

## **PROFITABILITY OF PARTICIPANTS IN SUPPLY VALUE CHAIN IN CROATIA**

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### ***Abstract***

The management system in supply value chain covers wide range of activities. The goal of the implementation of the system is to create strong value in the process between producers and final customers or consumers. In recent years, Croatian economy was faced with many significant changes in profitability of its participants. Production, distribution and retail sector had passed through significant changes since 2009. Production sector decreased -12,3% in 2009 compared with the same period of previous year, afterwards wholesale, distribution and retail sector decreased -11,6% compared with year 2008. The economic crises from 2009, caused by crises of mortgage loans in United States of America, left significant consequences on Croatian economy as well (GDP decreased -7,4%). The movements of consumer's preferences and habits changed rapidly in period of recession from 2009 to 2014. Nevertheless, the changes in consumer preferences and habits had an impact on other key players in the chain. The players are: producers, distributors and retailers. According to all mentioned facts, the main subject and the goal of this Paper is to analyse profitability of each participant in the supply value chain. Focus is on Croatian producers in Food and Beverage industry (National Classification of Activities abbreviation NKD C10 and NKD C11), distributors (NKD G46.90 and NKD G46.36) and retailers (NKD G47.11 and NKD G47.19). The hypothesis in this paper is emphasizing the disproportionately in division of a profitability between main players in value chain, where producers are the most negatively affected. The paper analysis TOP 10 participants in production, distribution and retail sector. The period which was taken into observation in this paper is 2011 – 2015, together with data from 2016 (only the companies listed on Croatian stock exchange market). The identified trend is the same for 2016 as for the period 2011 – 2015.

***Key words:*** profitability, supply value chain, food and beverage industry sector, distribution, retail

## 1. INTRODUCTION

Supply chain management presents processes between producers, distributors, retailers and finally consumers. All participants in value chain must take care about their efficiency. The supply chain is facing with constant restructuring process, because of unstable market conditions. Processes are becoming more and more transparent by decreasing the number of suppliers<sup>1</sup>, which leads to modification of business strategies. Creating a new added value and sharing it among partners is the key process in any organisation. The establishment of more efficient supply chain is becoming one of the key business goals. The Japanese were the first to recognize the importance of this process. Rationalization and acceleration of the movements between the participants in value chain are becoming one of the most important components of competitive advantage of modern market.

The efficient functioning of the supply chain includes effective and fast circulation of the information.

The supply value chain can be extended as much as its participants allow it. Producers, distributors, retailers and final consumers are depending on each other, because they present circular economy where one is purchasing while other is buying the same goods and services<sup>2</sup>.

In addition, it is important to analyse an open organisational architecture which represents an effective tool for improving competitiveness and presents important role in globalisation and modern economy.

Furthermore, it is also important to emphasise other forms of market structure in the supply chain, such as vertical supply system based on transaction costs within closed supply chain<sup>3</sup>.

In Croatia, there are several important vertical integrated systems (e.g. Agrokor). In the modern economy, closed supply system based on vertical integration are losing in profitability while increasing business risk because of the high system complexity. The Croatian economy experienced the first significant changes after mortgage crisis in 2008 in USA market, and their transmission on Croatian market in 2009. Consumers preferences changed drastically. During the recession from 2009 to 2014, consumer habits and the way of production, distribution and retailing has experienced with one kind of transformation which left serious consequences on overall economy and profitability in the supply chain. The trend of decreasing of GDP in the last six years, has affected on many structural changes in the market and caused a spiral of psychological suspense. The saving rate form 2009 – 2014 had been increased for 26,6% in terms of foreign exchange deposits and 17,1% for deposits overall. In the same time, the monetary expenditure measured in terms of household loans had been decreased for -2,5%<sup>4</sup>. The total GDP in 2016 was slightly as GDP in

<sup>1</sup> Number and structure of business entities, December 2015, NSO, NUMBER: 11.1.1/4.

