opt for payments into pension funds when these payments are accompanied by employers’ payments. Thus, providing the initial impetus by means of employers’ payments creates the potential for generating significantly larger total assets in the third pillars of the pension system. Give that about 85% of the total funds’ assets is invested in state-issued securities, strengthening the third pillar would enable a higher inflow of capital to the primary public debt market.

Apart from a more significant support of the public sector to the third pillar, additional tax exemptions would be of great assistance. The maximum tax exempt amount of payments is 4647 dinars and is adjusted to inflation annually. Raising the maximum tax exempt amount level would produce several positive effects for the state: generating a larger amount of funds in the third pillar of the pension system of the Republic of Serbia, increased liquidity on the primary public debt market, and the possibility of cheaper debt owing to higher demand for state-issued instruments. On the other hand, loss of tax revenue suffered by the state would be comparatively limited, as the payments into pension funds, as a rule, are not compensation for earning, but a separate benefit.
Institutional solutions (Official Gazette of the Republic of Serbia, 2005) provide that the funds accumulated in the voluntary pension fund can be withdrawn in a single amount, fixed-term annuity, purchase of annuity or a combination of these modes. The existing legal solutions (Official Gazette of the Republic of Serbia, 2006) provide payment of capital gains tax on single and fixed-term payments of funds accumulated in the voluntary pension fund, whereas annuities drawn and invested in purchasing annuities in insurance companies is exempt from this tax.

Given that it implies continuous and regular payments, fixed-term annuities are, by their nature, the most similar to pensions paid from the public pension fund, and as such, should be the most common as a mode of drawing funds from voluntary pension funds, which is not the case in practice.

In practice, fund members do not opt for fixed-term annuities in the expected percentage, and prefer single or the so-called bullet payments, among other reasons, due to complicated administrative procedure in dealing with tax authorities, which includes submitting a tax return for capital gains tax after every disbursement from the fund, which may be effected even several times monthly.

In addition to the time wasted by both the fund member in case of constant submitting of tax returns and the tax authorities due to constant adjustment of taxable income amounts, another consequence is the high tax of issuing a large number of taxation documents.

As the subject of taxation is gained inflation adjusted earned income from investment in voluntary pension funds, and, historically, these revenues amount negligibly above the inflation levels, the conclusion is that tax revenues on this basis cannot cover the costs of taxation procedure, which is labour intensive, demanding the engagement of considerable human and technical resources in order to calculate the tax accurately.

An additional point in favour of the proposed tax exemption is the fact that payments to voluntary pension funds are, in fact, development of long-term dinar savings deposits, which is in accordance with the foreseen strategy of financial market dinarisation strategy.

**Conclusion**

Accumulation of savings in voluntary pension funds may make a powerful impact on the development of financial markets and capital markets, and consequently, economic growth, and individual welfare and wealth. For instance, the analysis of the Chilean case resulted in the estimate that almost 5% of GDP growth in the period from 1980 till 2001 can be explained by the impact of the development of pension funds on the development of the capital market.

The size of this impact, however, is not equal in all countries, in view of the different times of launching the national social insurance reforms. The differences are explained mostly based on the characteristics in the regulation of pension funds in each of the countries. Some of the countries were forced to invest the pension fund assets in government bonds (due to legislation), which resulted in hindered development of other financial instruments. In other countries, investing pension funds into shares and other corporate instruments was either forbidden or strictly limited. Naturally, all of the above, together with frustrating the companies in their efforts to benefit from possible cost cuts in capital acquisition, forcefully hindered instead of creating supporting the improvement in the quality of corporate management. In other countries, the regulation of investment of pension funds was aimed at preventing the placement in financial derivatives and high-risk financial instrument on the capital market.

Capital market development is a vital prerequisite for a successful reform based on pension fund accumulation. Furthermore, a reform of this type is possible even if the capital market was initially underdeveloped. Efforts must be focussed in the circumstances were the regulation of pension fund investment does not prevent the development of particular financial assets and provide individuals with a significant degree of international diversification. Moreover, the changes will also require institutional changes in capital market regulation, which need to be carried out over time, so that the capital market may become capable of responding to the possible forthcoming demand by the pension funds.

