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There are scholars whose ideas leave a long-term imprint on the development of Bulgarian economic thought. One of them is Professor Atanas Leonidov. The 80th anniversary of the renowned economist is an occasion to review his rich work and his contribution to the development of economic science.

A. Leonidov was born on 16.03.1934 in the village of Golyamo Belovo.

He studied his higher-education course in HIE “Karl Marx” (today UNWE). In 1959 he graduated his major in “Planning people’s industry”. Between 1962 and 1965 he studied a PhD course in HIE “Karl Marx” where he successfully completed his dissertation paper “Foreign financial obligations of Bulgaria and their reflection on its economy between the two world wars (1918-1939 г.)”. In 1965 he was hired as a researcher in the Institute of planning as part of the State committee of planning. In 1968 he started work in the Institute of economics of BAS, where he worked until his retirement in 2004. He defended his PhD thesis for acquiring the scientific degree “Doctor of economic sciences” in 1991. Its topic was “Economic views of contemporary conservatism”. From 1992 he worked as a senior researcher first degree in the Institute of economics.

The professional experience of prof. Leonidov is closely associated with the Institute of economics (today Institute for economic research) of the Bulgarian academy of science. There he was a long-term researcher in the section “International economics” and member of the Scientific council of the Institute. The number of his publications goes beyond 100, including ten treatises and participation in treatises, papers, about 50 scientific articles in respectable national and foreign editions and others. Professor Leonidov has knowledge of written and spoken French, English and Russian, as well as written German. He has publications in Russian, Czech, German and English. He took part in tens of conferences in Bulgaria and abroad, in some of them he was a plenary speaker.

Prof. Leonidov’s development in science is characterized by consistency and purposefulness. His scientific interests are focused on problems in world economy, economic theory and history of economic thought. There for a number of years he has been indisputably recognized and respected.

A. Leonidov is an excellent expert in world economy and studies of eco-nomic processes. He has kept his interest in those till this moment. The orientation of the research work of the famous economist in this field concerns two scientific specializations: between September 1969 and July 1970 he specialized in the Economic commission of OUN in Geneva (Switzerland), and in 1981-1983 he specialized in the Institute of world economy and international relations (IWEIR) in Moscow. Until 1990

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1 This is how the section is called today. In the course of time its name has been changed.
and after, he made analyses of the economies of leading countries in the world – USA, France, FRG. The focus of his scientific interest was on the models of development of the Western countries mentioned above, the role of the market and regulation, the current condition and problems of market economies.


As early as the initial stage of his professional development and progress prof. Leonidov formed a particular attitude and preference to work with the History of economic thought (HET), historical interpretation of theoretical issues, main schools and representatives of theoretical economic thought. One of his earliest publications in this thematic field is the article “Foreign competition and economic development: the theory of P. Kuerbis about open economy” (magazine “A bourgeois theory about international economic integration” (chapter from a book, 1981) and the article “Unorthodox Keynesianism” (magazine MEMO, issue 4 1983). Undoubtedly, the treatise “Neo-conservatism and bourgeois political economy” is the highest point of his efforts in this field and in the period until 1990. The book deals with revealing the complex and contradictory tendencies of the evolution of Western economic thoughts in conditions of the crisis of reformism and Keynesianism and a turn to neo-conservatism. The author analyses the essence and content of the then new variations of economic neo-conservatism (monetarism, the new classic school, the theory of economy of supply, the new views of the representatives of the Austrian school). The manifestations of the reviving neo-conservatism are viewed through a comparative analysis of the ideas of Keynesian followers and in a close link with the practice of state regulations and “Raegan economy” in USA in particular. Prof. Leonidov’s treatise “Neo-conservatism and bourgeois political economy” is an indisputable contribution to the development of Bulgarian economic thought. The book is written with exceptional erudition and depth. It makes an impression with the great number of authentic foreign sources on which the research is based in the publication mentioned above. In a time when social sciences in Bulgaria addressed various types of restrictions, including access to Western literature, prof. Leonidov’s book gave an example of how one can and has to carry out serious and diligent scientific research. The treatise affirms A. Leonidov as a recognized authority in the field of economic theory and HET.

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2 It should be noted that here there is no complete list of all publications of prof. A. Leonidov concerning the scientific issue mentioned. Only certain publications are listed as examples. A similar approach will be applied in analyzing A. Leonidov’s work further.


4 Under this name President’s Raegan economic policy grew famous.
After 1990 prof. Leonidov enlarged his scientific work in the field of History of economic thought. There followed publications about A. Marshal, J. Shumpeter and J. M. Keynes. He was one of the scientific editors of the Bulgarian translation of the famous M. Blaug’s book “Great economists after Keynes” (1998), which is a precious gift for the Bulgarian readers. He kept on making his theoretical analyses of particular issues in the field of HET as revealed in the following publications: “Western theoretical views about balance of payment and currency exchange rates” (1991), “German neoliberalism” (1995), “New tendencies in General economic theory” (2006) and others. A. Leonidov’s contribution to the development of HET in Bulgaria is sizable and acknowledged by everyone, while his publications in this sphere are an example of deep and original viewpoint on the issues, in which the analysis of particular famous economists or scientific schools is combined with clearly expressed author’s assessment and conclusions.

The processes of transformation in Bulgarian economy after 1990 left their imprint on prof. Leonidov’s scientific work. Together with his long-lasting interest in the two problematic fields mentioned above – world economy and HET, the famous economist shifted his attention to two more significant scientific problems: the issues in the period of transition from planning to market and the topic about economic growth.

A characteristic feature of prof. Leonidov’s research work on the issues of transition from planned to market economy is their theoretical approach. The best examples in this respect are the publications “The Bulgarian Model of Transition to a Market Economy: Stabilization and Structural Aspects” (1994), “Towards economic theory of transformation” (1999) and “The process of transformation: basic aspects and elements” (1999). In searching for orientation for the ongoing transformation processes in Bulgarian society prof. Leonidov focused his attention on the German model of social market economy. A number of his publications at that time help Bulgarian scientific thought and the proponents of economic policy to get familiar much better with the theory and practice of the German model of economy. Alongside, in the focus of prof. Leonidov’s scientific interest there also come the issues of structural adaptation of Bulgarian economy, both in relation to the ongoing transition from planned to market economy, and later in relation to associating Bulgaria to the European union (the key work here is the collective monograph “Associating Bulgaria to EU: structural adaptation of national economy” (1995), in which A. Leonidov is one of the authors and scientific editor.

A very significant trend of prof. Leonidov’s professional interest, which refers to his latest economic research work, is the group of issues of economic growth. In fact, his interest in this topic is not new – one of his first publications in 1976 deals with the problem - “The policy of economic growth in developed capitalist countries – theory

5 Alfred Marshal i savremennostta (1990); Y. Shumpeter i vazrazhdaneto na negovite idei (1993); Za nov prochit na Keyns (1991); Keyns i keynsianstvoto (2010).
and practice”. After 1990 this interest went deeper and today it is a central focus of prof. Leonidov’s research work. With it the famous scientists shows again his characteristic feature to work on the most relevant and significant problems – at the moment the issues of economic growth are right in the centre of the dominant modern economic theory, as well as of modern politics. Prof. Leonidov’s studies on the issues of economic growth are characterized by comprehensiveness: the scientist deals with the theory, empirics and policy of growth. The theory of growth takes an important place in prof. Leonidov’s analyses of economic growth. The theoretical summaries in his work in respect to the active issue of “economic growth” in the history of economic thought encompasses the evolution of ideas from classic political economy to the endogenous theory of growth (see “Theory of economic growth from A. Smith to P. Romer (2002), part 1 and 2). The emphasis on studying the theory of growth is definitely on the endogenous theories. A. Leonidov is the first in Bulgarian economic thought who, in a number of papers presents a thorough and competent review of the endogenous theory of growth as one of the new theoretical trends in this field. There he reviews the prerequisites for the origin of the endogenous theory of growth, outlines its general features and differences in comparison with the neoclassical theory (the model of Solow) and the neo-Keynesian theories of growth, analytically presents the model of P. Romer and makes various conclusions which result from the endogenous theory in respect to economic policy.

In prof. Leonidov’s scientific work the evolution of views in the field of theories of growth is closely associated with the empirics of economic growth. He studies and analyses carefully the changes in the long-term tendencies of development of market economies, as well as the factors that determine those tendencies (publications like “Economic growth of industrially developed countries: new features and long-term dynamics of micro-indicators” (1993), “New tendencies of the economic growth in USA and EU: a comparative analysis” (2004), “Information revolution, globalization and economic growth” (2001) and others. This interest and the deep study of economic growth establish prof. Leonidov as one of the leading macro-economists in Bulgaria in the years after 1990.

A. Leonidov is a scientist with rich scientific work, indisputable and numerous contributions to Bulgarian science. He deserves the respect professionals cherish for him. In the course of years his competence and scientific achievement were given recognition under various forms. Between 1995 and 1997 Leonidov was Chairman of the Scientific commission on economic issues at SAC (Supreme attestation commission). Then, for a number of years he was Chairman of SSC (Specialized scientific committee) on economic theory and macroeconomics at SAC. He is a member of the editorial board of a number of editions, as well as the editor-in-chief of the “Economic thought” magazine between 1993 and 1995.

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8 See: Endogennata teoriya na rstezha i osnovnite ikonomicheski shkoli (2006); Endogennata teoriya na ikonomicheskiya rastezh: chast 1 i 2 (2006).
In his prolific lifetime prof. Leonidov participated also in preparing PhD postgraduates. His influence on establishing a big number of young economists, who are already established and famous Bulgarian scientists today, is much stronger and a result of his work in the system of SAC, of his close relations with academic circles and his long-term activity in the Institute of economics at BAS (Bulgarian academy of science) – a centre for preparing qualified staff for Bulgarian science. Currently prof. Leonidov continues his activity as a member of the Council of the Centre for economic theories and economic policies (established in 2012) as part of the Faculty of economics in SU “Kliment Ohridsky”.

The name of prof. A. Leonidov is well known in the University of Economics – Varna. In the last two decades he has been a regular guest and active participant in the conferences organized by UE. His publications are known, read and quoted by the university academic staff. Especially close are prof. Leonidov’s relations with the department of ‘General economic theory”. The renowned economist takes part in scientific forums and discussions organized by the department, he writes reviews at competitions for awarding academic titles to members of the department and others and he is widely respected.

In conclusion, I couldn’t help sharing my personal impressions from prof. Leonidov. I have known him for a long time. In the course of ten years he and I were members of the SSC on economic theories and macroeconomics at SAC (2001-2010). I know quite well his publications because I think that he is one of those economists whose every single paper is worth reading. He was the reviewer at habilitation competitions and I am most grateful to him for this. We have had many discussions on scientific issues that impressed me for his erudition, professional awareness, broad outlook and objectivity. My great respect for prof. Leonidov is due to his competence and indisputable contribution to science, as well as his ethics, attitude of a colleague and goodwill. I consider my personal acquaintance with prof. Leonidov a great privilege.

Last, I would allow myself on my behalf and on behalf of the whole academic staff of UE-Varna to congratulate prof. Leonidov for his 80th anniversary and wholeheartedly wish him many years to come with health and creative longevity, so that he can manage to put the projects he works on now into practice!
ARTICLES

Econ Lit – L81

ESSENTIAL CHANGES AND ISSUES OF THE DEVELOPMENT OF TRADE IN BULGARIA IN THE YEARS OF TRANSITION

Prof. Nikolinka Salova, PhD

Introduction

During the years of transition to market economy in this country after 1989, a rapid development of trade has been accomplished and above all of private trade, thanks to the privatization, restitution and private enterprise. There has been, first and foremost, a fast, high rate increase in the number of retailers and commercial outlets and also in the number of persons employed in trade, although the realized goods retail turnover has fallen in terms of comparable prices.

The aim of the present article is to study the major changes and issues in the development of trade in Bulgaria in the years of transition.

In present-day conditions the role of trade has increased as an important branch of the economy and an important stage of the reproduction process connecting production and distribution with consumption, as an important function of all economic structures, extremely closely connected with the financial and credit system and the circulation of money, with the personal consumption of the population. In the structure of gross added value for the country, services (incl. trade) amount to 64% in 2013, whereas they were under 10% years ago.

1. Major changes in the development of trade

The major changes in the development of trade are connected mainly with the fast quantitative increase of the resources in it – tangible fixed assets (TFA), employed persons, number of retail outlets (Table 1 and 2).

Investments in TFA and acquired TFA for the country grew both absolutely (until 2009) and relatively, and from about 14% in 2000 they reached 21-24% in 2008 - 2011, but in 2013 they decreased. That is a big increase of this major resource connected with the equipment and facilities (EF), with the furnishing and the equipment of the outlets, with the machinery and the installations in trade. A principal expression of the growth of TFA is the increase in the number of outlets for retail sale to the population.
The number of the retail outlets increased from 41,723 in 1990 to 133,475 (including 130,102 stores) in 2010 or a 3.2-fold increase, including a 3.8-fold increase of stores; however, there was a decrease in 2012. Such accelerated quantitative increase of commercial outlets has never existed in other periods. In the period 2000-2012, from the total number of stores those for foodstuffs fell from 47 to 38%, whereas those for non-food products increased from 53 to 62%. Mainly the large and medium-sized outlets with the established big commercial chains and small luxurious boutique shops on the main and busy streets of big cities will continue to develop and to be competitive.

### Table 1

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2000</th>
<th>2005</th>
<th>2010</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Investments in TFA – total in mln BGN including trade and repairs – mln BGN</td>
<td>5409.4</td>
<td>13262.5</td>
<td>16218.3</td>
<td>17397.3</td>
</tr>
<tr>
<td></td>
<td>778.4</td>
<td>1888.4</td>
<td>3887.2</td>
<td>3214.0</td>
</tr>
<tr>
<td>%</td>
<td>14.3</td>
<td>14.2</td>
<td>24.0</td>
<td>18.5</td>
</tr>
<tr>
<td>2. Acquired TFA – total in million BGN including trade and repairs – mln BGN</td>
<td>4684.3</td>
<td>11388.2</td>
<td>15552.6</td>
<td>13780.1</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>1650.9</td>
<td>3287.1</td>
<td>2599.5</td>
</tr>
<tr>
<td>%</td>
<td>14.5</td>
<td>21.1</td>
<td>18.9</td>
<td></td>
</tr>
<tr>
<td>3. Persons employed in economic activities – total in thou including trade and repairs – thou</td>
<td>3239.2</td>
<td>3495.3</td>
<td>3550.7</td>
<td>2934.9</td>
</tr>
<tr>
<td></td>
<td>383.9</td>
<td>479.8</td>
<td>548.9</td>
<td>.</td>
</tr>
<tr>
<td>%</td>
<td>11.9</td>
<td>13.7</td>
<td>15.5</td>
<td></td>
</tr>
</tbody>
</table>

The number of persons employed in trade also grows and was 549 thousand in 2010, which is almost 16% of the total number of the employed persons in the country (3,551 thousand), whereas it was 12% in 2000.

There is an overall improvement in the management of business activities, particularly in the big retail chains and outlets caused by the entry of global retail chains in this country and the increased competition.

The big increase in the number of commercial outlets in this country during the years of transition to market economy is not in accordance with the trends in their development in Western Europe. In the countries of Western Europe during the past twenty years or more every year there has been a decrease in the number of commercial outlets, but at the same time there has been an overall increase in the size in sq m of the commercial area and respectively an increase in the average commercial area per outlet. This is the result of an accelerated and lasting process of consolidation and concentration in the sales network, mainly large stores and shopping centres and complexes have been built. This process is clearly expressed also in the USA.

In Bulgaria until now there has been in effect the reverse process – the number of outlets is on the rise, but the average area of an outlet is preserved, since there are predominantly small outlets. This process of downsizing and deconcentration in the commercial network in this country is temporary and transitional. It has allowed many retailers with comparatively small businesses to trade, but as the data for 2012 shows, the number of outlets decreased for the first time that year.

Trade in this country is a good and relatively accessible area for entrepreneurship, since the commercial areas per 1000 inhabitants and the number of persons employed in trade per 10,000 inhabitants are lower than those in the countries of Western Europe. That is to say trade and the sales network in this country are still insufficiently developed.

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It is not by chance that about 80-90% of the companies are involved in retailing. The saturation with retail outlets is insufficient, although their number is rising and competition is getting stronger. It is possible to start commercial activities with less capital, it has quicker turnover, the risk taken is comparatively more acceptable and therefore trade is the broadest field for private enterprise in this country. But the main future trend has already been clearly outlined: the building of large commercial outlets, complexes and shopping centres and consolidation of the commercial network, as it is in the more economically developed countries. With the advent of foreign investors in this country this process has manifested itself more notably.

Against the background of the 3.8-fold increase in the number of stores in this country after 1990, then, including stores in the private sector, they have increased over 32 times even before 1999 and their relative share has increased from 10% to 97% (see Table 3). In other words the process of privatization in the retail trade network is completed. The outlets of the cooperative sector, being private collective property, are also included in the number of private sector outlets. There are very few remaining stores that are still municipal property (about 3%).

**Table 3**

<table>
<thead>
<tr>
<th>Kinds of outlets</th>
<th>1990</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total number</td>
<td>Incl. the private sector</td>
</tr>
<tr>
<td></td>
<td>number</td>
<td>rel. share in%</td>
</tr>
<tr>
<td>Stores</td>
<td>30,423</td>
<td>2,950</td>
</tr>
<tr>
<td>1. food</td>
<td>15,097</td>
<td>497</td>
</tr>
<tr>
<td>2. non-food</td>
<td>15,206</td>
<td>778</td>
</tr>
<tr>
<td>3. mixed</td>
<td>4,120</td>
<td>62</td>
</tr>
<tr>
<td>. Kiosks, canteens, pavilions</td>
<td>7,300</td>
<td>1,613</td>
</tr>
<tr>
<td>. Petrol stations</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

The development of trade and the structure of the retail trade network is also affected by the structure of sales (see Table 4).

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The data from Table 4 indicates that sales of foodstuffs represent a big share of the total volume of retail sales (between 33 and 47%) in the years of transition, which is an indication of a low standard of living, inadequate real income and insufficient consumption. In the same line is also the data on the structure of the gross income of households by groups of expenses. In the total expenses of households, the expenses on food in 1995 represent 46%, in 1997 – 54%, in 2000 – 44%, 2010 – 37.2, 2013 – 33.2%.

The high relative share of the expenses on food and the sales of foodstuffs is not connected with better and healthier eating. On the contrary, over the years of transition to market economy, the consumption of the main foodstuffs per person has got worse.

The development of trade depends in the utmost degree on the development of sales. 

Turnover in trade (Tables 5 and 6) has grown fast and its structure has changed. As has become clear, turnover from the sale of non-food products has grown faster than turnover from foodstuffs. It has also become clear that wholesale trade takes up a very high share in the total turnover.