<sup>2</sup> David J. Bloomberg, Stephen B. LeMay, Joe B. Hanna, Logistics, 1st edition, Prentice Hall, 2002, page 1

<sup>3</sup> Williamson, O. E. (1979), Transaction-Cost Economics: The Governance of Contractual Relations, *Journal of Law and Economics*, 22, 233-261.

<sup>4</sup> Croatian national bank, Foreign liabilities of other monetary financial institutions, <https://www.hnb.hr/en/statistics/statistical-data/other-monetary-financial-institutions/consolidated-balance-sheet>

2005, measured in constant prices. In other words, the total real GDP contraction was over 8% in 2016 compared to 2008.

All mentioned factors influenced on behaviour on the participants of the supply value chain. The final consumers became more cautious while purchasing in the recent years. As their answer on changes in consumer preferences, distributors and retailers acted by adapting their assortment and their market positions within new circumstances. Strong penetration of private brands, together with brand erosion, dumping prices and several other factors had led to significant corrections in supply chain. However, domestic producers have suffered the most in the period of crises. Due to the constant pressures on producer price from the other participants in value chain, producers were forced to decrease their margins in order to keep competitive position on the market. Other very important reason is strong penetration of foreign retail chains preferably discounter. The main discounter in Croatia contains more than 80%<sup>5</sup> of private brands and keeps 9%<sup>6</sup> of total market share in 2015 with strong base of international suppliers. Afterwards, last but not at least reason is tariffs, where the most products became cheaper after the year 2013.

The main hypothesis in this paper emphasize the disproportionately in division of a profitability between main players in value chain, where producers are the most negatively affected. The analysed period is 2011 – 2015, with special emphasis on 2013, when Croatia joined the EU.

## **2. SITUATION IN FOOD INDUSTRY SECTOR, NKD C10 AND NKD C11**

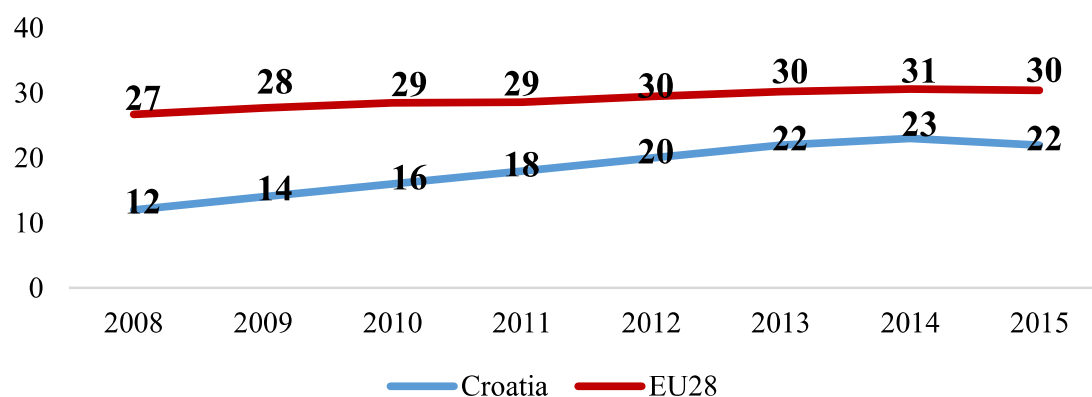
In gross domestic value added, the food industry is one of the most important sector. Following the agriculture, the food industry is one of the first steps in creating value on the market. In 2016, food industry made 44.2 bn Kuna in total gross domestic value added, which represents around 15,3% of total gross domestic value added and employs 208.375<sup>7</sup> employees (17.8% of total employees in Croatia). After joining the EU, first of July 2013, Croatia has passed through significant structural changes, especially in food industry. The strong pressure from foreign competitors, using discounting and dumping prices together with contraction of household income had significantly influenced on consumers habits and preferences. All those mentioned facts caused changes in profitability of food sector in Croatia. Due to the recession and decline in personal consumption, the private brand share has increased. When in 2014 Croatia exit from recession, the trend of high penetration of private brands began slightly to decrease in total portfolio of retail chains in Croatia.