The above are the causes of serious challenges to pension fund regulation. Individual countries do not mention the maximum benefits of the contributions made by pension funds to the development of their capital markets and economic growth. These countries require improvements in the regulation pertaining pension funds by authorising investment in instruments which are currently forbidden, and liberalisation of certain investment limitations, and thus the possibility of structuring more efficient portfolios. In addition, these countries must accompany these changes with parallel adjustments of their taxa-
tion systems and capital market regulations. These reforms will directly benefit pensioners and have positive effects on economic growth and welfare of the entire population.

References


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The Role of Company Performance Analysis in the Regional Development in Vojvodina

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Abstract
This article presents a comparative analysis of the business performance of companies across the regions of Vojvodina, with the objective to analyse the development of the regions and evaluate their contribution to the development of the Province. Business performance of enterprises is analysed on the basis of success indicators and financial status in the period 2007-2010. The results indicate a decrease in the business performance of companies measured by success indicators. Positive contribution to the development of Vojvodina, based on success indicators was recorded in companies in South Bačka and Srem Districts. According to the analysis of financial stability, the observed situation in 2010 is almost the same, as only companies in South Bačka and Srem Districts have a stable financial status and long-term financial balance and solvency.

Keywords
Business performance, analysis, regional development.

Introduction
A country’s growth and development is determined by the economic activities of companies operating on a given territory. Not all regions make and equal contribution to the development of the country, primarily due to differences in the availability of natural resources, and also because of differences in the economic, social and social structure. Research into companies’ business performance across individual regions is important from the aspect of considering the region’s particular contribution to the country’s development, and making decisions on creating the policies of growth and sustainable development of not only national economy in general but its particular regions as well. The regional development policies are created with the objective to attain sustainable development and reduce inter-regional and intra-regional disparities, the extent of social and economic development and living conditions (Official Gazette of the Republic of Serbia, 2009; 2010).

Observing the performance of the economy of the Republic of Serbia, it is obvious that the highest contribution to the development of our country, second only to the Belgrade region, is made by the region of the Autonomous Province of Vojvodina. 26% of the total GDP is generated in Vojvodina. As regards the total export of the Republic of Serbia, as much as 34% of export originates from Vojvodina (The Republic Statistical Office, 2012).

In order to examine the performance of Vojvodina, it is necessary to analyse the economic activity of companies operating in the Province’s individual regions. In order to analyse the development performance of Vojvodina, this article includes a comparative research of business performance of companies across seven regions (officially: Districts) of Vojvodina: North Bačka, West Bačka, South Bačka,
Srem, North Banat, Central Banat and South Banat. The field research will be based on the analysis of consolidated financial statements of companies by regions as a method of assessing their status and business performance. The analysis of a company’s financial statements produces information of importance for creating the company’s future business policies and determining their role in sustainable development, and also for measuring the effects of corporate management in the previous period. The analysis of the financial reports of companies across the regions of Vojvodina will be conducted based on the analysis of business performance and financial status indicators for the period 2007-2010. This research used the consolidated data from the financial reports of companies in Vojvodina distributed by regions.

1. Overview of the economic activities of companies in the AP Vojvodina

According to the 2010 data of the Chamber of Commerce of Vojvodina (2012), 23,652 companies are registered on the territory of Vojvodina, accounting for 7.5% of the total number of companies operating on the territory of our country. Although the share of companies based in the Autonomous Province (hereinafter: AP) of Vojvodina is comparatively low in relation to the total number of companies in the Republic of Serbia, their economic activity and contribution to the country’s development is higher. Considering the gross domestic product (GDP) as the most relevant macroeconomic aggregate of expressing the economic strength of a country and its regions, in can be concluded that the region of Vojvodina is the second strongest in generating GDP, second only to the region of Belgrade. The GDP of Vojvodina amounts to 748,673.2 billion RSD, accounting for 26.5% of the total Serbian GDP. The per capita GDP in Vojvodina is comparatively equal to the per capita GDP at the national level, amounting to 382 thousand dinars (The Republic Statistical Office, 2012). The comparative overview and structure of GDP across the regions of Serbia are presented in Table 1 and Image 1.