---

**Table 4**

Structure of retail sales in Bulgaria in percentages in prices of the respective year

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>1000</td>
<td>100</td>
</tr>
<tr>
<td>1. foodstuffs</td>
<td>37.0</td>
<td>47.3</td>
<td>39.0</td>
<td>35.4</td>
<td>32.5</td>
<td>33.6</td>
<td>33.3</td>
<td>33.8</td>
</tr>
<tr>
<td>2. non-food</td>
<td>63.0</td>
<td>52.7</td>
<td>61.0</td>
<td>64.6</td>
<td>67.5</td>
<td>66.4</td>
<td>66.7</td>
<td>66.2</td>
</tr>
</tbody>
</table>


UNESCO regards it as a sign of poverty if the expenses on food are over 40 % of the total expenses of households, whereas in countries of the European Union these expenses represent 15-20%.
Turnover in trade in Bulgaria\(^6\)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2000</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector trade – totals, including:</td>
<td>22,617</td>
<td>89,373</td>
<td>76,772</td>
<td>80,625</td>
<td>88,941</td>
<td>94,530</td>
<td>98,593</td>
</tr>
<tr>
<td>1. Wholesale trade, incl. commercial brokerage</td>
<td>16,741</td>
<td>60,153</td>
<td>52,295</td>
<td>57,211</td>
<td>64,024</td>
<td>67,631</td>
<td>71,215</td>
</tr>
<tr>
<td>2. Trade in cars, spare parts, combustibles and lubricants</td>
<td>2,537</td>
<td>7,830</td>
<td>4,880</td>
<td>4,503</td>
<td>4,902</td>
<td>5,192</td>
<td>4,961</td>
</tr>
<tr>
<td>3. Retail trade and repairs of personal effects and household goods</td>
<td>3,339</td>
<td>21,390</td>
<td>19,597</td>
<td>18,911</td>
<td>20,015</td>
<td>21,707</td>
<td>22,417</td>
</tr>
</tbody>
</table>

Structure of trade turnover in Bulgaria\(^7\)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2000</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector trade – totals, including:</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1. Wholesale trade, incl. commercial brokerage</td>
<td>74.0</td>
<td>67.3</td>
<td>68.1</td>
<td>71.0</td>
<td>72.0</td>
<td>71.5</td>
<td>72.2</td>
</tr>
<tr>
<td>2. Trade in cars, spare parts, combustibles and lubricants</td>
<td>11.2</td>
<td>8.8</td>
<td>6.4</td>
<td>5.6</td>
<td>5.5</td>
<td>5.5</td>
<td>5.0</td>
</tr>
<tr>
<td>3. Retail trade and repairs of personal effects and household goods</td>
<td>14.8</td>
<td>23.9</td>
<td>25.5</td>
<td>23.4</td>
<td>22.5</td>
<td>23.0</td>
<td>22.8</td>
</tr>
</tbody>
</table>

Wholesale trade in 2000 represented 74% of the total turnover and in the past 6 years until 2013 it fluctuated around 71-72%. Retail trade increased its share in the total turnover of trade from 14.8% in 2000 to 23% in 2010-2013. Trade in cars and motorcycles, technical equipment and repairs reduced appreciably its share in the


\(^7\) Statistical yearbook 2009, p. 359.
total turnover – from 11.2% in 2000 to 5% in 2013. The changes in the structure of turnover indicate that the turnover in retail trade is increasing with more accelerated rates and the turnover from trade in cars, spare parts, combustibles and lubricants is decreasing, but that’s against the background of the high share of wholesale trade.

If the income and expenditure in sector trade and repairs and its constitutive activities are compared, an estimate can be made to a considerable degree on the economic efficiency of these activities (Table 7 and 8).

The data from Table 7 shows that during the period 2005-2012 revenues from commercial activities annually grew between 17 and 19% until 2008, in 2009 they decreased and after that until 2012 they grew again by 6 – 10%. At the same time the costs of the activity during the period 2005 – 2008 grew between 15 and 19%, in 2009 they decreased and after that until 2012 they grew by 6-10%. The efficiency as the ratio of income and expenditure (in%) fluctuated from 2000 until 2012 from BGN 102 to 105 revenues over BGN 100 expenditures. There are fluctuations, though not big, the highest efficiency occurring before the transition (1989) and in the first year of the transition (1990).

Table 7

Main economic outputs in sector trade and repairs

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating income</th>
<th>Operating costs</th>
<th>Efficiency – income per 100 BGN costs in BGN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in mln BGN</td>
<td>Chain indexes</td>
<td>in mln BGN</td>
</tr>
<tr>
<td>1989</td>
<td>1,504</td>
<td></td>
<td>1,379</td>
</tr>
<tr>
<td>1990</td>
<td>1,668</td>
<td>110.9</td>
<td>1,525</td>
</tr>
<tr>
<td>2000</td>
<td>26,813</td>
<td>137.7</td>
<td>26,289</td>
</tr>
<tr>
<td>2005</td>
<td>54,888</td>
<td>120.2</td>
<td>53,288</td>
</tr>
<tr>
<td>2006</td>
<td>65,532</td>
<td>119.4</td>
<td>63,173</td>
</tr>
<tr>
<td>2007</td>
<td>76,600</td>
<td>116.9</td>
<td>72,864</td>
</tr>
<tr>
<td>2008</td>
<td>91,118</td>
<td>118.9</td>
<td>86,863</td>
</tr>
<tr>
<td>2009</td>
<td>77,602</td>
<td>85.2</td>
<td>75,892</td>
</tr>
<tr>
<td>2010</td>
<td>82,674</td>
<td>10.5</td>
<td>81,025</td>
</tr>
<tr>
<td>2011</td>
<td>90,957</td>
<td>110.0</td>
<td>89,319</td>
</tr>
<tr>
<td>2012</td>
<td>96,625</td>
<td>106.2</td>
<td>94,391</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>52,388</td>
<td>52,285</td>
<td>51,118</td>
<td>91,463</td>
<td>88,520</td>
<td>87,674</td>
<td>91,105</td>
<td>10,937</td>
<td>99,319</td>
<td>95,635</td>
<td>95,391</td>
</tr>
<tr>
<td>1. Wholesale, trade, incl. commercial brokerage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>101.0</td>
</tr>
<tr>
<td>2. Trade in cars, parts, combustible and lubricants</td>
<td>6,755</td>
<td>6,174</td>
<td>7,905</td>
<td>7,502</td>
<td>4,616</td>
<td>5,105</td>
<td>5,980</td>
<td>5,371</td>
<td>5,218</td>
<td>101.3</td>
<td>106.6</td>
</tr>
<tr>
<td>3. Retail trade and repairs of personal effects and household goods</td>
<td>8,534</td>
<td>8,223</td>
<td>22,182</td>
<td>21,224</td>
<td>19,664</td>
<td>19,294</td>
<td>20,563</td>
<td>20,667</td>
<td>21,140</td>
<td>22,058</td>
<td>100.8</td>
</tr>
</tbody>
</table>

The data from Table 8 shows the development of income, costs and efficiency in the three major constitutive activities of sector trade and repairs – wholesale trade, trade in cars, parts and fuels and retail trade. Until 2008 inclusive trade in cars was most profitable, followed by retail trade and finally - wholesale trade. After that the first place in terms of efficiency was occupied by wholesale trade – in 2010, 2011 and 2012. The efficiency of trade in cars and retail trade considerably decreased in 2010, and in 2011 with regard to retail trade there was no positive efficiency and costs exceeded income, and in 2011 for the entire sector trade and repairs the efficiency was the lowest. In 2012 wholesale trade was the most profitable.

Consequently, after 2008, as a result of the crisis, the efficiency in the entire sector trade and repairs has decreased considerably and continued also in 2012 to be lower than that of 2008, especially more noticeably so in retail trade. That is also the result of the lowered purchasing power of the population from the retention and reduction of the incomes of households - retention or slight rise of the salaries of persons employed, increase in the rate of unemployment, the retention of pensions.

With wholesale trade in 2005-2008, efficiency was under the average for the sector, whereas in 2010-2012 it was efficiency above the average. Here the absolute amounts of income and costs are the greatest and every per cent of efficiency includes a big volume of income. What is more, both in the income and in the costs the purchase value (book value) of the goods sold is included.

2. Main issues of the development of trade

The main issues in the development of trade in Bulgaria can be summarized mainly in the following aspects:

**Firstly**. Against the background of the big quantitative increase in resources and outlets there was strong downsizing and deconcentration of the retail outlets, especially in the first decade of the transition. Many small minimarkets and other small shops were opened. While in 1990 the average commercial area of one shop was 60 sq m, which was insufficient, in 2000 it dropped under 30 sq m, which was extremely irrational. In the second decade of the transition a process of concentration began with more accelerated development of supermarkets, hypermarkets, malls, which brought about a qualitative change in the equipment and facilities of trade and resulted in the bankruptcy and reduction in the number of part of the small inexpedient outlets.

The outward appearance of the outlets has been improved with more beautiful and more attractive facades, window displays, company signs, illumination which would distinguish them from the neighbouring buildings and attract the eye and the attention of people.

The internal design of the outlets is still being modernized – comfortable atmosphere through more air, light, attractive colours, lighting, equipment; shining, beautifully arranged goods, excellent hygiene, friendly, highly-cultured employees of high vocational training, modern equipment and technology, fast and polite service, which creates satisfaction and sets the mood with buyers and visitors. The electronification and bar-coding of the goods will generally accompany the business
activities, the application of advanced forms of trade, the development of a number of non-store forms of trade and particularly e-commerce, etc.

The number of the persons employed in trade will continue to grow, along with the growth in commercial areas, since our country lags in terms of commercial areas per 1,000 inhabitants and commercial workers per 10,000 inhabitants in comparison with the advanced countries. The requirements towards the equipment, the qualification and efficiency of commercial workers will grow. The general requirements of buyers and visitors for the quality of commercial service will grow rapidly. The increasing competition will press managers in trade to make continuous improvements.

**Secondly**. The accelerated entry in this country of foreign retail chains. This has had a favourable effect upon the modernization and raising the quality of commercial activities in this country – new formats, good technologies, great variety of goods, enhancing the service quality. However, the profits of the foreign chains are mainly exported abroad to the mother company and are used abroad, while at the same time many small outlets in this country go bankrupt under the influence of the nearby erected new large outlets. The preliminary requirements to foreign chains may be reconsidered in a better way so that they invest here a large part of the profits obtained in this country. Along with that, the big retail chains exert strong pressure and dictatorship on Bulgarian producers of consumer goods for low prices of supplies and the payment of a number of fees and thus seize part of the potential profit or restructure the profit between producers, wholesalers and retailers.

**Thirdly**. The national capital in trade is small and fragmented, which makes it insufficiently competitive. Along with that, what is promising are the medium-sized, so-called convenience stores, mainly for foodstuffs, which represents an area for utilizing the national trade capital. These outlets can be more successful if they are consolidated in big retail chains, rather than function as separate independent traders.

**Fourthly**. Wholesale trade including commercial brokerage represents a very high percentage in the total turnover of trade in Bulgaria: during the past 15 years it has been between 67 and 74%, which also includes consumer and industrial commodities. This means that many middlemen are involved and there are many resales in wholesale trade, which increases the multiunit character and costs of commodity flow, makes goods more expensive and competition does not eliminate those which the still insufficient.

**Fifthly**. The number of persons employed in trade increases absolutely and relatively and in the course of 10 years it increased its share from 12 to 16% of all people employed, but they have below average education and salaries. They need higher qualification: higher education, greater experience, greater incentives, more flexible employment, including part-time jobs, alleviation of working conditions and other kinds of care and requirements, with a view to higher productivity of labour and better quality of the commercial service.
Conclusion

Therefore under the contemporary conditions in Bulgaria - those of a transition to market economy, the most specific feature of trade is its stormy development, the considerable increase of its relative share in the gross domestic product, the big increase in the number of retail outlets, the change in the form of ownership and the transformation of trade into predominantly private business (97% of the number of retail outlets). These processes are positive, what is unfavourable, however, is the downsizing of the commercial network, but the recent mainly quantitative increase in the number of outlets already turns into quality improvement, including consolidation. Now it is already clear, however, that efforts are taken towards improving the utilization of the outlets, since with the growth in the number of outlets of about 3 times, the number of persons employed in trade has increased 1.5 times. In the development of trade there are also other positive sides, which the competition and the strong economic interests provide – improving the external and the internal appearance of the outlets, strengthened advertising, better formation and management of the product range, better service. With the increased competition these as well as other positive trends in the development of trade will also increase. Against the background of these positive aspects in the development of trade, it should be borne in mind (as already pointed out) that the development of trade in terms of commercial areas in the retail network per 1,000 inhabitants lags considerably behind from the achievements in the developed West European countries. Consequently, with the development of the economy, the incomes and the consumption of the population, in the future there will even be a more accelerated development in the domestic market and trade.

ESSENTIAL CHANGES AND ISSUES OF THE DEVELOPMENT OF TRADE IN BULGARIA IN THE YEARS OF TRANSITION

Prof. Dr Ec. Sc. Nikolinka Salova

Abstract

In the light of the theory there is studied the development of trade in Bulgaria in the years of transition to market economy after 1989 – the development of investments, TFA and the persons employed, the number of retail outlets, the turnover in trade by volume and structure, the receipts, costs and efficiency.

Keywords: trade, transition, resources, investments, TFA, employed persons, sales, turnover, revenues, costs, efficiency.
ROTATION AND INDEPENDENT FINANCIAL AUDIT

Assoc. Prof. Dr. Slavi Genov

Introduction

The question of auditors’ independence and the quality of audit services became particularly pressing in the USA in 2002 following Enron and WorldCom corporate scandals. Quality of audit services has been the focus of public attention in Bulgaria following the problems with Corporate Trade Bank (CTB).

While performing an independent financial audit, registered auditors adhere to ethical principles which determine their professional conduct and responsibilities. Among the most important principles are:

- independence – in material, personal or any other aspect registered auditors should be free from undue influences arising from their relationships with partners or members of staff and they should be free from any conflict of interest in relation to the organization that is subject to audit, its managers or any third parties.

- objectivity, lack of bias and non-admission of prejudice, conflict of interests or other influence which might impair the auditor’s professional judgement.

Rotation of auditors is a possible variant for achieving a higher degree of independence and objectivity.

This article aims to examine the connection between auditors’ rotation and independence and to evaluate the new regulations regarding audit practices within the European Union.

Rotation of the key audit partner according to Sarbanes-Oxley Act

The issue of auditor rotation gained particular relevance after the adoption of the Sarbanes-Oxley Act in the US in 2002, in response to the corporate accounting scandals at Enron and WorldCom. Two variants of rotation exist:

- rotation of key partner auditor (the one responsible for the audit);

- rotation of the audit firm.

Sarbanes-Oxley Act envisages a rotation of key audit partner taking place every 5 years. (Sarbanes-Oxley Act, 2002, Sec. 203) A similar requirement is adopted by the European Union in 2006 with EU Directive 2006/43/

(Directive 2006/43/)


1 Member states guarantee that key partner/s auditors who are responsible for performing statutory audit, do fulfill their audit obligations in turn, for a maximum of 7 years from date of appointment and can be allowed to take part in audit of an auditee after a period of minimum two years.”
“The key partner auditor of an audit firm, as well as the auditor who works directly through an individual practice, and is responsible for auditing an enterprise whose activity is of public interest, should withdraw after 5 consecutive years of audit engagement from the date of appointment in the audit firm.” The above mentioned requirement applies to audit engagements regarding annual financial statements prepared after 31 December 08. (Act of amendment and supplementation the Independent Financial Audit Act, par. 27 from Transitional provisions) i.e. the first rotation period expires with the audit for the year 2013. /see Position of UMS - ICPA/

The law only regulates the key partner auditor rotation. The issue of audit firm rotation remains unresolved.

**Rotation rules in Germany**

There are similar rotation rules in other European states as well. A more detailed examination of the German legal framework shows some differences. According to the Commercial Act in Germany (Handelsgesetzbuch HGB) an auditor has no right to assume responsibility for more than seven cases of auditing public interest enterprises („in sieben oder mehr Fällen“) unless two years have passed since the last audit. (HGB, 2014). The Seven Occasions formulation has resulted in a number of ambiguities in the German audit practice, as it doesn’t specifically clarify the point whether assuming audit responsibility for the individual statement and the consolidated statement of one and the same company (the parent company) should count as two separate cases of assuming audit responsibility. As a result, the Bundestag Council (Bundesrat) has come up with a decision, according to which Germany will apply the European practice and seven consecutive years will be meant under the wording „7 occasions“.

**Critical analysis of the opinions regarding rotation**

Regarding the compulsory rotation of the key partner auditor (the one in charge of the audit) there usually is consensus and most authors accept the necessity of this type of rotation.

It is important to point out that there isn’t a unanimous opinion regarding audit firm rotation. According to some authors this rotation should be compulsory to perform, as key partner auditors follow the procedures and policies of the audit firm and can be subjected to its pressure (to the detriment of independence). In this connection the basic theses can be grouped as follows:

- Rotation improves the quality of audit services and results in reducing audit risk.
- Periodical change of auditors limits familiarity between auditors and client’s employees, which leads to greater independence.
- A prerequisite for enhancing audit quality is the opportunity of a “new and fresh view” over the client’s financial statements, as well as the fact that the next auditor will detect the previous auditor’s mistakes.
- Compulsory rotation will enhance the quality of audit services by increasing competition.
There is another group of authors who believe that compulsory rotation is not necessary, as restricting the tenure of key partner auditors / without a change of audit firm / achieves a great number of the benefits and at no extra costs.

American Institute of Certified Public Accountants (AICPA) is also against audit firm rotation. AICPA’s major arguments against compulsory rotation are based on the opinion that rotation:

- Increases audit costs and resources, which is only logical, as first time audit requires considerably more time to gain understanding of the audited organization while this knowledge and understanding have already been accumulated by the previous auditor;
- Limits institutional specialization and experience and results in lowering audit quality and increasing auditor’s mistakes;
- Decreases the stimuli for enhancing audit effectiveness and quality. Typically auditors aim to improve effectiveness and quality so that they keep their clients for a longer time, while with compulsory rotation this stimulus is of less importance;
- Poses difficulties concerning completing the audit in due time;
- Undermines the role of audit committees. (AICPA Letter, 2011)

Broadly speaking, according to AICPA compulsory rotation increases costs and lowers quality and existing regulations are good enough to ensure the necessary independence.

According to opponents of rotation, the independence of audit firms is achieved through the requirements of audit committees, public supervision, key partner auditors and limiting the non-audit services previously introduced. Therefore, in their view, a rotation of audit firms is unnecessary.

Another contentious issue concerning audit services is competition. Supporters of rotation assume that competition enhances audit quality. According to opponents of rotation, however, growing competition does not result in improvement, but rather in a drop of auditors’ remuneration, which is a serious prerequisite for a drop in audit quality.

We are right then to claim that the arguments presented for and against compulsory rotation are not unambiguous. They can be interpreted differently. Therefore, it is suitable to perform this study on the basis of the existing practice in countries that have adopted rotation rules.

**Current development of Rotation rules**

In view of achieving greater effectiveness, efficiency, objectivity and independence, on 17 June 2014 the reviewed directive and regulations concerning audit reform came in force in the EU. These affect Public Interest Entities (PIEs). Division of audit and consultancy services is envisaged (black list). Auditor companies market (Wirtschaftsprüfungsgesellschaften) is expected to get reshuffled over the next few years.² (Reu , 2014).