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<sup>5</sup> GFK retail monitor March 2016

<sup>6</sup> GFK retail monitor March 2016

<sup>7</sup> Active population (labour force) in Republic of Croatia, according to administrative sources, by sex – final table 9.1.5., April 2017, Croatian bureau of statistics (CBS)

**Chart 1.** The share of private brands in Croatian market and in the market of EU28, 2008 – 2015 in %

Source: GFK retail monitor household panel March 2016 and MAT June, Nielsen shopper trends in Croatia 2016

The chart 1 above shows the effect of market share convergence of private brands in Croatia compared with market share in EU28. The trend lines between the curves, after 2013 are reaching a strong correlation. In the last 3 years, the private brand share in Croatia is 22% and in the EU 28, is around 30% in the same period.

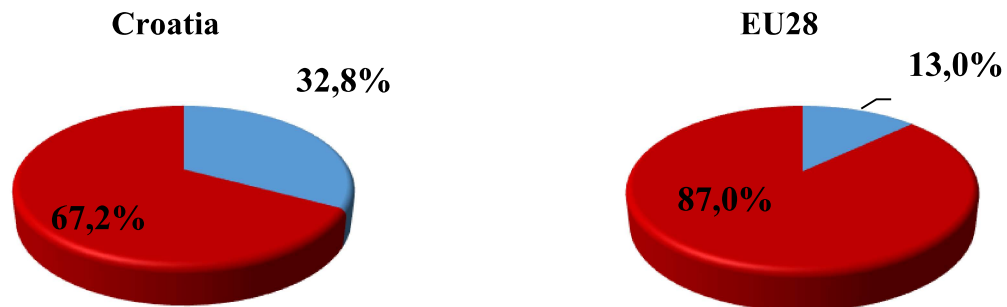
### 3. MARGINAL PROPENSITY TO CONSUMPTION ON FOOD AND BEVERAGE

The share of consumption on food and beverage in total household income depends mostly on the level of development of each country. For example, an average household consumption in 2014 (average household is 2,86 members per household) reached 81.315 Kuna<sup>8</sup>. In total consumption, marginal propensity to consumption on food and beverage equalled 33%. In the same time in EU28, marginal propensity to consumption was 13% of total consumption. All this facts show that Croatia is far below the EU28 average.

When the income increases and when the country achieves economic progress, the share of household consumption on food and beverage in total household consumption will decrease. According to this fact, Croatian economy will be achieve in the middle/long run the same level of development as the EU28 (convergence effect) and the marginal propensity to consumption will be on the level of EU28.

<sup>8</sup> Results of Household Budget Survey, 2014, date of realised 29<sup>th</sup> april 2016, CBS

**Chart 2.** The share of consumption on food and beverage in Croatia and EU28 in year 2014



Source: CBS, Eurostat

At the same time, the countries of Adria region are reaching higher share of household consumption on food and beverage comparing to Croatia. Serbia has 41,4% share of total household consumption on food and beverage, Bosnia and Hercegovina has around 39,5% household consumption on food and beverage while Slovenia has around 14,9% share of household consumption on food and beverage. Developed countries such as Luxemburg, Switzerland or Norway have less than 10% share of total household consumption on food and beverage.

#### **4. BUSINESS ANALYSIS OF TOP 10 FOOD AND BEVERAGE COMPANIES 2011- 2015 (NKD C10 AND NKD C11)**

After Croatia joined the EU in July 2013, food and beverage sector became one of the most exposed. The important changes in the profitability occurred after the liberalization of the market and exponential growth of fair and un fair competition. The import of food products increased significantly in 2013, while export was decreasing. The result of emphasized statements was that Croatia, and mainly food industry didn't manage to adapt to a new market circumstances, at least in the short run.

From TOP 10 analysed companies from food and beverage sector, 7 of them have recorded continuous decline in profitability in observed period. The effect was even stronger after 2013, when Croatia joined the EU.

From table 1 it is visible that after the 2013 the level of gross margin is started decreasing. The weighted average of TOP 10 companies is viewed as the most relevant indicator, and the gross margin in 2013 was 25.2%, while in 2015 was 23.6%, therefore the profitability decreased by 1,6pp. The biggest decline in profitability was recorded in the beverage sector (Jamnica and Zagrebačka pivovara).