<table>
<thead>
<tr>
<th>Region</th>
<th>Total GDP in RSD bn</th>
<th>per capita GDP</th>
<th>share % in RSD</th>
<th>Index level RS=100</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Vojvodina</td>
<td>748,673.2</td>
<td>382</td>
<td>26.0%</td>
<td>96.8</td>
</tr>
<tr>
<td>Belgrade Region</td>
<td>1,152,004.9</td>
<td>703</td>
<td>40.0%</td>
<td>177.8</td>
</tr>
<tr>
<td>Šumadija and West Serbia</td>
<td>562,911.0</td>
<td>276</td>
<td>19.5%</td>
<td>69.9</td>
</tr>
<tr>
<td>South and East Serbia</td>
<td>418,301.9</td>
<td>253</td>
<td>14.5%</td>
<td>63.9</td>
</tr>
<tr>
<td>The Republic of Serbia</td>
<td>2,881,891.0</td>
<td>395</td>
<td>100%</td>
<td>100</td>
</tr>
</tbody>
</table>

When observing the structure of companies classified by size, one notes a significantly high number of SMEs operating in Vojvodina. According to the data of the Chamber of Commerce of Vojvodina, as many as 23,527, i.e. 99.47% of the companies operating in 2010 were registered as small and medium sized. The number of SMEs increased by around 19.75% compared to 2007. Such a large number of SMEs can be explained by earmarked loans for the development of SMEs disbursed in 2008, and the fact that SMEs are more flexible and adaptable to change in the business environment, and viable enough to survive and develop.

Table 2  Number of small, medium-sized and large enterprises in Vojvodina in the period 2007-2010.

<table>
<thead>
<tr>
<th>year</th>
<th>SMEs</th>
<th>large corporations</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number</td>
<td>index</td>
<td>number</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>number</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>number</td>
</tr>
<tr>
<td>2007</td>
<td>18,939</td>
<td>100.00</td>
<td>153</td>
</tr>
<tr>
<td>2008</td>
<td>22,680</td>
<td>119.75</td>
<td>146</td>
</tr>
<tr>
<td>2009</td>
<td>23,448</td>
<td>123.81</td>
<td>133</td>
</tr>
<tr>
<td>2010</td>
<td>23,527</td>
<td>124.23</td>
<td>125</td>
</tr>
</tbody>
</table>

Source: The authors’ calculation based on the data obtained from the Republic Statistical Office, 2012

Analysing the distribution of companies by the regions of Vojvodina, the largest number of companies is obviously seated in the South Bačka District. The total number of companies registered in this region in 2010 was 10,283, accounting for 43.48 of the total number of companies.

Table 3  Number of companies by the regions of Vojvodina in 2010

<table>
<thead>
<tr>
<th>Region</th>
<th>number of companies</th>
<th>% share</th>
</tr>
</thead>
<tbody>
<tr>
<td>the North Bačka District</td>
<td>4,158</td>
<td>17.58%</td>
</tr>
<tr>
<td>the West Bačka District</td>
<td>1,723</td>
<td>7.29%</td>
</tr>
<tr>
<td>the South Bačka District</td>
<td>10,283</td>
<td>43.48%</td>
</tr>
<tr>
<td>the Srem District</td>
<td>2,935</td>
<td>12.41%</td>
</tr>
<tr>
<td>the North Banat District</td>
<td>538</td>
<td>2.27%</td>
</tr>
<tr>
<td>the Central Banat District</td>
<td>1,317</td>
<td>5.57%</td>
</tr>
<tr>
<td>The South Banat District</td>
<td>2,697</td>
<td>11.40%</td>
</tr>
<tr>
<td>Total</td>
<td>23,652</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: The authors’ calculation based on the data obtained from the Republic Statistical Office, 2012

2. Survey of business performance of companies in the AP Vojvodina

A comparative analysis of business success in the period 2007-2010 of companies distributed by regions was conducted in order to examine business performance in Vojvodina for the purpose of assessing regional development. Business success as a business performance measure was analysed based on the following indicators:

- operational revenue as the primary source of corporate operations, resulting from the company’s core activity,
- financial result as a difference between total revenue earned and expenditure incurred in the business year,
- results of currents operations as a measure of business success of the company’s current operations.