² The statement is valid for Germany mostly.
On October 13, 2010 the Green Paper on Audit Policy) was published by Commissioner Barnier, under the title “Audit Policy: Lessons from the Crisis”. After a process of intensive consultations in November 2011 the European Commission adopted two legislative proposals: regulations “concerning specific requirements for compulsory audit of public interest entities” and a directive for amendment of the current Directive regarding compulsory audit of annual financial statements and consolidated annual financial statements. After a lengthy process of negotiations, on 17 December 2013 a compromise was reached among the EU legislative bodies, the European Parliament, the EU member states and the EU Commission. On 21 January 2014 the European Parliament adopted the final regulation and directive. At the European Parliament plenary meeting on 03 April 2014 and at the Council of Ministers on 14 April 2014 the respective texts were adopted. Adopted regulations are to come in force 20 days after they have been published in the Official Journal of the EU – 27 May 2014, so the date they come into force is 16 June 2014. After the directive comes into effect, it is to be adopted by the national legislation as well.

“The regulation is jointly adopted by the Council of the European Union and the European Parliament, or only by the European Commission and by nature it is a general Act that is binding in its entirety. Unlike the directives, which are addressed at member states, and the decisions which have a clear addressee, regulations refer to all. They are directly applied i.e. they create legislation to be applied directly in all member states like national laws and no further measures need to be taken by national governments”. (European Commission, 2014).

A European directive may be addressed to one, several or all of the member states and the objectives it determines must be achieved through means chosen by the respective state. The principles set forth in the regulation produce action in respect of nationals only after the national legislative bodies adopt an act of the regulation’s transposition into national law. In this way national laws adapt to the objectives determined by the directive.

It is envisaged “a deadline for transposition into national legislation: member states have a degree of freedom of action regarding the deadline, which allows them to take national specifics into consideration. Transposition should be executed within the time frame stipulated in the directive.” (European Commission, 2014).

The directive must be applied no later than 16 June 2016. In case of delay or incomplete transposition, a penalty procedure for infringement may start. Provisions of the regulation are in force as of the date of coming in force, i.e. 16 June 2014.

The basic changes in the existing directive regarding compulsory audit refer to:

- Cancellation of the member states right of choice to limit the definition of public interest entities (Public Interest Entities, PIE) to publicly traded companies;
- Amendment and extension of the regulations for creating audit committees and the tasks of public interest entities;
- Adjustments to the rules of auditor objectivity and professional independence, as well as of the overall organization of auditors and audit activities;
• Quality assurance systems and a number of detailed requirements for auditors sanctioning;
• A new mechanism for adopting International Standards on Auditing in the European Union;
• Publishing audit results and subsequent reports for internal audit committees.

The key provisions of the Regulation apply to the compulsory audit of public interest entities. Major areas concern:
• restricting non-audit services while auditing public interest entities, in particular, adopting a black list of non-audit related services;
• initial introduction and regulation of compulsory rotation, as well as a detailed description of the process of selecting an auditor;
• professional supervision over statutory auditors and audit firms by European bodies;
• Setting up a new oversight body – European Audit Oversight Board (a body with a wide range of authority).

The new rules for compulsory rotation

Under Article17 of the Regulations, it is a basic rule that public interest entities must change their auditors after a maximum of 10 years. Yet member states can shorten this period of rotation. Companies can also choose a longer cycle of rotation than that of the basic rule depending on the respective decision of the member states about the application of the basic rule.

According to the Regulations, in any member state the 10 year period can be:
• extended to a maximum of 20 years, if, after the first 10 years of audit, a public tendering of audit contracts is performed;
• extended to a maximum of 24 years, if, after the first 10 years, more auditors (for example within the Joint Audit framework) perform the audit.

There are special transitional rules about the compulsory rotation. According to the text of the regulation, they will have the following effect:
• If on 16 June 2014 an auditor has been a public interest entity auditor for more than 20 years, the company should change the auditor in 6 years, that is the deadline for the first compulsory rotation expires on 16 June 2020 and as a result, this auditor cannot be chosen again after 16 June 2020.
• If by 16 June 2014 an auditor has performed audits for 11 years or more, but fewer than 20 years, the company must change the present auditor after no later than nine years, that is, the first compulsory rotation ends on 16 June 2023 and, as a result this auditor can no longer be chosen again after 16 June 2023.
• For cases where on 16 June 2014 an auditor has been performing audits of public interest entities for fewer than 11 years, there are no special transitional rules; Regulations of general rules of rotation is applied. (Deloitte, 2014)

Research on the biggest German companies on the stock exchange shows that by 31 December 2012, 24 out of the 30 DAX companies have been assigning their
audits to one and the same audit company for at least 20 years. (Herbers, 2014, s. 183-188)

In 2020 at the latest, these companies must perform a rotation. (Reu, 2014).

The introduction of internal rotation is expected to result in restructuring of the audit services market in Germany. A similar research on audit practice in Bulgaria is not available. Therefore no conclusions can be drawn about the consequences of introducing external rotation on the audit services market in Bulgaria.

Another substantial question is whether external rotation eliminates the obligation of key partner auditor rotation.

Along with compulsory rotation of auditors, there remains the problem with changing the key partner auditor after a maximum of 7 years. The two-year cooling off period between dismissing an employee and hiring him/her again is extended to three years.

In our opinion, rotation is unquestionably one of the important elements for ensuring auditors independence and, consequently, rotation is important for audit service quality.

Regarding the compulsory rotation of key partner auditor, we accept it as necessary, because it provides a “new and fresh view” on the financial statement, but it cannot fully guarantee independence, as dependence is available in the framework of the policies adopted by the audit firm.

Rotation of audit firms has both positive and negative aspects. The most significant advantages are that it leads to reducing auditors risk, limits familiarity between auditors and client’s employees and improves the quality of auditor’s service. As disadvantages we can point out the following: increasing the audit-related costs, limiting institutional specialization and experience, increasing auditor’s mistakes, wasting understanding and knowledge of the business entity that had been accumulated, reducing the stimuli for enhancing audit effectiveness and quality and the chances of the audit being completed in time.

Taking into considerations the above mentioned positives and negatives and the national practice so far, we believe that concerning rotation, Bulgaria will benefit most from the following statutory regulations under article 17 from the Regulations:

1. Public interest entities must change their auditors after a maximum of 10 years, and the rule of changing the audit firm should be retained; or

2. Having in mind the economic crisis and the economic environment in the country: public interest entities must change their auditors after a maximum of 5 years and the rule of changing key auditor partner should be retained. Companies may also choose a longer rotation cycle but not one longer than 10 years and on condition that a Joint Audit is performed in the fifth year of the audit engagement.

**Conclusion**

Introducing external rotation aims to counteract the danger of familiarity or market concentration. Nevertheless, compulsory external rotation does not directly result in assigning audit responsibilities to audit firms other than the Big Four. Another debatable issue is whether external rotation results in a better audit quality or, rather, it contributes
to loss of valuable knowledge of the audited company and its structures (Wissenslücken). To achieve the goal of opening the audit services market and limit loss of knowledge, attention should be paid to external rotation combined with Joint Audit. (Datev, 2014) In this connection two possible solutions are suggested for Bulgaria:

- Public interest entities have to change their auditors after a maximum of 10 years. Or.
- Public interest entities should change their auditors after either a maximum of 5 years or a longer rotation cycle, but no longer than 10 years, on condition that on the fifth year of the audit engagement a Joint Audit is performed.
- Rules of changing key partner auditor are retained.

**Bibliography**

ROTATION AND INDEPENDENT FINANCIAL AUDIT
Assoc. Prof. Dr Slavi Genov

Abstract

Rotation is a means for ensuring independence in performing financial audit and is a fairly debated theme in EU countries. There are presented the rules on rotation in Bulgaria and are discussed arguments pro and con its introduction for the audit firms. There are summed up the most topical changes in this respect, in view of the fact that after 2016 it is for the first time that there is to be conducted a rotation of these enterprises within the EU. There are proposed the possible scenarios - according to the author - for the change of the auditor-in-charge and the rotation of audit firms.

Keywords: independent financial audit, rotation, directive, regulation.
SPECIFICS OF THE NEW NORMATIVE DECISIONS REGARDING CONTRACTS FOR PROFESSIONAL QUALIFICATION

Assoc. Prof. Dr Andriyana Andreeva

Introduction

The labour market in Bulgaria in the years after the country’s accession to the European Union has been very dynamic. This trend, combined with the rapid technological development of the society and the radical changes in global production, requires an adequate response in Bulgarian legislature. This is one of the main reasons for the normative changes in Bulgarian labour legislation which has been increasingly involving a process of “contracting”. The amendments to Chapter XI “Vocational training” of the Labour Code (LC) from March 2014 attempted to update the labour and employment matters in the field of vocational training. The amendments to the regulations reflect the importance of the issues related to the vocational training of workers and employees. This is part of a trend imposed within the European Union and necessitates taking urgent measures at different levels in order to make Bulgarian workers and employees competitive both in the national and the international /specifically the European/ labour markets. This process of further vocational training is based on the Lisbon Strategy of 2000 for creating “a society based on knowledge” and for “lifelong learning”.

The importance of vocational qualification has been evaluated by the Bulgarian legislators with the adoption of the CT of 1986 and this is reflected in the establishment of rules in a separate chapter “Vocational training”. In this version of the law some mandatory provisions introduced bilateral obligations for the parties to an employment relationship aimed to maintain the vocational qualifications according to the requirements to the job and the needs of the enterprise (Article 127, item 9, Art. 132, item 6 of CT, revision 1986). (Mrachkov, C., 2010).

These norms were hastily repealed at the beginning of the transition period (repealed SG 100/1992) as a manifestation of the expansion of the parties’ freedom of contract. Therefore, in the period until the accession of Bulgaria to the European Union the Bulgarian legislation in the part concerning vocational qualification fell in a kind of vacuum inconsistent with the European processes and trends. Provisions were approved in the LC – Art. 228a, Art. 228b - immediately after Bulgaria’s accession to the European Union to restore the obligations of the parties under employment relationships with regard to the level of vocational qualification. It is an employer’s obligation to provide conditions for keeping and improving the vocational qualification of workers and employees and a counter obligation of workers and employees to maintain their vocational qualification in accordance with the nature of the job.
The evolution in the regulations related to the vocational qualification is also related to the evident process of “contracting” of labour law. The adaptability of the legal institution of contract, its adjustability to different legal environments and its ability to regulate various public relations on the basis of “the free will” of the parties is the reason to be used by the legislators in various fields.

The subject of this study is the contracts depending on the specifics in their subject matter, that is: an employment contract with a condition for training at work (Articles 230-233 of the LC), an employment contract with a condition for apprenticeship (Art. 233b-233c of the LC).

Therefore, the objectives of this study are:

1. To systemize the new types of employment contracts (EC) related to the vocational training of workers and employees.
2. To support their implementation with the legal analysis by linking their regulation to the general regulations of the institution of employment contract in Chapter V “Occurrence and change of an employment relationship”, Section I “Employment contract” of the Labour Code.

I. Evolution of contracts in labour law

The evolutionary development of contracts in labour law is determined by the current social processes and their respective social relationships. The development of the institution of labour contracts in Bulgaria has its historical periods marked by the corresponding economic and historical stages of the country’s development. Apart from the influence of internal factors these processes are also shaped by the relevant global (specifically European) processes.

The periods in the development of labour contracts may be described as follows:

a) Capitalist period – after Bulgaria’s liberation in 1878 until 1944. At the beginning of the period there was no special legal framework for that legal institution and it was regulated by Art. 386-402 of the Obligations and Contracts Act (OCA) of 1892. The so-called “contract for hiring persons to work for the benefit of another one” (Art. 386, item 1 of the OCA) paved the way for the future development of employment contracts. Later on, an Ordinance-Law on Employment Contracts was adopted in 1936 setting the legal definition, conclusion, effect, rights and duties of the parties and respectively the termination of an employment contract. An Ordinance-Law on Collective Employment Contracts and Labour Conflicts was adopted in the same year. These are the main sources of employment contracts during that period (Oshanov, 1936; Stalev, Zh., L. Radoilski, 1948).

b) Socialist period – after 1944 until 1989. The period is influenced by the new social relations, both political and economic, entering Bulgaria. The capitalist foundations of the economy built so far in the country were demolished, approved international principles were replaced with new ones. An internal source on employment contracts for that period is the Labour
The regulatory framework both of individual and collective employment contracts is minimalistic and consists in determination of the place and nature of the work (Art. 15 of the LC of 1951, repealed) in the former, and its consideration as a means for achievement and over-achievement of a plan (Art. 9-14 of the LC of 1951, repealed). The Labour Code of 1951 (in its initial version) regulated in a similar way the place and role of an employment contract.

c) **Modern stage** of democratic development of Bulgaria under the condition of a market economy. The trend in the development of labour law in this period, especially in the recent decades, has a clear focus on contracts. It is no coincidence that legal experts talk about a process of “contracting” of labour law. More specifically, this process is also manifested in the growing diversity of the types of employment contracts, respectively the employment relationships they generate. The legislative changes in Bulgarian labour law in this respect are not isolated but represent a process determined by the socio-economic needs of the labour market in the country and continuing the European process within the EU.

These conditional stages in the development of the institution of employment contract show not only the evolution in its development, but also reveal the need for better understanding of the different types of employment contracts in order to use them correctly in practice.

The legal framework regulating the types of employment contracts has not been completely systematized in the LC but is dispersed in different places within the Code: Chapter V – “Occurrence of an employment relationship”, section I – “Employment contract”, section IX “Additional labour under an employment contract”. These contain the main part of the diverse types of employment contracts, however, provisions are included also in other parts of the LC dedicated to different employment institutions, e.g. Chapter XI “Vocational qualification”, Chapter XII “Salaries and wages”, section III – “Additional and other types of remuneration”. The legislative motivation to include individual types of employment contracts in various parts may be linked to the specifics of the matter to which the respective employment contract is made to correspond. This fragmentation in the legal matter of the legal institution of employment contracts and the various aspects of their diverse types makes it difficult to find the relevant matter and its proper interpretation through specific legal techniques. Being systematically referred by the legislature to legal institutions different from the employment contract, the specific individual types of contracts are difficult to be integrated both as a doctrine and into the practice of classification of the types of employment contracts. This requires their detailed study and summary within the employment doctrine with a view to determining a common classification feature for systemization. Thus a system of the types of employment unified on the basis of the

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1 As a member of the ILO during that period Bulgaria ratified a number of conventions including in the field of employment contracts however the author has focused predominantly on the internal regulatory framework adopted by the Bulgarian legislature.
single legal institution – employment contract – can be created reflecting, however, the specifics of the “content” the elements of which determine the different types.

II. Specific features of the new types of employment contracts in the field of vocational qualification

This classification group of employment contracts reflects the modernization of the Bulgarian legislation in the sphere of vocational qualification – that is an employment contract with a condition for training at work (Articles 230-233 of the LC) and an employment contract with a condition for apprenticeship. They aim to support workers and employees in their training and to enable employers to adapt and meet the challenges posed by a combination of factors such as globalization and the aging Bulgarian population.

With amendments in the provisions regulating the apprenticeship contract it is renamed to “employment contract with a condition for training at work” (title amended – SG 27/2014, previous title: apprenticeship contract). The regulation of that type of employment contract is laid down in the provisions of Article 230-233 of the LC.

The legal essence comes from the legal title, i.e. it is an employment contract subject to, besides the specific regulations (Article 230-233 of the LC), all norms of the general regulation of the institution of employment contract in terms of procedure and form of conclusion, rights and obligations of the parties, etc. This is explicitly provided in the provision of Art. 233 of the LC. It ensues from the general provisions and the requirement of Art. 62, par. 1 of the LC that an employment contract with a condition for training is to be concluded in written form. A notification of the conclusion of such contract is filed with the relevant territorial department of the National Revenue Agency (TD of NRA). The specific features of that contract consist in the result it aims to achieve, i.e. the employer undertakes to train a worker or an employee in a particular profession or vocation in the course of work and the trainee is to learn such profession or vocation.

The legislator has regulated the maximum length of the period in explicit provisions (Art. 230, par. 2 of the LC) and the minimum salary (Art. 230, par. 4 of the LC) under such contract. The contract may have a fixed period of validity and the period of training may not exceed 6 months except in cases of training through work (dual training) organized under the terms and procedure of the Vocational Education and Training Act. It can be concluded from the analysis of that provision that generally the period of the contract is up to 6 months and such contract may be concluded only once with a particular worker or employee at a particular enterprise for training in a particular vocation. The legislator has introduced that fixed period due to a complex of reasons. Firstly, that is an optimal period in view of the knowledge to be acquired by a worker or employee related to their vocational training. Secondly, the period corresponds to

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3 According to Ordinance 5/29.12.2002 on the content and procedure of sending a notification under Art. 62, par. 5 of the LC under Annex 1 to Art. 1, par.1 of that contract is registered with code 14.
the remuneration during the period of training. The trainee receives remuneration corresponding to the performed work but not less than 90 percent of the minimum salary set for the country. Obviously, the aim of the legislator was to turn the period of the contract into a guarantee against malpractices by employers who tend to save on remuneration by signing a series of contracts for training.

With regard to the period of the contract the law has introduced an exception according to which the period may exceed the maximum threshold of 6 months in the cases of the so called dual training. In this hypothesis the provision of the LC is a blanket rule complemented by the Vocational Education and Training Act (VETA). According to Art. 5, par. 4 of that special act vocational training may take place also in the form of training through work (dual education). The training through work (dual training) is a form of partnership between a vocational school, a vocational college or a vocational training centre and one or several employers that includes:

- practical training in an actual working environment;
- training at a vocational school, a vocational college or a vocational training centre.

In the special act the legislator has provided also norms regarding the organization of the training through work (dual training) that correspond to the norms of the LC. According to the new provision of Art. 17a, par. 1 of the VETA that training is a specific form of vocational training for acquiring professional qualification that is organized on the basis of a partnership or a contract between the institutions under Art. 5, par. 4 of the VETA and one or several employers.

In the final stage of the effect of the contract, the outcome from the training under the contract under Art. 230, par. 1 is established through an examination of the trainee conducted under the terms and procedure determined by the employer. For training for acquisition of vocational qualification the examination takes place under the terms and conditions of the Vocational Education and Training Act. Where the trainee has successfully passed the examination they are issued a document demonstrating the acquired competence and skills. For training for acquisition of vocational qualification the results from the training are verified under the terms and conditions of the Vocational Education and Training Act.

The practical implementation of the provision gives rises to issues related to the quality of the training and the current general threshold of 6 months. To allow employers more flexibility the legislator should envisage exceptions from the upper threshold of the period of training taking into account the requirements and the characteristics of different vocations. (Bogomilova, Zh. Employment contract with a condition for training at work. Labour and Law, issue 10, 2014, page 14).

A new employment contract provided in the amendments made to the LC in March 2014 in Chapter XI “Vocational qualification” is the contract for apprenticeship.