**Table 1.** Analysis of the approximate gross margin<sup>9</sup> of TOP 10 companies in the food and beverage sector

<b>Rank 2015</b>	<b>Company</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
1	Vindija	11,2%	11,4%	10,8%	11,1%	12,7%
2	Pik Vrbovec	17,1%	17,1%	20,3%	22,6%	19,5%
3	Podravka	35,6%	37,6%	36,7%	37,5%	35,3%
4	Dukat	20,4%	20,7%	17,7%	17,7%	17,2%
5	Jamnica	38,0%	37,3%	45,6%	35,7%	31,3%
6	Ledo	30,5%	32,5%	33,0%	33,5%	31,6%
7	Koka	22,0%	22,8%	17,8%	18,6%	19,0%
8	Pivac	13,6%	11,7%	14,3%	15,6%	15,0%
9	Zag. pivovara	61,8%	60,6%	60,2%	55,7%	56,0%
10	PPK Karlovac	9,7%	8,8%	9,6%	10,7%	10,2%
	<b>Average TOP 10</b>	<b>24,4%</b>	<b>24,4%</b>	<b>25,2%</b>	<b>24,4%</b>	<b>23,6%</b>

Source: Lider 1000 the biggest by the total revenue in 2015, boniteti.hr, authors analysis

**Table 2.** Analysis of the approximate EBITDA margin of TOP 10 companies in the food and beverage sector

<b>Rank 2015</b>	<b>Company</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
1	Vindija	3,3%	3,1%	2,9%	2,6%	3,1%
2	Pik Vrbovec	9,1%	9,7%	7,4%	8,0%	8,5%
3	Podravka	6,5%	5,7%	4,1%	10,7%	9,0%
4	Dukat	8,9%	7,4%	3,3%	5,1%	4,0%
5	Jamnica	14,1%	14,0%	26,6%	12,5%	11,6%
6	Ledo	13,1%	13,3%	13,3%	12,7%	13,4%
7	Koka	5,2%	6,8%	2,8%	3,2%	3,4%
8	Pivac	6,4%	4,6%	6,0%	8,3%	7,1%
9	Zag. Pivovara	39,6%	37,3%	35,7%	31,0%	30,0%
10	PPK Karlovac	3,6%	3,6%	4,4%	5,7%	5,1%
	<b>Average TOP 10</b>	<b>9,6%</b>	<b>9,1%</b>	<b>9,3%</b>	<b>8,7%</b>	<b>8,5%</b>

Source: Lider 1000 the biggest by the total revenue in 2015, boniteti.hr, authors analysis

The profitability measured by the EBITDA margin<sup>10</sup> had a significant decline after the liberalization of the market and Croatian accession to the EU. The average EBITDA margin for TOP 10 companies in the food and beverage sector was around 9.3% in 2013, while in 2015 decreased to low 8.5%. The most significant generator

<sup>9</sup> Gross margin = (operating revenue-material costs) / operating revenue

The gross margin is approximated and calculated based on public available financial statements (source:FINA and www.boniteti.hr)

<sup>10</sup> EBITDA margin = (operating revenue-operating expenses + depreciation) / operating revenue

of decreasing in profitability is the beverage industry. On the other hand, the dairy industry, the meat industry and Podravka<sup>11</sup> company recorded growth in profitability measured by EBITDA margin. One of the reasons for their positive performance is cheaper access to raw materials in EU market after the market liberalization and optimization in business process among some of the companies<sup>12</sup>. It is important to mention that most of the observed companies have their own distribution, so they don't need to use outsource distribution services.

## **5. SITUATION IN WHOLESALE AND DISTRIBUTION SECTOR, NKD G46.90 AND NKD G46.36**

The distribution sector as a second player in the supply value chain is one of the most important sectors in overall economy. Only wholesale and distribution sector (NKD 46.90) employed 65.459 people in 2016 year and accounted for 3,6% of total employees in Croatia. In 2016, wholesale and distributive sector generated the total turnover over 100 bn Kuna. In the same year, the wholesale distribution sector together with retail, transport, storage, traffic and food service (NKD G,H,I<sup>13</sup>) measured as a share in total gross domestic value added, equalled 22,5% or 65.1 bn Kuna in total domestic gross value added.