The comparative analysis of the financial status of the regions of Vojvodina was conducted based on the following indicators:
- financial stability,
- liquidity, and
- solvency.

2.1. Analysis of companies’ business success across the regions of Vojvodina

The results of the examination of companies’ business success distributed by the regions of Vojvodina are presented in Table 4.

### Table 4  Operational revenue, financial results and results of companies' current operations distributed by the regions of Vojvodina in the period 2007-2010 (in thousand RSD)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Year</th>
<th>the North Bačka District</th>
<th>the West Bačka District</th>
<th>the South Bačka District</th>
<th>the Srem District</th>
<th>the North Banat District</th>
<th>the Central Banat District</th>
<th>the South Banat District</th>
</tr>
</thead>
<tbody>
<tr>
<td>operational revenue</td>
<td>2010</td>
<td>188,197,362</td>
<td>118,234,934</td>
<td>1,065,265,477</td>
<td>177,549,993</td>
<td>41,508,948</td>
<td>99,814,458</td>
<td>180,743,404</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>181,574,844</td>
<td>102,040,756</td>
<td>875,939,508</td>
<td>149,124,707</td>
<td>32,356,304</td>
<td>81,966,974</td>
<td>144,023,302</td>
</tr>
<tr>
<td></td>
<td>2008</td>
<td>190,249,670</td>
<td>104,723,556</td>
<td>1,055,983,131</td>
<td>149,429,834</td>
<td>42,898,575</td>
<td>91,906,799</td>
<td>168,725,308</td>
</tr>
<tr>
<td>net financial result</td>
<td>2010</td>
<td>-4,054,535</td>
<td>-592,095</td>
<td>35,820,347</td>
<td>-2,005,293</td>
<td>-6,273,286</td>
<td>-5,669,074</td>
<td>-12,998,151</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>-4,625,728</td>
<td>2,861,650</td>
<td>-20,558,754</td>
<td>873,389</td>
<td>-2,266,561</td>
<td>-2,650,826</td>
<td>-14,660,112</td>
</tr>
<tr>
<td></td>
<td>2008</td>
<td>-435,737</td>
<td>1,447,248</td>
<td>16,714,962</td>
<td>1,935,321</td>
<td>-1,780,116</td>
<td>-1,155,536</td>
<td>-12,666,030</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1,752,657</td>
<td>1,676,130</td>
<td>23,670,899</td>
<td>2,423,638</td>
<td>-714,960</td>
<td>-703,837</td>
<td>4,332,295</td>
</tr>
<tr>
<td>results of current operations</td>
<td>2010</td>
<td>-1,151,938</td>
<td>-762,317</td>
<td>38,955,354</td>
<td>1,288,471</td>
<td>-6,428,380</td>
<td>-465,926</td>
<td>-5,781,678</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>-3,826,449</td>
<td>3,047,447</td>
<td>11,704,475</td>
<td>209,540</td>
<td>-2,394,967</td>
<td>-2,264,770</td>
<td>-8,931,286</td>
</tr>
<tr>
<td></td>
<td>2008</td>
<td>-1,793,471</td>
<td>1,961,796</td>
<td>12,185,183</td>
<td>1,081,472</td>
<td>-4,120,490</td>
<td>-1,017,899</td>
<td>-9,842,974</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1,537,409</td>
<td>1,869,087</td>
<td>35,802,938</td>
<td>625,946</td>
<td>-1,406,428</td>
<td>-366,649</td>
<td>-831,628</td>
</tr>
</tbody>
</table>

Source: The authors’ calculation based on the data obtained from the Republic Statistical Office, 2012