Its legal provision is in Art. 233b-c of the LC. With the inclusion of that new type of employment contracts in the system of employment contracts in the LC their number reaches 19 which is additional confirmation of the intensifying process of “contracting” of Bulgarian labour law. With this new type the legislator aims to regulate a contract
designed directly for young people graduating from secondary or higher educational institutions but without work experience\(^4\). The problems before the introduction of that type of employment contract consisted mainly in the employers’ negative attitude and refusal to accept young people with education corresponding to a position but without work experience and length of service. That lack of competitiveness of the young people on the labour market is one of the reasons for the unfavourable trend of high youth unemployment in Bulgaria and the EU. The package of measures developed the European level is complemented by the EU recommendation to the Member States to extend the application of the apprenticeship contract in their domestic laws. As indicated by the systematic place of that contract in Chapter XI “Vocational qualification”, immediately after the employment contract with a condition for training at work, the legislator has logically enriched and extended the employment contract types related to training and its upgrading. On the basis of the selected systematic place of the regulation of the two contracts it can be concluded that the legislator’s intention was directly related to the improvement of the vocational qualification of workers and employees. This however does not justify the growing lack of regulatory systematization of the types of contracts. It is one of the reasons for the difficulties in the practical application of the otherwise rich diversity of employment contract types.

The legislator has set two restrictions on the conclusion of apprenticeship employment contracts. The first limits the age of the apprentice to 29. That maximum age limit is taken into account at the time of conclusion of the employment contract and the intention is to aim the apprenticeship at the young people having the relevant education but no work experience. The education of an apprentice is the second limitation for conclusion of that type of contract. The regulatory requirement of Art. 233b, par. 1 of the LC is that the education (secondary or higher) is to correspond to the work for which the apprenticeship contract is concluded. With these two requirements specific for the apprenticeship contracts the legislator intends to close the existing vacuum in the education-work relationship.

Within the meaning of Art. 233a of the LC apprenticeship is the key element of the apprenticeship contract. All other arrangements between the parties are the common elements in the content of every employment contract. For that reason the legislator has regulated the specific legal issues concerning the method and form of apprenticeship, the name and position of the mentor, the duration of the apprenticeship contract. The analysis of the legal regulation of the apprenticeship contract shows some specific features differentiating it in the first place from the contract for training at work and making it a form of “transition” from education (secondary or higher) to the beginning of employment in the acquired profession or vocation.

A specific feature of that type of contract is the work under mentorship. The legislator vests responsibilities in the person designated to act as mentor who is responsible in practice for the good acquisition of practical skills by the apprentice. The relationship between the employer and mentor is settled in an additional agreement to the mentor’s employment contract. In that sense the mentor builds upon the theoretical

\(^4\) See National Assembly, ref. 402-01-7 of 21.01.2014 – justification of the bill for amendment of the LC.
knowledge of the apprenticeship with habits and skills typical of the relevant profession. It can be therefore concluded that the process of apprenticeship builds upon the knowledge acquired in the educational system. To guarantee the quality of the mentorship the legislator has put in place a requirement that the mentor has “at least three years’ work or professional experience in that profession”. Besides the positive objectives pursued by the newest type of employment contract there are also some legal errors. As already discussed it is regulated in an unsuitable place which, first of all, makes difficult its practical application as it is related to another legal institution and not to the basic legal institution of employment contracts. Second, the legislator has mixed in some places the apprenticeship with the “contract for training” in some provisions. This can be observed in the requirement of Art. 233c “within 14 days from the termination of the contract under Art. 233b the employer shall issue to the apprentice a recommendation verifying the outcomes from the training”. That legal text needs to be further refined because of its internal contradiction. The requirement for issue of a letter of recommendation contradicts the idea of objectivity of the results achieved by the apprentice. It can be issued only in case the person has actually had positive results during the period of apprenticeship. In all other cases the accurate term is a certificate corresponding to the provision of Art. 128a, par. 2 of the LC regarding the documents issued by the employer.

Conclusion

Besides the positive aspects including the enrichment of the range of contract types in the modern employment law the current regulations of employment contracts related to vocational qualification contain a number of errors discussed above. The purpose of this is to draw the attention of the employment law experts to make an in-depth analysis in that direction and to ensure a future legislative reaction through amendments to the regulation of those contracts.

Literature

SPECIFICS OF THE NEW NORMATIVE DECISIONS REGARDING CONTRACTS FOR PROFESSIONAL QUALIFICATION

Assoc. Prof. Dr Andriyana Andreeva

Abstract

In the article there are discussed the essential characteristics and specificity of the contracts of employment connected with the professional qualification of the workers and employees, being a new legislative decision introduced with the changes in the Labour Code in 2014. There is analyzed the current legal organization of these contracts and on that basis there are drawn conclusions and recommendations with respect to their practical application, as well as proposals de lege ferenda for improving the normative base.

Keywords: contract of employment, apprenticeship, training, professional qualification.
EVALUATION OF E-COMMERCE WEB SITES ON THE BASIS OF USABILITY DATA

Assoc. prof. Snezhana Sulova, PhD

Introduction

Today increasing numbers of commercial companies are using the electronic forms of doing business. Globally, in 2012 the profits from online trade reached 1 trillion dollars\(^1\). The European online trading market gained a sales volume of 134,9 billion euro, and according to the analysts in Forester research its growth in 2018 would be 233,9 billion euro\(^2\). The considerable e-commerce growth rates are due to a multitude of advantages, brought about by this form of making deals, as well as the more advanced web systems used to handle it. Most companies dealing with online trade became aware that the website used for its implementation is an important tool, which can significantly contribute to sales growth, image recognition and finding new clients and partners.

The Internet retail systems are continuously being improved, so as to be able to achieve their main objective – selling goods and services, they initially have to assist in gaining clients’ trust. That is the reason why these types of sites have turned into peculiar virtual offices, where the users share their pieces of advice for making purchases; they can also rely on help and communication in real time with a staff member. In order to improve customer relations and apply more flexible servicing and pricing systems, more and more attention is paid to the valuation of e-commerce sites, on the basis of data analysis of consumer visits and behavior.

The objective of the present article is to explain the main points of the process of e-commerce web site analysis on the basis of their usability and to put forward a system of website assessment indicators.

The process of implementation of e-commerce website analysis

The e-commerce sites are the main tools for making online purchases, therefore it is important to be well designed so that they could give complete and correct information about products and services and possess a good module for making purchases online. The owners pay greater attention on tools for analyzing them in order to enhance their success rate. In scientific literature the process of site measurement and traffic gauge is called web analytics (Web Analytics).

The association for digital analyses defines web analytics as a process of measurement, collection, analysis and reporting web data for purposes of understanding

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and optimizing web usage\textsuperscript{3}. An expert of world renown in this field – Avinash Kaushik explores this concept in a bit broader aspect, as a qualitative and quantitative analysis of data obtained from the website\textsuperscript{4}. Besides, he estimates that this type of analysis will bring about changes in the way of doing business on the Internet\textsuperscript{5}, because measuring results from the online activity allows companies to evaluate site results and enhance effectiveness of their online initiatives.

We think that web analytics has to be looked at not only as statistics about websites visits, but as a complex analysis of site usage, usability and content with the purpose to improve their success rate.

In the present article we will only focus on web analyses which are based on data, obtained as a result of the use of Internet e-commerce sites.

The process of analysis of a particular e-commerce web site can be carried out by fulfilling the following steps (see fig.1):

1. Defining the analysis targets.
2. Defining the website measurement indicators.
3. Data collection and data integration
4. Processing data, estimating the value of the selected indicators, retrieving subordination.
5. Analysis of the obtained results and putting changes into effect.

![Fig.1. Website analytics process](#)

The main purpose of web analytics depends on the reason for the site creation. Online shops are set up either by new companies which decided to deal with e-commerce as their core business, or well established companies developing e-commerce as ancillary activity. However, in both cases, the main goal of online shops is to sell more goods and services, making greater profit to their owners.

Different indicators can be used to evaluate a website. They help us know if the site is visited, the most often browsed pages, which page visit the site is being left from, the order in which the pages are usually browsed, which other sites the customers visit, the number of pages the typical customer browses, the normal duration the customer stays in the site, etc. There is a multitude of research, regarding data

\textsuperscript{3} The Official DAA Definition of Web Analytics // http://www.digitalanalyticsassociation.org/?page=aboutus, (29.08.2013).


\textsuperscript{5} Ibid., p. 23.
Articles

analysis for site usability in literature. The authors refer to different combinations of measurement indicators, but they do not give an explicit answer about the choice of indicators. Besides, indicators which are based on researching and detecting hidden links and interdependencies between data are not used. Hence, defining a system of measurement indicators, to our view, is one of the most important elements of the analysis, because, currently, in this field there are a lot of unsolved problems.

The next step in the analysis process is the data collection. As a main source of data, obtained as a result of the Internet sites use for online trade, can be specified:

- log files – text files, also called journals or logs. They help record data about visits in the online shop on the server. They differ in their format, according to the type of the server. They contain the following main data: user’s IP address; the moment of site loading; the user’s location; the type of browser and operational system, used by the customer, etc. Some of their advantages are: neither site changes are required, nor additional software installation for the log files design; they can pile and analyse large amount of data, including data from past periods; they contain information about visits from search engines.

- data collection through JavaScript tagging method. It represents embedding JavaScript programming code, which is activated with the visit on the respective page from the online shop. The use of this technology allows all visits to be counted in contrast to the log files, which at cache from the proxy server or browser do not register visits. The so called “cookies” are used to identify users.

- additional tools for collecting greater amount and more accurate data, such as the technology of measuring the banner sessions – Web beacons and the special hardware packets for monitoring the traffic – Packet Sniffing.

Having in mind that each method has its advantages and disadvantages it is often required that the enumerated technologies should be used in combination. We think that data integration, collected through the methods mentioned above, would help to obtain more detailed and more accurate information, which would later be used for better personal servicing and generating more precise recommendation for clients, flexible pricing and accomplishing rational deliveries.

For processing the collected data specialised programming tools can be used, which process logfiles and data, obtained as a result of particularly developed JavaScript codes. For some indicators data obtained from the database of the respective online shops is needed. Moreover, in order to obtain more extensive results, we think, the technologies, based on techniques and algorithms in the field of extracting knowledge from web resources (Web Mining) should be used in data processing. In this way hidden data, dependencies, knowledge that have been unknown before but useful for business in many cases, could be found and studied.

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The result analysis is an important step, too. It helps to find out why the respective events have happened, to discover trends, to make associations between similar cases, to study the behaviour of each customer or the common behaviour of a large number of customers within the time frame of a certain period. The obtained results represent new knowledge, which grants the opportunity to implement such important elements for e-commerce as individual servicing of each client, better management of customer relations, flexible pricing, reasonable deliveries, working out forecasts for future development and as a whole it is conducive to sales promotion and rise of profits from the trade activity.

After introducing the stages of the analysis process it should be noted, that, when analysing e-commerce web sites it is important to comply to the success rule, defined by Kaushik -10/90, according to which only 10% of the budget is spent on analysis tools whereas 90% - for human resources, which would put the process into effect\(^7\). The human factor - web analysists are expected to define the basic analysis parametres, to apply innovative approaches and to integrate the selected tools into the entire company analytic information system. In our view, one of the most important task of the web analysists is to select the appropriate indicators for analysis, which will best expose the strong and weak parts of the website as a basic tool for carrying out the business activity.

A system of indicators for e-commerce sites measurement, based on data of their usage

As it was stated, one of the primary and unsolved problems in the process of analysis is the classifying of indicators for online shops measurement on the basis of the data about their usability. In different Internet studies one can come upon a wide range of metrics, which refers to all types of websites or take into account the particular business organization\(^8\). The most popular indicators used for analysis are: number of visits, unique visits and exits, duration of visits, the most popular pages, etc.

There are studies focused particularly on e-commerce, where, according to some authors\(^9\), the most significant indicators are the ones which are explicitly relevant to the activity; the average value of purchase; the average rate of a visit; customer loyalty; percentage of specific clients groups and clients who left. In some other studies on the topic, the indicators are grouped in different categories and the focus is again on the commercial activity, such as sales, marketing and customer service\(^10\) or company profile, product catalogue and promotions, transactions, customer service, smooth use

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of system and use of innovative technological solutions in the commercial activities\textsuperscript{11}. Besides, it should be noted, that in the quoted studies the measurement indicators are measured mainly by mathematical and statistical tools, using primarily data which is obtained from orders to the data basis and seldom data received from log files and javascript codes. As already mentioned, we think, that in order to obtain more accurate results, as well as the characteristics of the subject matter – e-commerce, it is necessary to include indicators, the value of which is gained after data processing and by the methods for extracting knowledge from the Internet resources.

What has been said gives us good reasons to propose a system of indicators for evaluating online shops, based on the collected data for their use. It consists of metrics, calculated in different ways, using plain mathematical and statistical formulae or methods for knowledge extraction. The metrics proposed can be classified in two major groups:

1. **Common indicators** – the ones, which are significant for e-commerce, but are reliable for most websites, too. The most important ones are:
   - Number of visits;
   - Unique visitors;
   - Repeat visits;
   - Duration of site visits;
   - Exit rate;
   - Number of pages, viewed by one visitor;
   - The most popular pages;
   - Exit pages;
   - Countries of registered visits.

   The meaning and the method the indicators are measured is shown in details in Table 1.

2. **Specific indicators** – the ones which are imposed by e-commerce. The most important are:
   - Average rate of a visit
   - Rate of a visit respective to clients types;
   - Rate of visits respective of countries;
   - Clients’ loyalty;
   - Reviewed goods, which are a good source of profits;
   - Successions of connected events and goods, which are purchased together;
   - Exceptions and risk control;
   - Effectiveness of advertising campaigns.

   The meaning and the method the indicators are measured is shown in details in Table 2.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Method of measurement, significance</th>
</tr>
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<tbody>
<tr>
<td>Number of visits</td>
<td>It indicates the visitor session for a particular time period. The activation of the online shop in the browser is considered the beginning of a visit, whereas the end is the site exit or the termination of session. If the online shop is not closed for a long time, the customer session is terminated and a 30 minute interval is accepted for session division. The e commerce site traffic has considerable importance, the more the visitors, the greater the likelihood for them to become buyers. Admittedly, the traffic should be targeted in order to bring greater profits.</td>
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<tr>
<td>Unique visitors</td>
<td>It indicates the viewers of a particular site. To register their number, the technology of “cookies” is usually used; when activating a particular site in the visitor’s browser a cookie file is recorded via which at a next session the visitor is identified and thus the repeat visits are not counted. Admittedly, the number of the unique visitors can not be calculated with absolute precision, because the client may use a web browser with a setting unable to save cookie information. Even though this metric is a sufficiently reliable indicator to show how many of all visitors are the different ones.</td>
</tr>
<tr>
<td>Repeat visits</td>
<td>It measures the percentage of visitors, who have already viewed the online shop. Once again, the technology of “cookies” is relied upon for counting. This indicator shows that the website appeals to visitors, it has aroused their interest and has been useful.</td>
</tr>
<tr>
<td>Duration of site visit</td>
<td>It shows the approximate duration of visits in minutes. The duration of visit on each page is usually calculated as a difference between the moment of accessing the page and the moment of opening a new one. The site duration is the sum total of duration of all pages. It should be noted here that, because it is difficult to measure duration at the last visited page in a particular site, it is reported that the duration on this page is 0 minutes. The indicator for duration of site visit identifies to what extent the site manages to attract the attention of viewers and offers them useful content. However, if the duration of visit in an online shop is very high we might consider it is due to the difficult orientation of the viewer, bad navigation, incomprehensible content or a complex system for placing an order.</td>
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The measurement of the proposed general indicators for evaluating an e-commerce website on the basis of its visit rate data can help to define the advantages and disadvantages of the web system for e-commerce. Conclusions on the ground of the listed common indicators can be drawn about:

- **the dynamics of visit rate of the online shop** – which days, months, the online shop is most visited. This study can help to look for ways to boost sales during the remaining periods;
- **the interest in the web site**, measured on the basis of the number of visited pages as well as the time for their review. The presence of real interest from

<table>
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<tbody>
<tr>
<td>Site exit rate</td>
<td>The indicator shows the percentage of visitors who view only one page and then they leave the site. An online site for e-commerce is successful if the exit rate is possibly at its lowest, and this is achieved when the traffic to the page is well targeted. Rendering an account of the site exit rate is essential, because one online shop may have a great number of visitors but, then, it may turn out that the larger part of them do not become its clients and have immediately left it. It is calculated as a relation between the total number of viewed pages and the number of visitors of the website. Generally it is better if the number of pages viewed is bigger which is usually a sign of attractive and useful online shopping. The only exception is the case when the site needs redesigning; because in order to find the required information, it turns out, that a person has to view a lot of pages.</td>
</tr>
<tr>
<td>Number of pages viewed from a visitor</td>
<td>The most often visited web site pages for-commerce are found. This indicator helps to draw conclusions about the visitors’ interests, optimize supply and make offers which live up to the clients’ expectations and preferences.</td>
</tr>
<tr>
<td>The most popular pages</td>
<td>It shows the page from which the visitors most often leave the online shop. All websites are studied apart from the ones where a purchase is finished because then it is logical to exit the site. When the exit pages are analysed the reasons for the exit of the web site can be found; for example, whether this happens after getting to know the characteristics of some goods, after charging the transport fees or after reviewing the proposed ways for online payment of goods.</td>
</tr>
<tr>
<td>Exit pages</td>
<td>It gives information about the geographical location the site visits are made from. It is very important for online shops to know which country their main visitors and customers are from in order to be able to offer a wider range of goods relevant to the national characteristics, traditions, and culture of their potential buyers.</td>
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</table>

Countries of registered visits
viewers means well organized online trade activity and availability of reliable and working web site for e commerce;

- **goods and services which attract the greatest number of visitors**, as it is possible to increase their supply and meanwhile consider ways for making other goods look more attractive and appealing, too;
- **possible reasons for losing interest in the website** and finding out what exactly does not satisfy the visitors;
- **e-commerce websites having errors** and the opportunities for improving the system for making online purchases, so as this would not cause visitors to leave the site or becomes reason for unsuccessful deals;
- **the tradition and habits of main visitors**, which can help for making promotional and holiday offers, relevant to the national peculiarities of the prevailing clients.

### Table 2

**Specific indicators for evaluating online shops on the basis of data for their usage**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Method of measurement, significance</th>
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<tbody>
<tr>
<td>Average rate of a visit</td>
<td>The rate of a visit is measured on the basis of total profits and the total number of visits. It is a significant indicator for defining the traffic quality because there may be a lot of visits in an online shop but few of them may be able to generate profits. The rate of a visit most often measures the effectiveness of the advertising companies. This indicator can also be used for analyzing the system for fulfilling orders, to evaluate if it is sufficiently intuitive, easy to use and contributes to turn the visitors into clients.</td>
</tr>
<tr>
<td>Rate of visit according to types of clients</td>
<td>The clusterization method serves to look for an independent group of clients in the whole range of data. The rate of visit is measured on the basis of profits from this client group and the visits made from the independent group. The study of visit rate according to the type of clients contributes to applying differentiated approaches in servicing them. The clients, belonging to an identified segment, respond in a similar way to the applied marketing impacts on them.</td>
</tr>
<tr>
<td>Rate of visit according to countries</td>
<td>The indicator is worked out on the basis of data saved about profits by country of origin and the visits made from the respective countries. The results allow the traders to make offers, consistent with the peculiarities of customers in the respective geographical regions.</td>
</tr>
</tbody>
</table>
It is defined through close observation of the correlation between new and existing customers. Raising the number of loyal clients entails direct boost of profits from trade operations. To evaluate clients and agents loyalty the methods for classification and clusterisation of website visits data can be used. Thus, the clients who are most valuable for an online shop can be identified, too.