## **6. BUSINESS ANALYSIS OF TOP 10 COMPANIES IN DISTRIBUTION SECTOR (NKD G46.90 AND NKD G46.36) FROM 2011 – 2015**

In the previous chapter 3, the focus was on analysis of the first participant in the supply value chain – food and beverage sector, while in this chapter emphasize is on a second player in the value chain and that is the distribution sector. Distribution is becoming more and more important in the recent years. TOP 10 distribution companies classified by the revenue in 2015 have recorded increase of the revenue for almost 1,0 billion Kuna. In other words, increase of their revenue was 12,5% in 2015 compared with 2011. The positive trend of increasing distributors revenue is even more visible after 2013. The biggest Croatian distributor is Orbico<sup>14</sup>. In 2015 Orbico generated 2,8 billion Kuna of non-consolidated business revenue, which represents more than 30% of total revenue of TOP 10 distributors in Croatia. Unlike the producers, in the last 5 years, the distributors have had lower margins, generating around 12%.

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<sup>11</sup> <http://www.boniteti.hr/BoniteteCE/Pages/Company.aspx?Lang=hr-HR&Mode=HR&App=HR&CompanyId=437707&CompanyDetailType=FinancialData&CompanyDetailSubType=FinancniPodatki>

<sup>12</sup> <http://www.indexmundi.com/commodities/?commodity=corn&months=60>

<sup>13</sup> [http://narodne-novine.nn.hr/clanci/sluzbeni/2007\\_06\\_58\\_1870.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2007_06_58_1870.html), G - Wholesale and retail trade; repair of motor vehicles and motorcycles, H - Transporting and storage, J - Information and communication

NKD - National Classification of Activities, 2007 (NKD 2007)

<sup>14</sup> <http://www.boniteti.hr/BoniteteCE/Pages/Company.aspx?Lang=hr-HR&Mode=HR&App=HR&CompanyId=467874&CompanyDetailType=FinancialData&CompanyDetailSubType=FinancniPodatki>

**Table 3.** Analysis of the approximate gross margin for TOP 10 distributors in food and beverage industry

Rank 2015	Company	2011	2012	2013	2014	2015
1	Orbico	6,7%	5,1%	6,1%	6,5%	6,5%
2	Atlantic trade	13,2%	9,1%	12,0%	12,1%	11,6%
3	Roto dinamic	17,8%	16,7%	16,6%	16,0%	15,4%
4	AWT international	15,0%	13,6%	13,6%	12,8%	12,0%
5	Alca Zagreb	17,8%	20,3%	23,3%	21,9%	21,8%
6	Ferrero	11,4%	12,3%	15,2%	6,0%	6,0%
7	Nestle Adriatic <sup>15</sup>	14,3%	14,4%	14,8%	12,2%	14,1%
8	Procter&Gamble	6,9%	10,5%	7,4%	7,7%	7,3%
9	Stridon Promet	11,3%	13,1%	14,1%	14,1%	14,1%
10	Stanić promet	23,8%	21,1%	22,3%	22,0%	25,7%
	<b>Average TOP 10</b>	<b>12,4%</b>	<b>11,6%</b>	<b>12,5%</b>	<b>11,6%</b>	<b>11,5%</b>

Source: Lider 1000 the biggest by the total revenue in 2015, boniteti.hr, authors analysis

TOP 10 distribution companies classified by the revenue in 2015 have recorded slight decrease in gross margin<sup>16</sup> for around 1,0 pp in 2015 comparing with 2013. Few distributors are generating the increase in profitability, such as Orbico and Stanić<sup>17</sup>, while others have recorded a small decline in profitability. If comparing distribution sector with food and beverage industry, especially if comparing with production of non-alcoholic drinks, distribution sector is achieving lower gross margins. The main reason is the type of services they provide (purchasing, distribution and sales of goods to specific retail chain or to final consumer).