2.1.1. Operating revenue analysis

The highest operating revenue values during all four years of the observation period were achieved by the companies in the South Bačka Region. There are fluctuations in the amount of earned revenue of the companies in the South Bačka region, with the highest value reached in 2010, amounting to 1,065,265,477 thousand dinars. The lowest earned income over all the four years of observation period was recorded by companies operating on the territory of the North Banat district. The lowest value of earned revenue in this income was 32,356,304 thousand dinars in 2009. The other regions of Vojvodina show a similar trend in the amount of operating revenue, characterised by growing revenue over the period 2007-2010, with a slight fall in 2009. The earned operating income across the regions of Vojvodina is presented in Figure 2.
2.1.2. Financial result analysis

The positive financial results, expressed as revenue, show the amount of profit remaining from the earned revenue after settling the company’s expenditures (Andrić & Vuković, 2011). It is obvious that the observation period saw a decrease in the number of regions on whose territory companies achieve positive aggregate financial results. More precisely, in 2007, as many as 5 regions achieved profit, whereas only the South Bačka District achieved it in 2010. Companies in the South Bačka District operated with positive financial risk, except in 2009, when their loss showed the highest figure of 35,820,347 thousand dinars. Companies on the territory of Srem and West Bačka Regions operated with profit in the period 2007-2009. Companies in the North Banat and Central Banat Districts were characterised by operative losses over the observation period. The achieved financial results are presented in the chart below.
2.1.3. Analysis of results of current operations

The financial result of current operations is the basis for accessing business success. Business success assessment is important from the perspective of a company’s operation in terms of achieving financial results; regardless of the character and amount of overall financial result (Rodić, Filipović & Andrić, 2007). Successful operation over the entire observation period characterised companies on the territory of the South Bačka and Srem Districts. On the other hand, unsuccessful total operation over the entire observation period was reported by companies situated in the South Banat, the North Banat and the Central Bačka districts. Companies on the territory of the North Bačka and the West Bačka Regions recorded a decline in the results of current operations, and transition from the profit zone in 2007 into the loss zone in 2010. The achieved results of current operations of the companies in Vojvodina are presented in the chart below.

![Figure 4](image_url) The result of the companies’ current operations across the regions of Vojvodina over the period 2007-2010

Source: The authors’ calculation

2.2. Analysis of the companies’ financial status across the regions of Vojvodina

The financial status determines the company’s financing ability. The principal determinants of the financial status are:

- **Financial stability** (long-term financial balance) shows the correlation between the long-term employed assets and long-term financing sources. If the financial stability ratio equals, long-term financial balance has been established and conditions have been created for maintaining liquidity. If the financial stability ratio is less than 1, then the long-term financial balance is shifted towards long-term financing sources, with the presence of liquid assets available for investment. The company’s liquidity is compromised when the financial stability ratio is higher than 1 (Rodić, Filipović, Andrić, 2011, p. 203-204)

- **Liquidity** is the company’s ability to pay its liabilities within maturity dated. Liquidity assessment is performed my means of overall liquidity and instant or quick liquidity ratios. According to the overall liquidity ratio, the ratio between operating assets and short-term liabilities needs to be at least 2 in order to main the company’s liquidity (Vunjak, 2008, p. 114). The instant liquidity ratio is the ratio between operating assets without inventories and short-term sources of funding. A company is liquid if the instant liquidity ratio equals or is higher than 1 (Žager, Mamić Sačer, Sever & Žager, 2009, p. 246).
- **Solvency** refers to the company’s ability to pay its long-term liabilities. The company is solvent as long as assets are larger than liabilities (Rodić & Filipović, 2011, p. 270).

The results of the overview of the companies’ financial status across the regions of Vojvodina are presented in the table below.