From the most requested and visited pages describing the supplied goods and on the basis of purchases made, information is worked out about products which are not only a customer interest but also bring the greatest profits. Identifying these commodities can improve the range of goods.

The method of associating and finding events which happen in conjunction and goods which are bought together is used. On the basis of analysis of added goods into the consumer basket, commodities can be found, which externally do not look connected but are often bought together. The information from server sessions can be a resource for identifying regularities in customer behavior. The succession analysis can assist for planning the stock supplies, too.

Through extracting knowledge from the collected data we can identify the so called exceptional cases which significantly differ from the norms. The indicator is most often applied when fighting credit card frauds and when attempts for unauthorized access to the systems of e-commerce are identified.

To evaluate the Internet advertising campaigns we most often scrutinize the number and frequency of the advertisement views. As an effectiveness indicator we can calculate the correlation between the number of advertisement hits and the number of visitors on the page where the advertisement is displayed. Advertisements are important for online shops and to be effective they should reach the largest possible number of clients.

The specific indicators contribute to transform the available data into client and business awareness. The results help the managers to make adequate business decisions. The pointed out specific indicators promote the following conclusions about:

- **what the main sources of profits for the online shop are.** On the basis of identification of clients groups with similar demographic, psychological and behavioral characteristics and the available profits from them, conclusions can be drawn about the group the most valuable clients belong to;
clients’ satisfaction with the goods and services offered and the e-commerce system as a whole. The purpose is to understand to what extent the needs or expectations have been met and, if required, to improve the quality of service;

- sources of greatest profits, these goods and services, which have the greatest number of hits, are preferred and at the same time bought at most;

- availability of connected goods, identifying goods, which even though may not have direct relation among them, are often bought together and on this ground generate recommendations for new purchases;

- success of advertising campaigns, which are part of the marketing and communication strategy of the company;

- presence of risk, connected with online payments and access to the system and its data.

The indicators presented in the two tables, in our view, are essential to e-commerce. They are grounded on data taken from the server logs, which register the visits in an online shop. Although the nature of used data, as well as the methods for its processing, do not give entirely accurate results, we think that they can be used by the business analysts as an additional source of knowledge. The results of their measurement serve as a good ground for obtaining additional and useful business knowledge. Depending on the particular online commercial activity, the analysts may use all or part of the proposed indicators and integrate them into the general company business intelligent system. **We reckon, that the systematic use of all indicators as an addition to the ones that are evaluated on the grounds of data collected from online shop operations, would give the best results.**

In many cases, the choice of analysis indicators depends on the analytical software tools the company has at its disposal. For the analysis based on the usability of e-commerce websites, several software tools are usually used in parallel. Most frequently they are: the embedded tools in the systems for deducing statistical information; the web analytics free tools, the most popular of which is Google Analytics and the tools for extracting useful knowledge from web resources (Web Mining), such as RapidMiner, R and others.

**Conclusion**

As a summary to the above mentioned, we think that by means of processing data collected as a result of e-commerce site usage, one can gain valuable and useful information about customer visits in an online shop, about customer interests, their behavior, as well as the operation of the e-commerce system. The proposed system of key indicators can be used as an addition to all indicators, which are calculated on grounds of data collected in databases of online shops. This is grounded on the application of data mining techniques from the Internet resources and it is essentially significant for improving the processes of customer relations management and other marketing activities, which have an impact on the profits from the commercial activity to a great extent.
EVALUATION OF E-COMMERCE WEBSITES ON THE BASIS OF USABILITY DATA

Assoc. Prof. Dr Snezhana Salova

Abstract

By processing the data on the use of e-commerce websites there can be derived useful information concerning consumer visits in an online store, information on the interests of the buyers and their behaviour, as well as on the functioning of the system for the placement of orders. In the article there is revealed the nature of the process of analyzing websites for e-commerce on the basis of data on their use and is proposed a system of indicators for the assessment of these websites. The proposed key assessment indicators are of significance for the development of the processes in customer relationship management and other marketing activities.

Keywords: assessment indicators, e-commerce websites, usage.
APPLICATION OF ‘COST-VOLUME-PROFIT’ ANALYSIS IN THE HOTEL INDUSTRY (BASED ON SURVEY DATA OF HIGH-RANKING HOTELS IN THE NORTH-EAST REGION OF BULGARIA)

Assistant Professor Dragan Georgiev

Research in the field of management accountancy up-to-date, has been mainly preoccupied with the accounting systems of large manufacturing and merchandizing companies, while studies of organizations in the service sector was directed specifically at non-profit organizations in the public sector (Olson, Guthrie and Humphrey, 1998). At this stage, there are few empirical data and analyses on the use of management accountancy in tourism and the hotel industry in particular (Pellinen, 2003).

Revenue, expenses, volume of activities and economic results of the enterprises, discussed from the point of view of management accounting, have been the main object of research of a number of Bulgarian scientists, such as prof. Trifon Trifonov (Тrifinov, 2003), prof. Boychinka Yonkova (Yonkova, 2003) to name but a few. Indeed, the impact of specific factors upon the subject of business activities has been grossly overlooked in various industry sectors. Assoc. Prof. Svetlozar Stefanov (Stefanov, 2009), Rozalin Ivanov (Ivanov, 2012) and other authors are among those who focused their attention on existing flaws in accountability, analysis of revenue, expenses and volume of activities in the hotel industry, however they failed to see their interrelatedness in terms of management accounting. When reviewing Bulgarian scientific literature it becomes clear that alongside general assumptions, authors such as Theodora Rupska, Hrabrin Brashev and Snezhana Tsvetkova bring to the front CVP analysis and its scope of application (Rupska, 2010; Bashev, 1993) (Rupska, 2010) in terms of industry sector, many focusing on the agricultural sector in particular, taking into consideration the specifics of company operations in that particular sector and the way they are reported in the survey.

Speaking of the Bulgarian hotel sector, it seems that no in-depth and comprehensive empirical studies on the application of CVP analysis exist so far, which can help us understand to what extent said analysis is applicable to management accounting in hotel enterprises and which aspects of application can possibly bring valuable information feedback in the area of hotel management and practice. Arguably, the fulfilment of these two basic tasks will help meet the objective of the present survey i.e. to examine the application of ‘costs-volume-profit’ analysis in the high-rating hotels located in the north-eastern region of Bulgaria.
I. Research methodology

**Period of research:** July 8, 2014 – August 31, 2014

**Sample characteristics** – The survey embraces 24 businesses (See Appendix 1), which own or operate a total of 86 hotels in the north-eastern region with 31 792 hotel beds in total, representing 15.13% of total hotel beds for all high-ranking hotels (210 172) in the country and 44.16% (72 000) on the territory of north-east Bulgaria.

**Methodology of data collection and processing** – The survey is based on questionnaires to be filled in, with questions surveying respondents opinion on the aforementioned tasks. Collected data are processed with the help of the statistical software package (SPSS), with a descriptive analysis of findings.

**Limitations** – As the scope of the present study embraces a wide range of issues associated with management accounting, it leaves the door open for certain misinterpretations on the part of the respondents despite the initially given instructions. The study is limited to business operators of high-ranking hotels in the north-eastern region of Bulgaria.

II. Profile of operators and hotels

1) Classification of operators

![Fig. 1. Distribution in terms of legal entities](image1)

![Fig. 2. Distribution in terms of hotel management](image2)

![Fig. 3. Distribution on the basis of present or past state ownership in the hotel property](image3)

![Fig. 4. Distribution in terms of nationality of person having a controlling interest in the company](image4)

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1 Data provided by the National Statistical Institute with reference to accommodation units and accommodation distribution in terms of statistical zones, statistical regions and districts 2013.
B) Classification of hotel operators

Fig. 5. Distribution in terms of applied accounting system/basis

Fig. 6. Distribution in terms of hotel size

Fig. 7. Distribution in terms of hotel operation

Fig. 8. Distribution in view of hotel location

Fig. 9. Distribution in terms of hotel grading

Fig. 10. Distribution in terms of purpose

III. Application of management accounting in the hotel industry

1) Degree of application and evaluation of information utility in management accounting (management accounting approaches)

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2 All hotels (86 in total), are classified against specific criteria, provided under the Ordinance for categorization of accommodation units, catering and entertainment places: period of operation, distribution/geographical coverage, category and purpose or specifics.
Articles

Research methodology focusing on the management accounting (MA) approaches in the hospitality sector, hotels in the north-eastern region of Bulgaria in particular, is based upon the experience in similar research conducted by foreign authors. Our study aims to identify the feasibility and efficiency of the thirty (30) most popular approaches in management accountancy, in view of the survey conducted in 2009 by Pavlatos and Paggios (Pavlatos and Paggios, 2009). These approaches were divided into 5 groups, using Abdel-Kader and Luther classification (Abdel-Kader and Luther, 2006). The present study is based on the survey questionnaire of Assoc. Prof. PhD A. Atanassova employed in July, 2013, the purpose of which was to investigate the state of management accountancy in terms of actual use of MA tools, intention to use said tools, and the significance the Bulgarian users attribute to these tools. The question about degree of application relates not only to present time but to possible tools implementation in the future (within 3 years’ time). Information utility, generated by using the above tools is measured on the Likert scale - 1 to 5 point scale, where 1 stands for the lowest, and 5 for the highest degree of utility.

Section A: Cost Accounting
Evaluation of full cost (65.2%) and conventional methods for the distribution of indirect costs (65.2%) are among the most popular tools in management accounting in view of the surveyed sector, therefore data generated by these tools have received the highest scores by utility specialists. It is worth noting that evaluation of the marginal cost (17.4%) and ABC method are rarely used (4.3%), which can be the reason but also a justification for the low scores on their information utility. The reasons for the above finding can be various – on the one hand, the tools used in the analysis tend to incur some extra development costs that outweigh their implementation; on the other, information based on the assumptions of these two tools is seen unnecessary by the management, etc. In addition, experts at this stage do not foresee the use of either approach in the optimization of the ‘cost accounting’ section.

Section B: Evaluation of achieved results (operating profit)
To evaluate the results achieved, it is necessary to use the profitability factors (91.3%) and factors which relate to guests and their behavior (82.6%), such as number of guests arriving, average duration of stay, distribution of guests by nationality, etc. Information utility of these two sets of parameters is taken as the highest.

In the hospitality sector, useful information on IT software packages used in the management process can be found in the non-financial factors of innovations in service technologies, return on sales factors and benchmarking. Some of the more recent tools in management accounting such as EVA (Economic Value Added) and balanced scorecard (BSC) are barely recognizable and poorly implemented (8.7% and 4.3% accordingly). These are comparatively new tools and their application is deemed necessary only if managers and experts become convinced in the benefits they will

3 The present survey is conducted with the financial support of the project “Application of CVP analysis in the hotel industry on the basis of high-ranking hotels along the Black sea coast”, 2014 under the guidance of Assoc. Prof. PhD A. Atanassova. The project was realized by Assistant Prof. Dragan Georgiev.
Table 1

Application of management accounting tools

<table>
<thead>
<tr>
<th>Management Accounting Tools</th>
<th>Is it applied?</th>
<th>Evaluation (score)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td><strong>Section A: Cost accounting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluating simplified cost</td>
<td>34,8</td>
<td>65,2</td>
</tr>
<tr>
<td>Evaluating full cost</td>
<td>65,2</td>
<td>34,8</td>
</tr>
<tr>
<td>Evaluating marginal cost</td>
<td>17,4</td>
<td>82,6</td>
</tr>
<tr>
<td>Applying ABC method</td>
<td>4,3</td>
<td>95,7</td>
</tr>
<tr>
<td>Use of conventional methods</td>
<td>65,2</td>
<td>34,8</td>
</tr>
<tr>
<td><strong>Section B: Evaluation of achieved results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability factors</td>
<td>91,3</td>
<td>8,7</td>
</tr>
<tr>
<td>Non-financial factors</td>
<td>82,6</td>
<td>17,4</td>
</tr>
<tr>
<td>Non-financial factors</td>
<td>52,2</td>
<td>47,8</td>
</tr>
<tr>
<td>Non-financial factors</td>
<td>43,5</td>
<td>56,5</td>
</tr>
<tr>
<td>Evaluation of ROI</td>
<td>30,4</td>
<td>69,6</td>
</tr>
<tr>
<td>Evaluation of economic profit</td>
<td>34,8</td>
<td>65,2</td>
</tr>
<tr>
<td>Economic Value Added (EVA)</td>
<td>8,7</td>
<td>87</td>
</tr>
<tr>
<td>Return on sales</td>
<td>43,5</td>
<td>56,5</td>
</tr>
<tr>
<td>Balance Scorecard (BSC)</td>
<td>4,3</td>
<td>91,3</td>
</tr>
<tr>
<td>Benchmarking</td>
<td>47,8</td>
<td>47,8</td>
</tr>
<tr>
<td><strong>Section C: Budgeting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To plan annual operations</td>
<td>56,5</td>
<td>43,5</td>
</tr>
<tr>
<td>To monitor costs</td>
<td>82,6</td>
<td>17,4</td>
</tr>
<tr>
<td>To coordinate activities</td>
<td>56,5</td>
<td>43,5</td>
</tr>
<tr>
<td>To evaluate managers</td>
<td>21,7</td>
<td>78,3</td>
</tr>
<tr>
<td>Preparing break-even budgets</td>
<td>17,4</td>
<td>82,6</td>
</tr>
<tr>
<td>Preparing flexible budgets</td>
<td>43,5</td>
<td>56,5</td>
</tr>
<tr>
<td>Activity based budgeting</td>
<td>39,1</td>
<td>60,9</td>
</tr>
<tr>
<td>Developing strategic plans</td>
<td>39,1</td>
<td>60,9</td>
</tr>
<tr>
<td><strong>Section D: Data on decision making</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis of product profitability</td>
<td>73,9</td>
<td>21,7</td>
</tr>
<tr>
<td>Analysis of clients profitability</td>
<td>47,8</td>
<td>52,2</td>
</tr>
<tr>
<td>Analysis of the relation “costs-volume-profit”</td>
<td>78,3</td>
<td>21,7</td>
</tr>
<tr>
<td><strong>Section E: Strategic analysis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector analysis</td>
<td>65,2</td>
<td>34,8</td>
</tr>
<tr>
<td>Analysis of competitors strengths and weaknesses</td>
<td>60,9</td>
<td>34,8</td>
</tr>
<tr>
<td>Analysis of competitiveness</td>
<td>65,2</td>
<td>34,8</td>
</tr>
<tr>
<td>Long-term forecasts</td>
<td>39,1</td>
<td>60,9</td>
</tr>
<tr>
<td>ABM (Activity Based Management)</td>
<td>34,8</td>
<td>65,2</td>
</tr>
</tbody>
</table>

Note: Interviewing respondents made it clear that part of them did not answer properly the question: “Do you apply budgeting tools as activity based budgeting tool or activity based management tool?” The source for this confusion seems to be the fact, that the respondents associate the term “activities” with basic and ancillary hotel activities and not with budgeting and operations management as is the case. This was the reason for the invalid “Yes” answers to these two tools which accounted for their increased share.
We should emphasize the fact that several business operators have voiced their intention to use the aforementioned tools in the near future.

**Section C: Budgeting**

Direction “budgeting” is key in generating data on planning of annual operations, monitoring expenses and coordinating activities and operations of different hotel operators, which is justified by the large number of operators using the aforementioned tools for budgeting, together with the high utility scores (from 4.14 to 4.43) in terms of received data. Businesses in the hospitality sector make frequent use of flexible budgets (43.5%) in the management process and more rarely of zero-based budgets (17.4%). The latter are normally used when changes arise in the hotel product – changes in the operations involved in a service provided and/or inclusion of a new service. If no changes occur in the hotel product, flexible budgets will be calculated, based on retrospective data from previous accounting periods, with relevant volumes of activity. A relatively high per cent of hotel organizations (39.1%) set out their long-term strategic plans for development and submit high scores on their data utility (4.23). It is clear, that dynamics in demand (changes in market segments, customer awareness of product availability and innovations and resulting change in customer behavior) and supply (the ongoing process of service sector innovations and modernization of hotel facilities) determine the significance of data for making wise long-term decisions. Besides, hotel operations are seen as economic activities with return on investment over a comparatively long period of time which means that good forecasts are crucial for realizing yield upon investment.

**Section D: Data on the decision making process**

The scores for this section reflect the use of many and different tools for the decision making process in the hospitality sector, with product profitability analysis taking the lead (73.9%), followed by CVP analysis (78.3%), with high scores for their information utility with 4.33 and 4.08 respectively. CVP is considered an essential tool in hotel management accounting and research of the impact of the hotel product and its specifics. It would greatly contribute to address some of the key assumptions embedded in the CVP approach and its applications. Taking into account the specifics of the hotel product ‘aggregate demand for services’ which means that said services are perceived as an aggregate, we cannot but draw the conclusion that the profitability analysis of hotel products is largely irrelevant in terms of decisions to be made about the hotel product. This calls for a profitability analysis of customers against various classification criteria and it was adopted in the hotel sector as a useful tool implemented by a number of hotel organizations (47.8%). Many hotel operators will also resort to using said tools in their managerial valuations.

**Section E: Strategic analysis**

More than half of the existing hotel organizations employ the strategic analysis tool for sector studies (65.2%), analysis of competitors strengths and weaknesses (60.9%) and competitiveness analysis (65.2%), whereby these approaches scored high in relation to the utility of generated data. Long-term planning and sector analysis tools are expected to extend their scope of application. Arguments presented in relation
to strategic planning (Section C: Budgeting), also hold true for the strategic analysis methods.

A key problem that needs to be addressed is the implementation of integrated information systems which largely account for the ‘cost-benefit’ relationship and effectiveness of tools applied in the process of management accounting in general.

2) Management accounting and supporting integrated information systems

Hereinafter various variants for organization and implementation of management accounting are discussed in their relation to hotel organizations and their integrated information systems. In view of the first direction, it is agreed that different variants can be used in a profile-relevant combination (Fig.11). In this respect, most of the respondents agree that management accounting is employed by the financial director or head of accountancy in the organization, (82.6 %), who are aided by a special department (17.4%) or other staff (8.7%).

Another very interesting pattern emerging in the hotel organizations is implementation of software products of the integrated information system (34.8%), which explains why so many functions are shouldered solely by CFOs and not by departments and members of staff (26.1% in total). A large per cent of data on the decision making process is gathered by the software products and further processed and structured in reference books on the top and middle management level of CFOs and chief accountants.