**Table 4.** Analysis of the approximate EBITDA margin of TOP 10 distributors

Rank 2015	Company	2011	2012	2013	2014	2015
1	Orbico	1,5%	0,2%	1,4%	2,0%	2,7%
2	Atlantic trade	2,6%	-1,6%	0,4%	1,4%	1,3%
3	Roto dinamic	6,2%	5,1%	4,6%	6,3%	6,3%
4	AWT international	5,3%	2,7%	3,6%	2,0%	1,9%
5	Alca Zagreb	4,6%	5,1%	5,6%	4,9%	5,1%
6	Ferrero	8,9%	8,5%	11,6%	2,9%	2,8%
7	Nestle Adriatic <sup>18</sup>	-7,2%	-6,8%	-5,2%	-8,2%	-5,0%

<sup>15</sup> Classified as NKD G46.36 Wholesale of sugar and chocolate and sugar confectionery in Croatia

<sup>16</sup> Gross margin = (operating revenue-cogs-other external costs) / operating revenue

<sup>17</sup> <http://www.boniteti.hr/BoniteteCE/Pages/Company.aspx?Lang=hr-HR&Mode=HR&App=HR&CompanyId=462813&CompanyDetailType=FinancialData&CompanyDetailSubType=FinancniPodatki>

<sup>18</sup> By revenue Nestle is 7<sup>th</sup> company with negative EBITDA margin through all the observed years ( according to activity, Nestle is registrated as distributor in Croatia)



<b>8</b>	Procter&Gamble	2,1%	4,9%	1,0%	3,2%	2,8%
<b>9</b>	Stridon Promet	2,4%	3,4%	3,9%	3,8%	3,7%
<b>10</b>	Stanić promet	3,8%	2,8%	2,6%	0,3%	3,5%
	<b>Average TOP 10</b>	<b>2,8%</b>	<b>1,7%</b>	<b>2,5%</b>	<b>2,1%</b>	<b>2,7%</b>

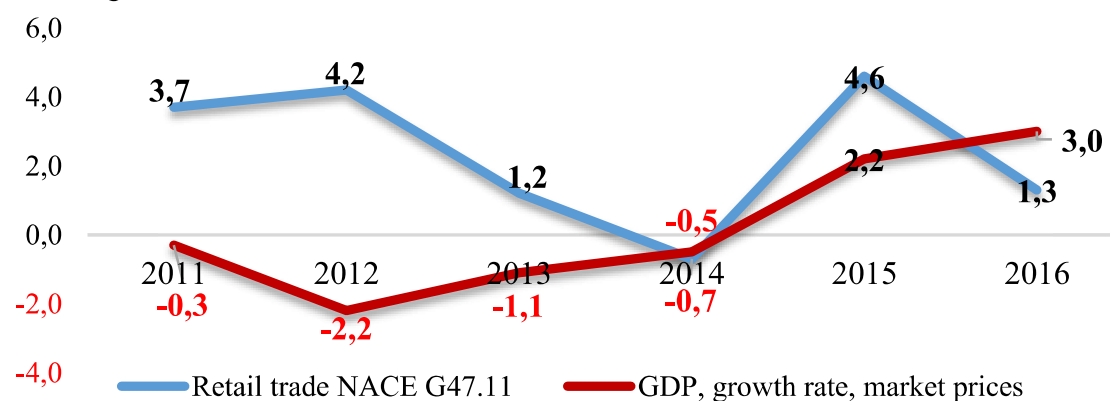
Source: Lider 1000 the biggest by the total revenue in 2015, boniteti.hr, authors analysis

When observing the EBITDA margin, the distributors recorded growth in 2015, comparing with 2013. The average EBITDA margin of TOP 10 distributors is around 2.5%. If comparing with food industry (about 9% in the food industry) the margins are noticeably lower in distribution sector. Distributors as the second players in the supply value chain, are achieving the lowest profitability of all participants. Nevertheless, distributors of beverages, such as Roto Dinamic<sup>19</sup> are generating the EBITDA margin at the same level as retailers (between 5-7%). On the other hand, if we put the focus on different indicator, such as, income per employee, then the distribution sector is the most efficient. The average income per employee in 2015 was 2.3 million Kuna, while at the same time the producers recorded 1.2 million Kuna of income per employee. The difference is almost 50%.