**Table 5** Companies’ financial status indicators across the regions of Vojvodina in the period 2007-2010.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Year</th>
<th>North Bačka District</th>
<th>West Bačka District</th>
<th>South Bačka District</th>
<th>Srem District</th>
<th>North Banat District</th>
<th>Central Banat District</th>
<th>South Banat District</th>
</tr>
</thead>
<tbody>
<tr>
<td>financial stability</td>
<td>2010</td>
<td>1.04</td>
<td>1.07</td>
<td>0.94</td>
<td>0.96</td>
<td>1.11</td>
<td>1.1</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>1.07</td>
<td>0.93</td>
<td>0.97</td>
<td>1.06</td>
<td>1.05</td>
<td>1.07</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>2008</td>
<td>1</td>
<td>0.92</td>
<td>0.97</td>
<td>1.06</td>
<td>1.1</td>
<td>0.98</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1</td>
<td>0.88</td>
<td>0.93</td>
<td>1.05</td>
<td>1.24</td>
<td>0.98</td>
<td>0.98</td>
</tr>
<tr>
<td>overall liquidity</td>
<td>2010</td>
<td>0.96</td>
<td>0.93</td>
<td>1.07</td>
<td>1.04</td>
<td>0.88</td>
<td>0.91</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>0.94</td>
<td>1.07</td>
<td>1.04</td>
<td>0.93</td>
<td>0.92</td>
<td>0.92</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>2008</td>
<td>1</td>
<td>1.1</td>
<td>1.05</td>
<td>0.93</td>
<td>0.86</td>
<td>1.03</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1.01</td>
<td>1.19</td>
<td>1.13</td>
<td>0.94</td>
<td>0.72</td>
<td>1.03</td>
<td>1.03</td>
</tr>
<tr>
<td>instant liquidity</td>
<td>2010</td>
<td>0.53</td>
<td>0.52</td>
<td>0.55</td>
<td>0.52</td>
<td>0.43</td>
<td>0.42</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>0.53</td>
<td>0.6</td>
<td>0.52</td>
<td>0.51</td>
<td>0.44</td>
<td>0.45</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>2008</td>
<td>0.51</td>
<td>0.54</td>
<td>0.51</td>
<td>0.49</td>
<td>0.44</td>
<td>0.54</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>0.53</td>
<td>0.58</td>
<td>0.56</td>
<td>0.5</td>
<td>0.44</td>
<td>0.52</td>
<td>0.58</td>
</tr>
<tr>
<td>solvency</td>
<td>2010</td>
<td>1.4</td>
<td>1.29</td>
<td>1.64</td>
<td>1.49</td>
<td>1.52</td>
<td>1.4</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>1.35</td>
<td>1.54</td>
<td>1.68</td>
<td>1.4</td>
<td>1.85</td>
<td>1.57</td>
<td>1.51</td>
</tr>
<tr>
<td></td>
<td>2008</td>
<td>1.38</td>
<td>1.63</td>
<td>1.91</td>
<td>1.41</td>
<td>1.9</td>
<td>1.56</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1.41</td>
<td>1.77</td>
<td>2.08</td>
<td>1.46</td>
<td>1.23</td>
<td>1.7</td>
<td>1.86</td>
</tr>
</tbody>
</table>

Source: The authors’ calculation

### 2.2.1. Financial stability

The observation period shows a declining trend in the financial stability ratio (long-term financial balance) in most companies in Vojvodina. More precisely, companies operating in five regions of Vojvodina met the conditions for long-term financial balance in 2007, whereas in 2010 this condition was met only by companies in the South Bačka and Srem Districts. The companies in these two regions even showed improvement in the financial stability over the observation period, as the ratio has kept dropping from year to year. The best financial stability over the entire period is recorded by companies of the South Bačka District, with a constant stability ratio below 1. Companies on the territory of the Srem District are characterised by being the only ones to manage to move from financial instability to liquidity status during the observation period. On the other hand, the companies of the North Banat District record constant illiquidity, as the long-term engaged assets are financed partly from long-term, and partly from short-term sources of funding. Funding from short-term sources compromises liquidity, as short-term liabilities will become due before the long-term engaged assets are mobilised (Vuković & Mijić, 2010, p. 48). The long-term financial balance of companies distributed by the regions of Vojvodina is presented in Figure 5.
2.2.2. Liquidity

The overall and instant liquidity in all enterprises in Vojvodina during the observation period were significantly below the reference value, which points to problems with the companies’ liquidity. Liquidity is most compromised in companies of the North Banat District, as the overall liquidity at the regional level in the period 2007-2010 was constantly below 1, whereas the instant liquidity ratio had the values of 0.44 and 0.43 in 2010.