In view of the second direction of analysis, is becomes clear that all organizations use dedicated software for hotel property management (PMS – Property Management System), which is normally part of the hotel integrated information systems. It is also clear, that the benefits outweigh the costs associated with implementation, maintenance and staff training in terms of large to medium hotels, hotel chains and independent hotel operators. Data on the goals of the management accounting can be extracted
from the accounting software, inventory programs, programs for generated sales, etc. It is still undecided whether optimal integration links exist between the individual information systems and what is the time lag since the occurrence of the first event and its inclusion for the purposes of analysis.

The stage at which applicable tools and information systems are being examined serves as the starting point for a further and more detailed research of the CVP analysis – how is management accounting progressing, what is the scope of applicable tools with regards to studied directions and specific method implications.

IV. Application of cost-volume-profit analysis

The respondents identified those aspects in the analysis of the relationship between changes in the volume of activities, and changes in the total sales revenue, expenses and net profit which they applied or intend to apply by submitting a score for the utility of generated data as well.

Research results serve to indicate that analysts apply the CVP analysis to all aspects of management accounting, which clearly speaks of its significance for generation of data on hotel management. Taking into account the specifics of the hotel product we cannot but accept as logical the results on the extent and frequency of application of CVP analysis, as discussed hereinafter.

With regards to planning, it is evident that determination of the critical/breakeven point in the CVP analysis is frequently overlooked (43.4%) and is generally applied to a set of events (possible occurrences) (17.4%) or to monthly planning (17.4%). It is clear that one of the most common aspects of this approach often identified with the CVP method itself remains misjudged. This can be attributed to the dynamic character of consumer demand which tends to restrict critical volume planning within short time horizons i.e. periods when hotels have available booking information or possible occurrences, for example a sudden drop in consumer demand or when the hotel receives bookings for an off-season event.

Determining the operating leverage factor is not seen as a priority aspect either (34.8%) in analyzing the operational risk in hotels. Here, the ‘arithmetic mean’ score is the lowest which can be explained with the low degree of application, however the mode range index indicates that hotel organizations which analyze critical volume of activity, place a high score on its information utility.

In the planning process, three aspects of the CVP analysis stand out as being most frequently applied – the CVP-based sensitivity analysis of the operating income (77.9%), volume of activity needed to reach the desired profit level (69.5%) and making decisions about the product mix (78.1%) These three aspects are routinely considered on a monthly or yearly basis, whereas the score on their information utility is relatively low (3.89).

For example, CVP analysis helps managers take decisions about control in the surveyed organizations, 86.8% of them examine deviations in revenue, costs and operating income due to changes in the volume of activity, whereas 78.2% conduct analysis on areas of responsibility. In contrast to the planning function, the CVP-based
### Table 2

<table>
<thead>
<tr>
<th>Functions</th>
<th>A study of the impact of changes in volume upon changes in revenue, costs and organization financial results</th>
<th>Applied (%)</th>
<th>Not applied</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Daily</td>
<td>Weekly</td>
<td>Monthly</td>
</tr>
<tr>
<td>Planning</td>
<td>Defining the volume of activity which leads to a break even point, with known product/service price and costs – a critical point in quantity and value</td>
<td>-</td>
<td>43</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Defining the volume of activities aiming to reach the desired profit level</td>
<td>-</td>
<td>-</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Conducting Analysis which aims to identify the sensitivity of operating profit when changes occur in the following factors – volume, pricing, variable costs per unit product and fixed costs</td>
<td>-</td>
<td>-</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Defining the operational risk in view of the operating leverage factor (the relation between marginal profit and operating income)</td>
<td>-</td>
<td>-</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>When making decisions about the product mix – what services, in what volume, prices, fixed and variable costs, in view of limitations to capacity.</td>
<td>-</td>
<td>4.3</td>
<td>30</td>
</tr>
<tr>
<td>Control</td>
<td>Research into areas of responsibility, with evaluation of performance and activities in terms of revenue generated and costs incurred for a specific volume of activities</td>
<td>-</td>
<td>8.7</td>
<td>47.8</td>
</tr>
<tr>
<td></td>
<td>Analysis of allowed deviations from the point of view of revenue, costs and profit for a specific volume of activities</td>
<td>4.3</td>
<td>13</td>
<td>47.8</td>
</tr>
<tr>
<td></td>
<td>Making decisions of the type “Shall I buy it or manufacture it”, on the basis of size of variable costs, with two or more alternative decision scenarios</td>
<td>-</td>
<td>-</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Taking into consideration a single offer with special conditions attached (availability is regarded in view of variables such as marginal costs) for example, to extend the guest’s stay at a preferential rate or a last minute offer</td>
<td>1.3</td>
<td>17.4</td>
<td>8.7</td>
</tr>
<tr>
<td></td>
<td>When decisions to start, continue or stop an activity are taken, taking into account the volume of activities and associated revenue, fixed and variable costs involved</td>
<td>4.3</td>
<td>17.4</td>
<td>39.1</td>
</tr>
<tr>
<td></td>
<td>Analysis of the impact of changes arising in the structure of the product mix (basic and ancillary services) with limited financial resource</td>
<td>-</td>
<td>-</td>
<td>39.1</td>
</tr>
</tbody>
</table>
control function is more widely used – on a daily, weekly or monthly basis or with a set of events (possible occurrence). Results from the above analysis are most highly scored for information utility.

Nearly all organizations (82,5%) use the CVP analysis to help them decide whether to start, continue or wind down their operations, which proves useful in breaking down fixed costs into necessary fixed costs (permanent staff salaries) and discretionary costs or ongoing business spends (for example salaries paid to seasonal workers), which in turn supports relevant cost analysis. This aspect of the CVP analysis is applicable to all time periods and in case of possible occurrence. On the one hand, the above decisions are seen as routine in the running of seasonal hotels where analysis on annual basis is applied. But when hotels rent out space to service or retail operators dependent on external factors such as the weather, CVP analysis is made necessary for other time options.

CVP analysis is used in a large number of organizations (78,2%) to aid the decision making process with special offers where only variable costs are taken into account. This aspect of the CVP approach is applied mainly in the case of possible occurrence and covers a very short time span. With decisions of the type “Shall I buy it or manufacture it?” CVP analysis is used by a smaller number of enterprises with the option for ‘possible occurrence’.

When the CVP approach is used for the purpose of organization’s in-house financial and accounting analysis, aiming to examine the effect of volume of activity upon the business operating income (profit), it is seen as the most significant aspect of the CVP tool. In the survey, it was applied in 91,2% of the organizations, exhibiting one of the highest scores (4,29) for information utility. In hindsight, researchers often analyzed the cost-volume-profit relationship to help them decide the impact of such important operating factors as volume of activity and its effect upon revenue, costs and operating income while executing the control function to track deviations or changes in variables with reference to previous periods of accounting. The utility of thus generated data is estimated the highest.

The CVP analysis is increasingly used by hotel organizations in establishing their price setting policies on a wide scope of basic and ancillary services. Marginal input is used as an index in the price setting mechanism both in the hotel (82,6%) and restaurant sector (69,4%), mostly in the case of possible occurrence.
V. Conclusions

Organizations operating high-ranking hotels, have significantly developed their management accounting practices in the context of the Bulgarian economic environment. Moreover, the arsenal of analytical tools they applied, is largely determined by the specifics of the hotel product and the needs to be addressed from the point of view of management accounting and relevant data collection. It is worth noting, that all hotel organizations embraced by the present survey demonstrated well-designed and functional information systems which are a key factor in obtaining meaningful information in terms of the ‘cost-benefits’ principle. The organizations under study, applied conventional management accounting methods to the discussed sections of the survey, though in the future they are prepared to resort to more modern tools in their analysis. A number of factors are acting upon, inhibiting the distribution of new methods of analysis such as development of theoretical approaches, training and practical education in management accounting (on many occasions boiled down to cost accounting), the situation before and after the transition period to market economy by the end of last century, economic interests of local enterprise owners and entrepreneurship, staff skills and qualifications, etc. Conducted CVP analysis made us draw the conclusions, that it is one of the most common tools used by hotel organizations to submit high utility data, as part of a number of effective management accounting methods applied to the hotel industry.

Surveyed hotels, exhibit well-developed information systems with capabilities for data extraction on a number of components of the volume of activity (bed nights) in the hotel sector – occupancy rate and load factors depending on seasonality; bed nights for both children and adults; one night guest and average guest stay at the hotel; bed nights in view of guest nationality, etc. In view of the significance of a detailed analysis of factors determining the volume of activity but also having effect on the CVP variables, we believe that implementation of a standardized approach to measure said effect will be seen as a tangible contribution to research in this area. Such an approach should be consistent with the analysis on identified areas/centres of responsibility.

Appendix 1 – List of hotels and organizations subject of research

<table>
<thead>
<tr>
<th>N</th>
<th>Organization</th>
<th>N</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grand Hotel Varna JSC</td>
<td>13</td>
<td>Astoria Beach Ltd.</td>
</tr>
<tr>
<td>2</td>
<td>International Hotel JSC</td>
<td>14</td>
<td>BIRS Ltd.</td>
</tr>
<tr>
<td>3</td>
<td>Zlatni Pyassatsi JSC</td>
<td>15</td>
<td>Lylia Hotel Ltd.</td>
</tr>
<tr>
<td>4</td>
<td>Top Travel BG - Златни Пявасати JSC</td>
<td>16</td>
<td>Sunny Day JSC</td>
</tr>
<tr>
<td>5</td>
<td>Galleria Hotels Ltd.</td>
<td>17</td>
<td>Varnenski бряг JSC</td>
</tr>
<tr>
<td>6</td>
<td>Dolce vita 2007 JSC</td>
<td>18</td>
<td>Riviera JSC</td>
</tr>
<tr>
<td>7</td>
<td>Terra Tour Service D</td>
<td>19</td>
<td>Briz 2 JSC</td>
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Articles

<table>
<thead>
<tr>
<th></th>
<th>Mig Market Ltd.</th>
<th>20</th>
<th>Accuracy Activities</th>
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<tbody>
<tr>
<td>9</td>
<td>Gala Tours Ltd</td>
<td>21</td>
<td>Pirin Tourist Company JSC</td>
</tr>
<tr>
<td>10</td>
<td>Syrius 49 D</td>
<td>22</td>
<td>Hotel Management Company EOOD</td>
</tr>
<tr>
<td>11</td>
<td>Omega Bulgaria Ltd.</td>
<td>23</td>
<td>Tourist Holding’ Rusalka Holidays’ JSC</td>
</tr>
<tr>
<td>12</td>
<td>Glotrako Ltd.</td>
<td>24</td>
<td>Albena JSC</td>
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</tbody>
</table>

References

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APPLICATION OF THE ANALYSIS OF THE RELATION COST-VOLUME-PROFIT IN HOTEL KEEPING
(ON THE BASIS OF THE HIGH-CATEGORY HOTELS IN THE NORTHEASTERN REGION, BULGARIA)
Assist. Prof. Dragan Georgiev

Abstract

At this stage there is still insufficient empirical data and analyses regarding the application of the tools of managerial accounting in the tourist sector and mainly in the hotel industry. The present study examines the application of the interdependence cost-volume-profit with a view to the specific character of the hospitality product in Bulgarian high-category hotels. To that end there is studied the rate, the frequency of use and the informational usefulness of the aspects of the analysis in the context of the attained level of development of managerial accounting in the enterprises, which operate the hotels in the Northeastern region, Bulgaria.

Keywords: managerial accounting, hotel keeping, approaches of managerial accounting, „cost-volume-profit”.
AN INTEGRATED MODEL FOR ASSESSING THE ACTIVITY OF THE ENTERPRISE

Assist. Prof. Iliyan Hristov

Introduction

In the 1990s the traditional financial accounting models for the assessment of an enterprise’s performance were criticized because of their inability to incorporate in themselves the alternative costs of the invested capital. This brought about a renewed interest in the value-based approach, and as a result, adequate new models were sought to measure the financial performance of the business entity. One of these models is the economic added value, representing an indicator of residual income of the enterprise, a measure of the wealth created by the company for its shareholders, and business management philosophy. The model occupies a substantial intermediate position between the accounting and the financial evaluation model and comprises in itself the most important information about the company’s condition.

The purpose of this paper is to develop a practical application model of an inherently integrated indicator of the presentation and measurement of the enterprise’s performance in two time perspectives: the past and the future. The model of financial condition assessment will be applied to Bulgarian pharmaceutical companies, applying the IAS / IFRS, producing generic medicines with disclosed expenses for research and development (R & D) in the officially published annual financial statements and management reports. The main tasks related to the implementation of the thus-formulated objective include: 1) selection of key indicators for assessing the performance of the enterprise; 2) presentation of the model of evaluation the enterprise’s performance; and 3) seeking dependencies between the lagging and the leading indicators in the integrated assessment model.

The effective model of assessing the enterprise’s performance results from the balancing of the two Key Performance Indicators (KPI): 1) lagging (financial) indicators; and 2) leading (non-financial) indicators, in order to find the golden mean in combining and balancing these contradictory approaches in the evaluation of the business entity’s performance.

1. Key performance indicators from a financial perspective: lagging indicators

From the financial perspective of the enterprise performance assessment we consider the economic value added indicator (EVA). EVA is the difference between

---

1 Pharmaceutical companies were chosen for the study due to the fact that they are constantly seeking to maintain a highly technological production of innovative and generic products.

the net operative taxed profit and the value of the capital invested in the company. It is the residual revenue of the company, a measure of the wealth created by the company for its owners (shareholders). The positive result derived from the calculations by formula (1) shows the value remaining in the enterprise by which the net profit exceeds the alternative costs of the equity and borrowed capital.

\[
EVA = NOPAT - WACC \times IC
\]

where:
- EVA – economic value added;
- NOPAT – net operative profit after taxes;
- WACC – weighted average capital cost; IC – invested capital.

In its nature, the invested capital represents the sum of the equity and liabilities as per the financial statement in the beginning of the reporting period, reduced by the non-interest liabilities. These are financial sources, used in the company’s activities through which the company’s net operative profit after taxes is obtained. NOPAT is the financial result of the company’s core activity after deducting the corporate tax. The average weighted capital cost (WACC) is a liability payable from the realized profit that should be a reward for the investors for the capital they have invested in the enterprise and the assumed risk.

Formula (1) can also be presented through an indicator, expressing the ability of the enterprise to generate a profit from the resources invested in its activities – cost-effectiveness of the invested capital. The latter is regarded as a key investment indicator that is given a lot of attention due to the fact that it “characterizes the company’s capability of capital growth, its financial sustainability and the rational management of its capital structure”.

Cost-effectiveness is a summarizing economic indicator of the enterprise’s performance calculated as the ratio of the achieved financial result and the value of invested capital (Formula 2). Positive values of the indicator answer the question of what earnings are derived from BGN 1 of invested capital. Negative values indicate the pace of “meltdown” of the capital invested in the enterprise, i.e. extent of its decapitalization.

\[
ROIC = \frac{NOPAT}{IC}
\]

where:
- ROIC is the cost effectiveness of the invested capital, while NOPAT and IC have the same significance as in formula (1).

By replacing formula (2) in (1), we arrive at the three key indicators of assessment of an enterprise’s performance within the financial perspective of EVA:

\[
EVA = (ROIC - WACC) \times IC
\]

\footnote{Todorov, G. Financial and accounting analysis of the enterprise Steno, Varna, 2005, p. 267.}
The difference between the return of capital and the cost of capital is known as the economic “spread” (ROIC – WACC). It allows us to evaluate the effectiveness of the company’s activities from the point of view of its economic growth, as well as its ability to create value. This is hyper-profitability of the invested capital. A positive “spread” (ROIC-WACC>0) shows the generated economic added value of the enterprise. Conversely, a negative “spread” (ROIC-WACC<0) indicates that the company is losing business and decreasing its value. A third, midway option is also possible (ROIC-WACC=0), whereby the enterprise keeps its value unchanged.

Adapting and developing further the model presented by V. Kuznetsov (formulas 4 and 5), the indicator cost-effectiveness of the invested capital can be decomposed, whereby the value of the net sales income and the sum of current assets are added to it. This would help us research the influence of more variables integrated internally in the indicator of the economic added value. Thus we can identify the main key value indicators and factors impacting the EVA.

\[ ROIC = \frac{NOPAT}{IC} \times \frac{S}{S} \times \frac{CA}{CA} = \frac{NOPAT}{S} \times \frac{S}{CA} \times \frac{CA}{IC}, \]

or

\[ ROIC = ROS \times CAT \times OIC, \]

where:
ROIC – cost-effectiveness of the invested capital;
S – net sales income;
CA – current assets;
ROS – cost-effectiveness of revenues;
CAT – current assets turnover;
OIC – share of current assets in the invested capital, while the remaining abbreviations have the same meaning as in the previous formulae.

The sales income profitability index reveals the net profit margin. Examination of individual elements constituting the net operating profit after taxes enriches the information content of the indicator by showing the individual impact of the separate components on it (Formula 6).

\[ ROS = \frac{NOPAT}{S} = \frac{EBIT \times (1 - T)}{S}, \]

where:
EBIT – pre-interest and pre-tax profit;
T – taxes, while the remaining abbreviations have the same meaning as in the previous formulae.

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4 It is also called economic added rate of return of the capital invested in the enterprise.
When converting the formula for calculating the ratio of turnover of current assets by dividing the numerator and denominator to the size of net sales revenues, additional information is obtained about the commitment of current assets (CA), servicing BGN 1 turnover (formula 7). The disaggregation of the CA deepens the analysis by providing information on the turnover of the three structural elements: inventory (I), accounts receivable (CR) and cash (C).

\[
CA = \frac{S}{CA} = \frac{S \times \frac{1}{S}}{CA \times \frac{1}{S}} = \frac{1}{\frac{CR}{S} + \frac{C}{S}}, \tag{7}
\]

Overall, current assets are most susceptible to management within the structure of the indicator EVA. The reason for this is the fact that managers can most easily impact inventories, receivables and cash, being an object of flexible and immediate internal control. The creation of a logistic connection with customers leads to faster collection of receivables from them, i.e. there is a rapid transformation in cash equivalents. The higher the turnover of cash from operating activities, the more effective the management of the company’s current assets.

The division of current assets into their constituent elements (formula 8) allows for the share of each of these elements to be presented in the amount of the invested capital, whereby outlining the impact of each element on the overall value of the indicator.

\[
OIC = \frac{CA}{IC} = \frac{1 + CR + C + OCA}{IC}, \tag{8}
\]

The weighted average capital cost (formula 9) of the enterprise depends on the sources forming the overall capital. It is determined as the average weighted value of the prices of the individual forms and methods of financing. The economic significance of the price of capital is measured as a percentage of the price that the company has to pay to use the resources creating its capital: equity and borrowed capital.

\[
WACC = \frac{E}{D + E} \times R_e + \frac{D}{D + E} \times R_d \times (1 - T), \tag{9}
\]

where:
WACC – the weighted average capital cost;
E – equity;
D – borrowed capital;
R_e – equity price;
R_d – price of borrowed capital;
T – taxes.