## 7. SITUATION IN RETAIL SECTOR, NKD G47.11 AND NKD G47.19

The main characteristics of retail in Croatia are the high degree of market concentration and saturation. TOP 10 retailers present more than 75%<sup>20</sup> of total retail trade in Croatian market.

**Chart 3.** The movements in turnover in retail trade (NKD G47.11)<sup>21</sup> in Croatia and GDP<sup>22</sup> growth rate, 2011 – 2016 in %



Source: CBS (retail trade turnover) and GDP

<sup>19</sup>

<http://www.boniteti.hr/BoniteteCE/Pages/Company.aspx?Lang=hr-HR&Mode=HR&App=HR&CompanyId=450178&CompanyDetailType=FinancialData&CompanyDetailSubType=FinancniPodatki>

<sup>20</sup> GFK –market trends monitor 2015 in Croatia

<sup>21</sup> Retail trade, december 2011 – 2016, first releases, CSS (Sub-area: Distributive Trade and Other services)

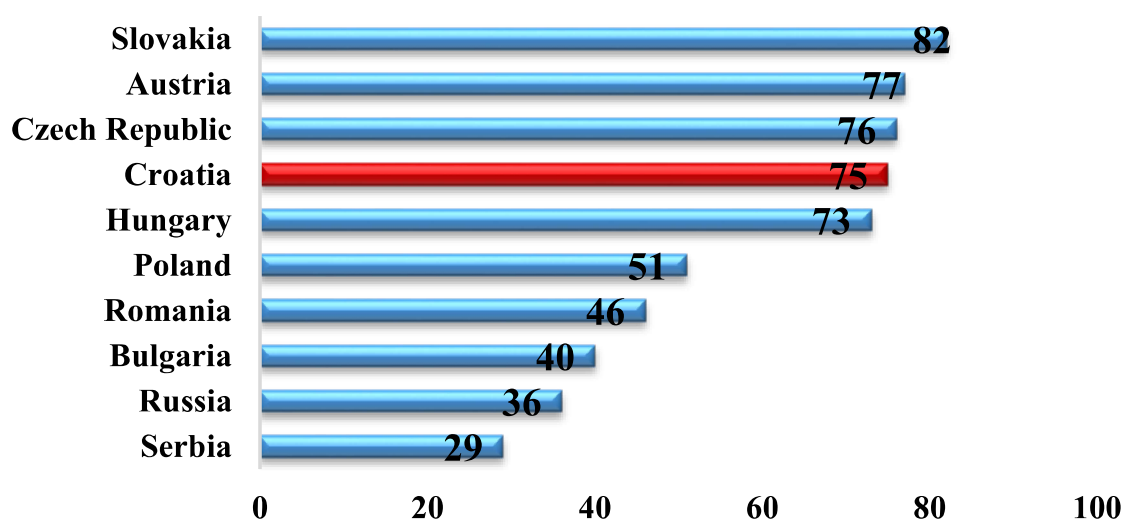
<sup>22</sup> CBS, NUMBER: 12.1.1/2., NSO ISSN 1330-0350

The movements in retail trade in Croatia in observed period showed a positive trend. In the same observed time, the GDP measured at constant price recorded a negative trend. The type of trends in curves from above, where the red curve presents the GDP growth rate, while the blue curve presents the retail turnover are showing a divergence trend in observed period time. The retail turnover is constantly above GDP growth rate 2011 – 2016 which means that the retail sector is much more resistant than other sectors in economy. Gap between the curves in observed period was in favour of retail sector, especially in 2012 where the gap was at the highest level and difference between GDP growth rate and retail growth rate was 6,4%. Therefore, in the observed period the retail sector passed through expansion, while the Croatian economy has passed through the contraction period and recorded negative growth rate. The chart above, presents strong negotiation skills of retail sector through the recession period, where the overall economy faced the downturn. All components of GDP decreased while the retail sector recorded growth in observed period. Therefore, some of the participants in supply value chain had amortized imperfections in their business (e.g. decrease in margins) in the observed period.