2.2.3. Solvency

Although all companies in Vojvodina showed a decline in liquidity compared to 2007, they still meet the solvency criterion. As the solvency criterion in 2010 was above 1, it means that companies in all the regions in Vojvodina are capable of paying their long-term liabilities out of their business assets. The highest solvency levels during the observation period were found in companies in South Bačka District, whose assets for debt coverage amounted to twice as much as the amount of total debt in 2007. The lowest solvency levels in 2010 were present in companies in the West Bačka District, whose assets were negligibly higher than the debt levels.
The results of the comparative analysis of the financial status of regions in the AP Vojvodina in 2010 show that stable financial status was present in the companies in the South Bačka and Srem Districts, in terms of solvency and financial stability maintenance. The graph below presents a comparative overview of the companies’ financial status indicators in 2010 distributed across the regions of Vojvodina.
Conclusion

The territory of AP Vojvodina saw a noticeable growth in companies’ economic activity in the period 2007-2010. The growth in the number of operating companies increased by 23.88% compared to 2007. The growth in the number of companies is accompanied by a growth in the volume of business operation. Companies in all the regions of Vojvodina have recorded a growth in revenue as a measure of the volume of regular operations. In 2010, the companies’ overall revenue was 26.94% higher than the revenue earned in 2007.

On the other hand, despite the positive effects of the growth in the corporate economic activities on the entire territory of the Province, it cannot be stated that instances of business performance of individual companies have contributed equally to the Province’s development. Viewing the business performance across the regions of Vojvodina, it can be inferred that the development of individual regions is disproportionate, resulting in notable differences in their contribution to the development of the province. Analysing the indicators of business success and financial status of companies across regions, companies on the territory of the South Bačka and Srem Districts evidently make a positive contribution to the development of Vojvodina. On the other hand, poor business performance of companies in other regions, notably on the territory of Banat, negatively influences the Province’s economic growth.

Unequal economic activities of companies classified by the regions of the AP Vojvodina can result in increasing the differences between the regions in terms of social and economic development, and quality of life. In order to secure the development of the Province as a whole, it is necessary to create an appropriate regional development strategy and policies, which should aim at strengthening the underdeveloped areas and reducing the gap between the levels of development of individual regions. Advancing industrial branches with new technologies, enhancing inter-regional cooperation and the development of economic entities and conditions for raising employment rates could feature as some of the avenues on which the development and strategy of the AP Vojvodina could be based.

References


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Manuscript Requirements

A paper must be written in text processor Microsoft Word. Paper size: A4. Margins: 3.0 cm on top and bottom, and 2.5 cm on left and right sides. As a guide, articles should be no more than 5,000 words in length. In case the paper exceeds the normal length, the Editors' consent for its publication is needed. Articles submitted for publication in Journal should include the research aim and tasks, with detailed methodology, presenting literature overview on the research object, substantiation of the achieved results and findings, conclusions and a list of references. Manuscripts should be arranged in the following order of presentation.

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All tables, graphs and diagrams are expected to back your research findings. They should be clearly referred to and numbered consecutively in Arabic numerals. They should be placed in the text at the appropriate paragraph (just after its reference).

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Journals paginated by volume begin with page 1 in issue 1, and continue page numbering in issue 2 where issue 1 ended, e.g.

_SECURE JOURNAL ARTICLE, TWO AUTHORS, PAGINATED BY ISSUE

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_SECURE JOURNAL ARTICLE, THREE TO SIX AUTHORS, PAGINATED BY ISSUE

_SECURE JOURNAL ARTICLE, THREE TO SIX AUTHORS, PAGINATED BY VOLUME

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_SECURE MAGAZINE ARTICLE

_SECURE NEWSLETTER ARTICLE WITH AUTHOR

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Book, two authors


Book, three to six authors


Book, more than six authors


Book, no author or editor


Group, corporate, or government author


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According to Mirković (2001), “The use of data warehouses may be limited, especially if they contain confidential data” (p. 201).
Mirković (2001), found that “the use of data warehouses may be limited” (p. 201). What unexpected impact does this have on the range of availability?