Current financial assets are not included in the invested capital due to the fact that they do not contribute to the enterprise’s operating profit.
In light of the presented analysis a comprehensive segmented picture of the enterprise is drawn, allowing to identify key indicators affecting the profitability indicators of the capital invested. Thus the profitability links the level of profit with the used assets and the reported revenues in the economic process. The analysis of these ratios over several reporting periods may reveal the influence of each indicator on the rate of profit. Formula (5), allows for the quantification of the impact of the improvement or deterioration of key ratios in the indicator EVA. The synthesis of the above results in the conclusion that the improvement in some of these indicators within the proposed model will result in a higher value of the profitability of invested capital, and in general, to a higher economic added value.

The above described and analyzed key performance indicators within the financial perspective of EVA have significant drawbacks. First of all, short-term positive results can be achieved at the cost of future negative outcomes in a long-term perspective. Next, the deterioration of the quality of products in order to reduce the cost of production results in reduced customer satisfaction and a decrease in future sales revenue. Finally, financial ratios are historical, i.e. they are the result of operations and facts in the past and are not a reliable indicator of the future as an only benchmark.

In essence, the financial indicators help to quantify the economic added value indicator. They explain the results only after the said results have been achieved, i.e. they are lagging indicators of value creation in the enterprise. If they are applied on their own, the financial indicators are inadequate and insufficient due to the fact that the information contained therein is presented in a targeted, narrow and limited manner. They describe only historical processes, as they report operations that have already been implemented.

2. Key indicators to assess the results achieved by the company in the non-financial perspective: leading indicators

In their nature, ROIC and EVA are historical indicators that can have positive values in the short term. But in the long term businesses need to take into account those non-financial KPI, which will lead to increased financial performance indicators and will generate economic added value.

C. Ittner, D. Lacker and M. Rajan state in their study that 36% of the companies in the sample they have researched (114 out of 317 studied companies) used non-financial indicators in the evaluation of results. Some of the relevant non-financial indicators to assess the activities of the studied enterprises are: customer satisfaction, non-financial strategic objectives, quality of the supplied product or service, productivity, market share, employee satisfaction, process improvement and reengineering, employees’ development and training, new products development, innovations, etc. By applying an empirical test of the above indicators the authors displayed four alternative leading performance indicators in a non-financial perspective:7

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• The ratio of spending on research and development to the net amount of sales. The indicator measures the propensity of the company to search for new products.
• The ratio of the average number of employees and the net revenue from sales. The indicator assesses the ability of the organization to produce and distribute their products effectively.
• The ratio of the company’s market value to its book value. It reveals the growth of the company and its investment opportunities.

The non-financial indicators are significantly more strongly associated with future results. They contain additional information that is reflected in the financial (lagging) indicators much later, in a subsequent accounting period. The weaknesses in the financial KPI can be eliminated by combining them with non-financial indicators. The determination of leading non-financial indicators helps to achieve positive values of the indicator EVA in the long term.

3. Applying the integrated model of assessing a company’s performance

The full picture and assessment of the company’s performance can be obtained only if we combine the lagging and leading performance indicators, and consider them in their logical connection, unity and sequence (Figure 1). The current values of these indicators are aimed at the past and the future, because they reflect past and possible future developments in the activities of the enterprise. It is appropriate to position the assessment of the company’s activities in an intermediate position, by reformulating the key performance indicators in a nexus and connection.

Figure 1. Integrated model of assessing a company’s performance

For the purposes of the empirical test the model of performance assessment will be applied to Bulgarian pharmaceutical companies. The study was carried out in the period 2007 – 2012. The criteria applied in the choice of companies were as follows: 1) that they have published their annual financial reports, appendices thereto and annual
management reports; 2) that they incur costs for research and development; and 3) that they publish the said costs in their annual financial statements and the appendices thereto. Only 2 out of the 23 Bulgarian pharmaceutical companies complied with the above criteria, therefore the assessment model was applied to the companies Balkanpharma Razgrad JsC and Balkanpharma Troyan JsC.

Table (1) shows the values of the lagging and leading indicators of the integrated model of company performance assessment.

Balkanpharma Troyan JsC demonstrated a more pronounced advantage in the indicator share of profits resulting from BGN 1 of sales revenue during the period in consideration. On the basis of the values obtained for this indicator in the period 2010 – 2012 it can be concluded that the company achieve the optimal cost-effectiveness for a production enterprise. The country’s policy in regulating the mechanisms of price-formation of medicines has a considerable impact on this coefficient. This in turn limits the profit margin registered by the producers.

The Turnover Coefficient characterizes the amount of the sales made with BGN 1 of current assets. For Balkanpharma Troyan JsC this indicator is higher, with an initial decrease and subsequent increase. For Balkanpharma Razgrad JsC there is also an initial drop in the value of the indicator, followed by steady growth of the number of turnovers made with current assets.

Inventories and receivables have a significant impact on the indicator share of current assets in the invested capital for companies, therefore it may be concluded that most of the current assets are less liquid. In this case, it can be interpreted as a sign of increased production over the period. The significant influence of receivables in the invested capital, whose highest values for Balkanpharma Razgrad JsC were in 2008 and for Balkanpharma Troyan JsC in 2007, are a sure sign of the liquidity crisis that spread across the country and its impact on the interaction between enterprises. The adequate and appropriate working capital management decisions taken clearly stand out in the subsequent years of the analyzed period, which led to the normalization of the values of the indicator. The low values of the ratio of cash in the invested capital in both companies testify to the rational and efficient use of the most liquid assets.

Table (1) clearly shows that neither of the studied companies created a residual income. Moreover, instead of generating value they consumed the funds invested in their activities. Balkanpharma Troyan JsC had greater negative values of the indicator economic added value in the first two years of the period. In the following years the values of the indicator exceeded those of the other studied company. Although both companies generated a profit from their operations during most of the studied period, the profit was not sufficient in size to cover the alterative cost of the capital employed. In 2007 Balkanpharma Razgrad JsC saw the most favorable value of the indicator EVA. The reasons for this were as follows: 1) a higher profit during the period; and 2) the lowest cost of capital employed in the business. On the whole, there was a general

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9 Due to the fact that the considered companies are not listed on the Bulgarian Stock Exchange, the ratio “market to book value of the company” will not be featured in the integrated evaluation model.

10 The optimal value of the coefficient for production companies is determined in the range of 0.08-0.1.
<table>
<thead>
<tr>
<th>Indicators</th>
<th>Balkanharma Roger JSC</th>
<th>Balkanharma Troyan JSC</th>
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<tr>
<td>Lagging and leading indicators of the integrated model of company performance assessment</td>
<td></td>
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<tr>
<td>The ratio of spending on research and development to the net amount of sales</td>
<td>0.022</td>
<td>0.029</td>
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<tr>
<td>The ratio of the average number of employees to the net revenue from sales</td>
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<td>0.016</td>
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<tr>
<td>Cost-effectiveness of revenue from sales (ROS)</td>
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<td>Current assets turnover coefficient (CAT)</td>
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<td>Inventories / APP</td>
<td>0.174</td>
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<td>Current receivables / APP</td>
<td>0.176</td>
<td>0.251</td>
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<td>Cash / APP</td>
<td>0.089</td>
<td>0.222</td>
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<td>Share of current assets in the invested capital (OC)</td>
<td>3.32</td>
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<td>Inventories / Invested capital</td>
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<tr>
<td>Current receivables / Invested capital</td>
<td>3.18</td>
<td>0.145</td>
</tr>
<tr>
<td>Cash / Invested capital</td>
<td>0.088</td>
<td>0.133</td>
</tr>
<tr>
<td>Cost-effectiveness of the invested capital (ROIC)</td>
<td>0.048</td>
<td>0.316</td>
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</table>
## The weighted average capital cost

<table>
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<tr>
<th>Invested capital (in thousand BGN)</th>
<th>The weighted average capital cost</th>
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<tr>
<td>3-808</td>
<td>353-9</td>
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<tr>
<td>35613</td>
<td>37498</td>
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<tr>
<td>35261</td>
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<td>46519</td>
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<td>40372</td>
<td>40020</td>
</tr>
<tr>
<td>40715</td>
<td>38040</td>
</tr>
<tr>
<td>Relative share of equity</td>
<td>0.58</td>
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<tr>
<td>Relative share of interest debt</td>
<td>0.5</td>
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<tr>
<td>Equity value (in %)</td>
<td>12.28%</td>
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<tr>
<td>Value of borrowed capital (in %)</td>
<td>17.51%</td>
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<tr>
<td>Tax rate (in %)</td>
<td>10%</td>
</tr>
<tr>
<td>Weighted average cost (WACC)</td>
<td>11.57%</td>
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<tr>
<td>Economic value added</td>
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<tr>
<td>Economic value added (in thousand BGN)</td>
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<td>1411.65</td>
<td>649.64</td>
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<td>1107.81</td>
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<td>-448.31</td>
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<tr>
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<td>-292.56</td>
</tr>
<tr>
<td>0.94</td>
<td>1723.99</td>
</tr>
<tr>
<td>1523.41</td>
<td>-</td>
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</table>
trend of improvement after 2009, expressed on the one hand, in the declining negative value of the indicator EVA, and on the other, in the tentatively rising rate of added value (DEVA). The other studied company, Balkanpharma Troyan JsC, registered a positive value of the indicator only in 2010, with a subsequent deterioration, followed by an improvement in the valuation of economic value added. This is evidenced by the present value change of the indicator EVA. Among the external reasons for the negative results of the indicator economic value added we can point out the severe financial and economic crisis that affected Bulgaria in the period after 2007.

To establish the relation between the lagging and the leading indicators in the integrated model of company performance assessment, it is necessary to apply the correlation analysis. The measure of linear probabilistic link between these two types of indicators is represented by the correlation coefficient:

$$r = \frac{\sum_{i=1}^{n} (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n} (x_i - \bar{x})^2 \sum_{i=1}^{n} (y_i - \bar{y})^2}}.$$ \hspace{1cm} (10)

where:
- $r$ – correlation coefficient;
- $x$ – values of the lagging indicator EVA;
- $y$ – values of the leading indicators.

The statistical hypotheses of the significance of the correlation coefficients are tested. The following hypotheses are formulated: $H_0: \rho = 0$ – the correlation coefficient is statistically insignificant; and $H_1: \rho \neq 0$ – the correlation coefficient is statistically significant.

The sample is small in volume ($n < 100$), therefore Fischer’s Z-criterion has to be used when testing the hypotheses, whereby the empirical value $z$ is calculated according to Formula (11).

$$z = Z_r \sqrt{n - 3}.$$ \hspace{1cm} (11)

where:
- $Z_r$ – transformation of the correlation coefficient $r$.

When the empirical value $z$ is smaller than the theoretical value $z_\alpha$, the zero hypothesis ($H_0$) is adopted. It follows that the correlation coefficient of the general aggregate is equal to zero and is statistically insignificant. The level of significance $\alpha$ shows the probability of making such a mistake, i.e. to reject the zero hypothesis ($H_0$) in cases where it is correct. The level of significance 6 is used to elicit the theoretical value of the $z$-criterion from the standard distribution table. At the level of significance $\alpha = 0.05$, $z_\alpha$ is 1.96. The data of the applied correlation analysis is shown in table (2).
There is a strong reverse linear dependence of both companies during the period in consideration, upon establishment of the relation between the indicator EVA and the ratio of average number of employees and net sales revenue. The argumentation for this is derived from the value of the empirical parameter \( z \), which is greater than the theoretical parameter \( z_\alpha \) (table 2, section 2). Therefore, we reject the zero hypothesis \( (H_0) \) and we assume that the correlation coefficient is statistically significant and reflects the existing relation in the general aggregate in the studied second dependence from the table. The reduction of the ratio between the number of employees and the net sales revenues results in the change in the value of the indicator EVA. The decrease
in income resulted in downsizing in both companies, while the increase in net revenues brought about a less pronounced increase in the number of employees. The determination coefficient shows that in the case of Balkanpharma Troyan JsC 73.3% of the change of the indicator EVA is due to the changes in the ratio between the number of employees and the net sales revenue, while in the case of the other company the percentage is 69.2%. For the remaining dependence from table (2) the resulting z-characteristics is smaller than the theoretical \( z \), which provides grounds for adopting the zero hypothesis (\( H_0 \)). The correlation coefficients in the general aggregate are equal to zero and are statistically significant. The reasons for this could be: 1) the small number of studied companies; 2) the specifics of the produced product; and 3) the long and complicated process of creation and implementation of new medicines.

In conclusion, we could state that the second indicator in the non-financial perspective (table 2) for evaluating a company’s performance proves to be a strongly connected leading indicator of the created value, consequently measured through the lagging indicators of the financial perspective.

Within the context of the considered model for the evaluation of a company’s performance, the integration of the indicator EVA is presented in two aspects: once as an internal relation in the metrics, and once in external cooperation with non-financial leading indicators. The logical connection between the key indicators, confirmed through an empirical study, contributes to the enrichment of the cognitive dependence of the new control and analytical evaluation indicators. This in turn proves the advantages of the adapted model compared to the traditional approach to evaluation. The advantages can be classified in the following way: 1) the lagging indicator EVA does not reflect all registered profits, only the profit which is generated from operating activities of the enterprise; 2) the economic added value incorporates the cost of money invested in a business entity; and 3) the leading non-financial indicators inform about what can happen with the company in the future and the opportunities to make a profit.

**Conclusion**

The pooling of financial and non-financial indicators has led to the construction of a combined model for assessing the performance of the enterprise, including the results of its operations and past activities on the one hand, and on the other - indicators of future development, strongly associated with future results. The conducted empirical analysis demonstrates a strong correlation and high explanatory power between the leading indicator expressing the ratio of the average number of employees and net revenue from sales and the outcome indicators: the economic added value. The result supports the idea of the need for an integrated model for assessing a company’s performance.
AN INTEGRATED MODEL FOR ASSESSING THE ACTIVITY OF THE ENTERPRISE

Assist. Prof. Iliyan Hristov

Abstract

In the article oneself there is developed a practical and applied model binding the lagging (financial) and leading (non-financial) indicators in the assessment of the activity of the enterprise and its future development. The conducted empirical analysis demonstrates a strong dependency and high explicative force between the leading indicator, expressing the ratio of the average list number of employees to the net amount of the revenue from sales, and the resultant indicator - economic value added. The obtained result reinforces the need for the use of a comprehensive approach in the assessment of the activity of the enterprise.

Keywords: key indicators, lagging (financial) indicators, leading (non-financial) indicators, economic value added.
Introduction:

Over the last couple of years, the popularity of non-store retailing formats has taken off as a reasonable cost-effective alternative to traditional retail forms, offering more consumer convenience. In the focus of the present article are hi-tech vending channels being typical representatives of this type of distribution means. In fact, vending machines have been installed in almost every country around the world – from Africa to South America and from the Arctic pole to the Antarctic\(^1\). In 2012 only, highly developed countries such as Japan and USA generated an annual turnover of well over 50 billion dollars, every fifth purchase being MADE/done through vending machines\(^2\). An unofficial survey, conducted last century in Russia reasoned that were vending machines on the whole planet to be put in one place, they would exceed the entire population of Australia, estimated at 15 million\(^3\). In comparison, this type of distribution facilities in Bulgaria are at a stage of re-introduction, and are yet to be developed in terms of possible new areas of application and adoption of new and more effective forms of payment and market stimulation. Basically, existing vending machines offer cheap and convenient consumer products such as hot and cold drinks, snacks and sweets. In developed countries such as France, Germany, Japan and USA, vending machine operators have turned already to more sophisticated products (MP3s, mobile phones, even gold bars). By its very nature, the vending machine business can be seen both as product and distribution channel. Not only does it provide goods and services but it is a product in itself, subject to sale and purchase relationships. It is therefore the purpose of the present article to study the multifaceted nature of the vending business where terms such as vending, vending channels, vending distribution and a vending machine are being used as synonyms. Further on, the article aims to analyze market and marketing peculiarities of vending channels. It also examines the role and place of vending channels in business today. The state of this particular market in Bulgaria is briefly discussed. On the basis of the traditional 4Ps marketing mix model, certain essential market peculiarities have been outlined, which can be used to differentiate between vending distribution and traditional retail distribution forms.

\(^2\) Source: Euromonitor www.portaleuromonitor.com
\(^3\) Chigarin, Т., citation., p. 6.
1. The role and place of vending channels in business today

The meaning of the word vending can be derived from the English word “vend” – i.e. trade, offer goods for sale, sell. This is a business concept, which implies bringing the store to the client and not the client to the store. As the idea of vending is to have an automated service process, in specialized English sources it is often referred to as ‘automatic retail trade’ (Saxena, 2009, p. 472), “automatic merchandizing” (NAMA, 2014) and “automatic sale” (Чzer & Phillips, 2012, p. 37). Some authors discuss vending in terms of product innovations across marketing distribution channels (Dupuis, 2000; Dawson, 2001), whereas others discuss it from the point of view of innovations in terms of the value chain. (Musso, 2010). In this respect, the evolution of the vending concept is related to the IT and communication technologies which are revolutionizing the industry, and it is seen as part of the so-called SST technologies (self-service technologies). With SST technologies, the user alone is doing the purchase, and there is no ‘face-to-face’ communication between client and vendor. These services are based on some integrated technology innovations, which exclude any intervention or interaction whatsoever between user and vending operator. That’s why, vending channels can be generally defined as a means of providing goods or services through a vending machine on a self-service basis.

To further clarify the role and place of vending machines in today’s business environment, it is necessary to discuss the vending market from the point of view of non-store retailing of goods and services used by companies and operators in the retail sector. In view of a classification recognized by many specialists in the area of distribution management, non-store retailing formats are seen as an aggregate model, comprising direct sales, direct marketing, home shopping, electronic and vending channels of distribution (Couglan et al. 2001). The non-store retailing formats/channels include any form in selling new or used products, without establishing a physical store, where the vending operator is freed from a physical retail presence (Dancette & Rithorri, 2000), as compared to the so-called "brick & mortar distribution" (Kotler & Keller, 2011, p. 328, 364). The significance of non-store retail distribution, vending channels in particular, seen as a percentage of global retail trade is illustrated in Fig.1.

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2. State of the vending market in Bulgaria

For 2013, the vending market in Bulgaria accounted for a total sales volume of 14.7 million BGN, exhibiting a 10% growth in the last six years. The most successful product category, both in quantity and value, seems to be the hot drinks, especially coffee, which is the main early morning drink for many Bulgarians on their way to work. Since it is a small market, vending operators run their businesses on very narrow margins, while high costs deter operators from upgrading their machines or investing in new ones. Normally, old or imported retrofit versions are in use. Most often, vending machines are installed in busy or high street locations seen as custom catchment areas (captive & semi-captive environment). These are bus stops, railway stations, hospitals and schools. Administrative and institutional buildings and offices are also seen as some of the most important locations to put vending machines as these are points through which a lot of people go.

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6 The figure is based on data and classification criteria, submitted by Euromonitor. The selected year is 2012, as the latest reports on the state of the vending market worldwide haven’t been published yet. Data provided reflect global, not national market trends as by the time this article was written, data on retail and not-store formats with reference to retail trade in Bulgaria was not available.

7 Data from Euromonitor International report on the state of the vending market in Bulgaria was used in the second part of the article: Vending in Bulgaria. Report of Euromonitor international, May 2013 and Company shares by global retail brand owner. Euromonitor international, 2014.
Dynamics in the development of vending machines in Bulgaria in terms of product categories for 2008-2013.