If the author is not named in the introductory phrase, the author’s last name, publication year, and the page number in parentheses must be placed at the end of the quotation, e.g.

He stated, “The use of data warehouses may be limited,” but he did not fully explain the possible impact (Mirković, 2001, p. 201).

**Summary or paraphrase**

According to Mirković (1991), limitations on the use of databases can be external and software-based, or temporary and even discretion-based. (p.201)

Limitations on the use of databases can be external and software-based, or temporary and even discretion-based (Mirković, 1991, p. 201).

**One author**

Boškov (2005) compared the access range…

In an early study of access range (Boškov, 2005), it was found...

**When there are two authors**, both names are always cited:

Another study (Mirković & Boškov, 2006) concluded that…

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(Jovanov, Boškov, Perić, Boškov, & Strakić, 2004).

In subsequent citations, only the first author’s name is used, followed by “et al.” in the introductory phrase or in parentheses:

According to Jovanov et al. (2004), further occurrences of the phenomenon tend to receive a much wider media coverage.

Further occurrences of the phenomenon tend to receive a much wider media coverage (Jovanov et al., 2004).

In “et al.”, “et” is not followed by a full stop.

**Six or more authors**

The first author’s last name followed by "et al." is used in the introductory phrase or in parentheses:

Yossarian et al. (2004) argued that…

… not relevant (Yossarian et al., 2001).
Unknown author

If the work does not have an author, the source is cited by its title in the introductory phrase, or the first 1-2 words are placed in the parentheses. Book and report titles must be italicized or underlined, while titles of articles and chapters are placed in quotation marks:

A similar survey was conducted on a number of organizations employing database managers ("Limiting database access", 2005).

If work (such as a newspaper editorial) has no author, the first few words of the title are cited, followed by the year:

(“The Objectives of Access Delegation,” 2007)

Note: In the rare cases when the word "Anonymous" is used for the author, it is treated as the author's name (Anonymous, 2008). The name Anonymous must then be used as the author in the reference list.

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If the author is an organization or a government agency, the organization must be mentioned in the introductory phrase or in the parenthetical citation the first time the source is cited:

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The overview is limited to towns with 10,000 inhabitants and up (Statistical Office of the Republic of Serbia [SORS], 1978).

The list does not include schools that were listed as closed down in the previous statistical overview (SORS, 1978).

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(Bezjak, 1999, 2002)

When several used works by the same author were published in the same year, they must be cited adding a, b, c, and so on, to the publication date:

(Griffith, 2002a, 2002b, 2004)

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Two or more works by the same author in the same year

If two or more sources used in the submission were published by the same author in the same year, the entries in the reference list must be ordered using lower-case letters (a, b, c…) with the year. Lower-case letters will also be used with the year in the in-text citation as well:

Survey results published in Theissen (2004a) show that…
To **credit an author for discovering a work**, when you have not read the original:

Bergson’s research (as cited in Mirković & Boškov, 2006)...

Here, Mirković & Boškov (2006) will appear in the reference list, while Bergson will not.

When citing **more than one author**, the authors must be listed alphabetically:

(Britten, 2001; Sturlasson, 2002; Wasserwandt, 1997)

When there is **no publication date**:

(Hessenberg, n.d.)

**Page numbers must always be given for quotations:**

(Mirković & Boškov, 2006, p.12)

Mirković & Boškov (2006, p. 12) propose the approach by which “the initial viewpoint…

**Referring to a specific part of a work:**

(Theissen, 2004a, chap. 3)

(Keaton, 1997, pp. 85-94)

**Personal communications, including interviews, letters, memos, e-mails, and telephone conversations**, are cited as below. (These are *not* included in the reference list.)

(K. Ljubojević, personal communication, May 5, 2008).

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