As seen from the table, packaged goods sales fluctuate around the same level, exhibiting no actual growth within said period. There is a limited number of vending machines in the country dispensing both packaged drinks and foodstuffs at locations such as picture theatres and airport terminals, but their distribution is limited to big cities only, with negligible sales. Besides, drinks offered by vending machines are considerably cheaper than drinks served in coffee shops and cafeteria, which accounts for the fact that nearly 1 million users consume hot drinks from vending machines on a daily basis. In 5 years’ time, the hot drinks category will show an expected growth of 2-3%, but as compared to the category ‘other products’, Euromonitor experts predict a growth of over 600 %. This huge growth can be attributed to the increasing use of vending channels in the distribution network of the country. For example, kiosks where you can pay your utility bills are already installed in many of the big retail chain stores, mobile phone retail outlets, parking meters installed in ‘blue zones’, etc.

![Market share of major vending operators in Bulgaria over the period 2008 - 2013 (by value)](image-url)
As seen from fig. 2 above, two companies stand out as market leaders in Bulgaria. These are Overas Vending Ltd and Zagato Ltd, official importers of new and recycled vending machines. Either company has a well-established distribution or logistics network in Bulgaria. In 2008, their joint market share accounted for over 70%, but in 2013 it sank dramatically, reducing market share by half as compared to 2008. If we look at 2008 we can see that there are many small players on the market (marked as “other companies”) whose market share is only 26.3%, rising up to 64.3% in 2013, to show that said industry sector has become much more attractive for new entrepreneurs and investors.

To obtain more accurate results, the vending market structure is defined on the basis of applying the HHI index (Herfindahl-Hirschman index) which is a measure of market concentration (Djolov, 2013), the Rozenblunt index (Bikker, 2002) and Horvat (Barthwal, 2004). The results show that market concentration tends to increase over the discussed period. As mentioned above, this is mainly due to the growing number of smaller companies and not the increased share of market leaders, which can be a serious deterrent for new entrants (see Table 2).

### Table 2

Use of market concentration indices for the vending market in Bulgaria

<table>
<thead>
<tr>
<th>Year</th>
<th>HHI = $\sum_{i=1}^{n} s_i^2$</th>
<th>$R = \frac{1}{2(\sum s_i^2) - 1}$</th>
<th>CCI = $s_1 + \sum_{i=2}^{n} s_i^2 (2 - s_i)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>0.34</td>
<td>0.36</td>
<td>0.69</td>
</tr>
<tr>
<td>2009</td>
<td>0.33</td>
<td>0.35</td>
<td>0.69</td>
</tr>
<tr>
<td>2010</td>
<td>0.36</td>
<td>0.40</td>
<td>0.70</td>
</tr>
<tr>
<td>2011</td>
<td>0.41</td>
<td>0.45</td>
<td>0.73</td>
</tr>
<tr>
<td>2012</td>
<td>0.46</td>
<td>0.47</td>
<td>0.75</td>
</tr>
<tr>
<td>2013</td>
<td>0.48</td>
<td>0.48</td>
<td>0.76</td>
</tr>
<tr>
<td>Average for the period:</td>
<td>0.39</td>
<td>0.42</td>
<td>0.72</td>
</tr>
</tbody>
</table>

8 The Herfindahl-Hirschman index is used to measure the level of competition in a particular market sector. It is estimated in the interval $1/n \leq HHI \leq 1$. When $0 \leq HHI \leq 0.20$, this is indicative of a highly competitive market and low level of market concentration (ideal competition). At $0.20 < HHI \leq 0.40$ the level of market concentration is moderate (monopolistic competition). At $0.40 < HHI \leq 0.70$ the level of market concentration is high (oligopoly), and $HHI > 0.70$ is indicative of a highly concentrated market (monopoly).

9 The Rosenbluth index (Hall-Tideman) is used to measure market competition with uneven distribution of market share between companies operating on the market. It takes into account values in the interval $0 \leq R \leq 1$. Similarly to HHI, it allows to measure the absolute market concentration, but unlike HHI, it takes into consideration the ranks of individual market players.

10 Horvat index is an alternative measure for market concentration. It takes into consideration the company with the largest market share and weighted market shares of other companies.
3. Vending channels and their marketing peculiarities

In view of the conventional 4Ps marketing mix model (McCarthy, 1964) we can outline the following inherent marketing categories: 1) product 2) price 3) place or distribution 4) promotion.

Product peculiarities

One of the main product features, which serves to distinguish vending from other traditional forms of retail distribution is that it allows for easy introduction of new products and dispensing of old ones, which proved hard to sell. It does not require further software or hardware upgrades and if needed, changes can be implemented from a distance (where vending services are concerned). Some of the vending machines allow for personalization of the product to meet specific customer needs (see Coca-Cola freestyle fountains, which combine more than 127 different tastes). Vending automats can be quickly and easily adapted if the company suddenly decides to change its brand strategy or to relocate. Take for example, the Coca Cola branded vending machine, with its own facade, which shows a well-known iconic statue in Warsaw (Jaworski & Thurlow 2010). Vending machines of special artistic design, the so-called (art-o-mats) are often sited in galleries, museums and cultural institutions. Branding in this sector can be seen as a way of improving the automat design and outer appearance and boosting sales by offering premium brands, e.g. premium coffee brands (Rosenbloom, 2013). This will take the vending business to a new level where ‘customer satisfaction is so high that they want to leave a tip’ (Maras, 2011, p. 20). Industrial design is also important in achieving the desired communication effects. The Diet coke slender vender of Coca-Cola communicates the message that the drink is void of sugar content, largely to blame for overweight and obesity. A major weakness of the vending channels is their limited capacity to stock large quantities of products. To overcome this, a number of assortment-wise, mathematical and statistical models have been developed: some aim at projecting consumer demand forecasts, in answer to a sudden shortage of merchandize (Anupindi, Dada & Gupta, 1998), Miyamoto algorithm for the item assortment problem (2003), PROFSET program model for product selection (Brijs, 2004). Partly, such restraints in capacity can be overcome by the so-called fully automated convenience stores. Unlike conventional vending options, convenience stores occupy a larger area (around 8 m² and use bigger displays. Their storage capacity is bigger, allowing to store more and various articles (up to 200 items). A certain disadvantage of the vending machines however is the fact that customers have limited access to information about the products before their actual purchase as they can pick up the product only after they pay for it. Customers have no idea about the expiry period of stocked merchandise, nor do they get information about product ingredients, particularly ingredients they are allergic to and their nutritional value i.e., percentage of carbohydrates, fats, proteins, etc. This may be crucial for customers who adhere to

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11 This section focuses on the marketing peculiarities of vending in a global context. Studies and data provided are not restricted to Bulgaria only, as it is a market showing a potential for development. Following the best practices in this sector, Bulgarian vending operators can be more successful in setting out their marketing strategies.
special healthy diets or have specific dietary needs such as those with weight problems or suffering from diabetes. There is no clear policy on complaints either, which makes them difficult to handle. In contrast to traditional distribution channels, with vending, the customer is unable to complain at the moment of purchase. There is no direct connection with the supplier of service which acts as a deterrent to many consumers using the vending channels today. When a refund is required, because the vending machine is broken or failed to charge adequately, vending operators can tackle the situation in one of the following ways. With coin operated hot drink vending machines, offering products at the low end of the market (hot and cold drinks), a button is envisaged whose function is to return the last amount of money, when pressed, even in cases of machine malfunction. With vending machines offering mid-range products, (personal products and photographic services) also taking banknotes as a form of payment, the customer has the option to call an assigned number and remotely with the help of an operator or through inspection by a technician on spot, get their money back. With vending machines that offer high-end products and accept cashless payment, i.e. credit and debit cards and mobile phones, many operators take the opportunity to transfer money to a customer’s bank account after an official complaint has been filed. At the same time, hi-tech vending channels can be used to receive real customer feedback if they are made part of the self-service technology complaint system (Robertson, 2012). The hitch is that many vending operators fail to provide consistent maintenance and customer support service. A telephone number is often assigned for complaints, however this number may not be accessible at the weekend and certain hours during the night. Last but not least, security issues in some locations and vandalism can limit vending machine adoption.

Pricing

However, restraints to capacity, mentioned earlier, can be seen as an opportunity, especially when various surveys on the product–price ratio need to be done. Availability of lesser items (prices respectively) helps to conduct market studies in a real environment which are of shorter duration and incur less expenditure. Fast and easy price change of vended products is applicable to tourist venues where tourists flock in large numbers. Thus the risk to subject the usual consumer to frequent change of price is limited. From a technological point of view, the policy of price discrimination can be easily applied, but it may present a certain ethical problem. Take for example the Coca-Cola company which in 1999 developed a machine prototype, designed to hike the price of drinks during the warm period. Regretfully, subsequent public backlash forced the company to drop its invention (Lal, Quelch, & Rangan, 2004, pp. 493–498).

Vending machines offer a wide variety of payment methods, discussed in detail in the Table 3 below:
Vending methods of payment – opportunities and constraints

<table>
<thead>
<tr>
<th>Methods</th>
<th>Opportunities</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cash payment</td>
<td>The cheapest mechanisms for purchases from vending operators. Most popular and largely used by consumers. No personalized information is required (PIN code), which can be subject to theft or mishandling.</td>
<td>The capacity of vending machines to receive and store cash requires regular collection of money to prevent vandalism; problems arise from recognition of crumpled or newly emitted banknotes; access is limited to consumers prepared to pay cash; need to install a facility for return of change.</td>
</tr>
<tr>
<td>2. Cashless payment</td>
<td>This method overcomes the deficiencies of cash payment. It offers greater convenience for the customer and more security in cash turnover. It has a proven record of return.</td>
<td>Risk of theft with credit or deposit cards; less payment security from consumer point of view; more expensive than cash payment options, often need video surveillance.</td>
</tr>
<tr>
<td>3. Non-contact payment</td>
<td>This method overcomes the weaknesses of the first two methods. It gives the customer the feeling of convenience and security. It generates sales volume.</td>
<td>Requires significant investment. Not so popular with customers.</td>
</tr>
</tbody>
</table>

A common strategic and marketing advantage of cashless and non-contact payment formats is that they allow for electronic gathering of data on consumers. These have the potential to offer new and conventional products at higher prices as the customer is free to choose alternative means to cash payment. (Kasavana, 2005). In 2012, Coca–Cola and Google launched a pilot project promoting payment via a mobile phone application, called “Google wallet”. This cell-phone app offers payment flexibility at thousands of vending machines across the United States (Maras, 2012). Although products open to cashless vending are of higher value, lower distribution costs tend to push down prices, with a negligible effect upon returns on the vending channel. This accounts for two major price peculiarities of the vending distribution – cost effectiveness and profitability which are among the main advantages of the vending format as compared to traditional retail formats, particularly in the developed countries where the percentage of labour costs is rather high in the overall fixed costs. Rental
space is more efficiently used in terms of communication and achieving sales targets. Rental costs are low as the machines occupy a comparatively small area – up to 2-3 m². However, one of the main concerns with vending distribution is accountability of revenue, generated from vending operations. No receipt is issued, at the moment of purchase which can reduce VAT collection of revenue. The hi-tech vending machines often require special software with integrated fiscal functions, with capability to keep records of daily and monthly company sales. With mechanical vending machines (chewing gums, large gumball, and souvenir items) and some coffee vending automats, such records are entered by hand by the maintenance personnel. This may leave the door open to unscrupulous vending operators and subsequent irregularities (i.e. hidden operator revenue). In 2012, a decision by the Ministry of Finance in Bulgaria imposed a mandatory real-time connection between the fiscal devices in vending machines and the National Revenue Service, sending information on every transaction registered¹². Later on, the decision to install such fiscal devices in vending machines was repealed by the Supreme Administrative Court on the grounds of being illegal.

### Distribution peculiarities

A key feature of the vending machines is their location adaptability. They can be installed almost everywhere as they need a small area to be put up. In the past, vending machines were installed in places seen as large catchment areas (captive environment). Most machines are found in busy locations such as factories, offices, warehouses and transport hubs as railway stations, airport terminals, cruise ships and public areas. Today, vending machines are often sited in theatre and hotel lobbies, garage spaces, drugstores, hospitals and schools. At the same time, countries such as USA and Great Britain, impose regulations on the installation of vending machines in hospitals and educational institutions. Their main considerations here are that certain items dispensed through the vending distribution system can cause serious health problems, such as foods and drinks with high sugar, salt and fat content. Among other concerns is that access to vending machines located in governmental institutions and military sites (municipalities, ministries, military bases) is extremely difficult to gain, which makes it labour intensive. This process is also time-consuming, as it requires applying and participating in tendering procedures in the public procurement sector, filling in documents, etc. On the other hand, government institutions are characterized by a higher degree of security compared to ‘open space’ locations, due to enhanced security measures and closed-circuit television cameras (CCTV) or video surveillance. The same holds true for public spaces – bus and railway stations, airport terminals, etc. In addition, when vending machines have an outdoor location, they are largely exposed to various climatic and atmospheric conditions, such as sun, wind, humidity, etc.

Accessibility and convenience are among other important features of vending distribution. Notwithstanding the specific marketing peculiarity which is in the focus

of discussion – whether it is an item assortment problem, location or methods of payment, vending’s main concern remains customer convenience. It is defined as “the minimum financial, physical and mental effort required of the consumer to compensate for the difference between time and space during shopping”. (Schary 1971, p. 52). This is a subjective category which depends on consumer perceptions. Customer convenience comprises the following three components: price, time and effort (Risch, 1987). The price reflects the perceived consumer value of the product or perceived benefits in buying the product. Therefore, in order to offer a better and pricey product, vending operators need to win customers’ trust. This is made possible by improving the design and hygiene of the vending machines. Time is another attribute that determines convenience, because more and more consumers nowadays are pressed for time when they have to make a purchasing decision (time buying consumers). Actually, many of the last century studies predicted that “a large number of the city dwellers would rather buy time than products” (Risch, 1987, p. 60). This means, that in choosing from among thousands of products available on the market, consumers purchasing habits will be dominated by the time-saving factor. This is how time or rather lack of time, becomes a critical value. The third component in defining convenience is the effort exerted by the consumer to get the product. Vending machines offer fast and standardized service. They are easy to use and interaction with them provides a dynamically visual experience as with video games (Weijters et al., 2007). They reflect the impact of new and modern technologies on marketing: Internet based applications, payments via mobile phones, use of VoIP software¹³, gathering and processing of biometric data. In this respect, remote tracking of storage capacity and merchandise stocking, regular maintenance and software prediction of delivery periods, have become important features of vending distribution (Rusdiansyah & Tsao, 2005). In terms of the Quality Management concept (TQM), advanced vending combines increased functionality towards reduction of delivery periods, decreasing direct and indirect costs, and gathering relevant information for the decision making process. This is witnessed by the integration of Internet-based management systems (VMS). These allow for real-time, remote tracking of stock levels, automating business processes and reducing down time due to low stock. (Case & Newman 2004)

**Promotional peculiarities**

Vending distribution channels offer great opportunities for communication with consumers. As studies in interactive advertising show, vending channels can be seen as both distribution and communication channels or a standalone media, alongside broadcast, TV and electronic media (Schumann, Artis & Rivera, 2001; Tan, Kwek & Li, 2013). In 2010, in an effort to launch (roll out) a premium coffee brand and increase its mass market appeal, the Starbucks Co. introduced its new model of a coffee vending machine, instantly grinding the coffee beans and dispensing a high quality hot drink to the consumer. The company’s new slogan read: “Great Coffee Everywhere”. For their integrated multi-channel advertising campaign, Starbucks mounted a series of on-line TV commercials, bill boards and digital signage on their vending machines.

¹³ VoIP – software products of the Skype type, which integrate ”Internet telephony” service (ITSP).
Furthermore, advanced vending formats integrate innovative means to boost sales such as price reductions, bonuses, competition and games, tokens, and sample demonstrations. These support a range of multimedia features, to attract customers in increasingly dynamic ways. In 2010, Coca cola and Intel, launched a new corporate vending model designed around integrated interactive technologies to encourage sales. Having purchased a Coca cola product, the customer can take a picture of him/herself and share it via e-mail with his friends. Thus, on the one hand, the range of services is extended while on the other – the company is able to visually observe the degree of customer satisfaction with the product. Vending channels can be part of integrated marketing communications. For example, Coca-Cola socially orientated campaigns under the motto “Share the happiness” successfully complement Coca cola happiness vending machines. The customer who complies with a command, i.e. to smile, kiss their boyfriend/girlfriend, sing a song, dance, etc. is awarded a free drink from the machine.

Vending channels prove quite suitable for applying such marketing techniques as cross-selling and up-selling. The Economist magazine defines the cross-selling technique as “the synergistic notion that buyers of one of a firm’s services would become customers for another” (Hindle, 2008, p. 51). Generally, this involves selling an additional product or service on top of the one that a customer has already agreed to buy (or has already bought). Its close cousin is up-selling, in which case, the customer is sold a more expensive product instead of the product he/she was originally purchasing. (Carysforth & Neild, 2006). Today, the last generation of the fully automated convenience stores that can be seen in the United States and Japan, offer a wider variety of products at a different price. Over the last years, shopping malls and hyper-markets in Bulgaria also rent space for vending operations with fully-automated convenience stores. Such are the mechanical gumball vending machines that vend a handful of candy, a bouncy ball, or a toy capsule, charging a coin of 1 BGN. These are often sited near a photo booth and charge five times the regular price.

**Conclusion**

The above study of the state of the Bulgarian vending market reveals that it is a dynamic and fast growing market. The liberalization of measures banning vending machines and the tendency to reduce market leaders share create a favourable climate for new entrants in this market. An old truth about vending is that everything sold by a man can be also sold through a machine. Vending machines are everywhere, delivering just about everything you can think of: from fresh eggs, lingerie, gold bars, spaghetti and pizza to some bizarre vending items such as pet laundry and other doggy treats. Not surprisingly, the next ten years or so can be witnessing a more mature vending market, attracting significant investments in the sector. In conclusion, this type of non-store retail distribution calls for higher awareness of the marketing peculiarities on the part of vending operators. It is a hi-tech, distribution and communication product-channel, demanding a differentiated approach to the elements in the marketing mix.
References


MARKET AND MARKETING PECULIARITIES OF VENDING CHANNELS

PhD student Dobromir Stoyanov

Abstract

In recent years there has been an ever-increasing rise in the importance of non-store distribution formats as a cost-effective, as well as providing considerable consumer convenience alternative to the traditional store forms. The subject of the present article are the high-tech vending channels as a typical representative of this fast developing type of distribution. The main aim of the present article is to analyse the market and marketing specifics of vending channels. In this connection there are discussed their role and place in contemporary business. There is given a brief overview of the state of the Bulgarian vending market during the past few years and there are deduced some anticipated trends for its development in the future. Along with that, based on the traditional 4P model of the marketing mix, there are outlined some major marketing specifics of vending itself, distinguishing it from the traditional store distribution formats.

Keywords: marketing specifics, vending channels.
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