## 8. BUSINESS ANALYSIS OF TOP 10 COMPANIES IN THE RETAIL TRADE SECTOR (NKD G47.11 AND NKD G47.19)

The last, but not the least player in the supply value chain is the retail sector. In the last 5 years, the retail sector is experiencing an exceptionally high level of concentration. The first TOP 10 retailers (retail chains<sup>23</sup>) account for more than 75% of the total retail value in Croatia. High retail concentration is the main characteristic of developed countries.

**Chart 4.** Share of TOP 10 retailers in total retail sector in 2015 in %



Source: GFK retail monitor 2016/2015 June 2016

<sup>23</sup> Metro is excluded – in the same time he has the role of a wholesaler and retailer (registered under NKD G46.90)

From appointed countries, in the TOP 10 retailers, Romania, Bulgaria, Russia and Serbia have the lowest share of top 10 retailers in total retail sector (lower than 50%). The consolidation of retail sector in Croatia, started in 2008, when the share was reaching 60%<sup>24</sup>. Still, a real beginning of the market consolidation started with entrance of the biggest international players in Croatian market, Lidl and Kaufland (Schwarz Group<sup>25</sup>). Today, Schwarz group exceeds 20% of market share.

**Table 5.** Analysis of the approximate gross margin<sup>26</sup> TOP 10 retailers

Rank 2015	Company	2011	2012	2013	2014	2015
1	Konzum	26,6%	25,9%	25,9%	26,1%	25,8%
2	Plodine	25,1%	24,9%	25,7%	25,1%	23,9%
3	Lidl	19,9%	20,5%	23,3%	25,6%	26,6%
4	Kaufland	22,5%	22,9%	23,4%	24,4%	25,7%
5	Spar Hrvatska	25,5%	25,6%	25,9%	26,5%	25,8%
6	Tommy	22,6%	23,0%	23,8%	24,4%	25,0%
7	Billa	19,0%	17,4%	21,2%	24,6%	23,7%
8	Studenac	23,7%	24,1%	24,5%	25,0%	26,0%
9	KTC	18,7%	18,8%	19,8%	19,9%	19,6%
10	Metss	23,1%	22,7%	22,5%	23,0%	23,3%
	<b>Average TOP 10</b>	<b>24,4%</b>	<b>24,1%</b>	<b>24,7%</b>	<b>25,3%</b>	<b>25,2%</b>

Source: boniteti.hr, authors analysis

From TOP 10 mentioned retailers according to NKD G47.11 and NKD G47.19, Lidl<sup>27</sup> is achieving the largest gross margin.

**Table 6.** Analysis of the approximate EBITDA margin of TOP 10 retailers

Rank 2015	Company	2011	2012	2013	2014	2015
1	Konzum	6,9%	6,2%	6,7%	6,9%	7,1%
2	Plodine	10,4%	9,7%	9,3%	8,9%	7,9%
3	Lidl	1,1%	1,8%	4,4%	5,8%	8,0%
4	Kaufland	2,2%	2,2%	2,2%	2,4%	0,1%
5	Spar Hrvatska	-0,1%	0,9%	0,6%	1,1%	-0,6%
6	Tommy	6,9%	6,5%	8,0%	7,7%	8,7%
7	Billa	-4,6%	-7,6%	-2,6%	-0,7%	-1,4%
8	Studenac	6,0%	5,6%	5,2%	5,1%	6,3%
9	KTC	5,5%	5,3%	5,9%	6,2%	5,3%

<sup>24</sup> GFK – GFK retail monitor 2016/2015 June 2016

<sup>25</sup> German retail chain with annual revenue more than 85.6 bn EUR, source: [www.igd.com](http://www.igd.com)

<sup>26</sup> Gross margin = (operating revenue-cogs) / operating revenue

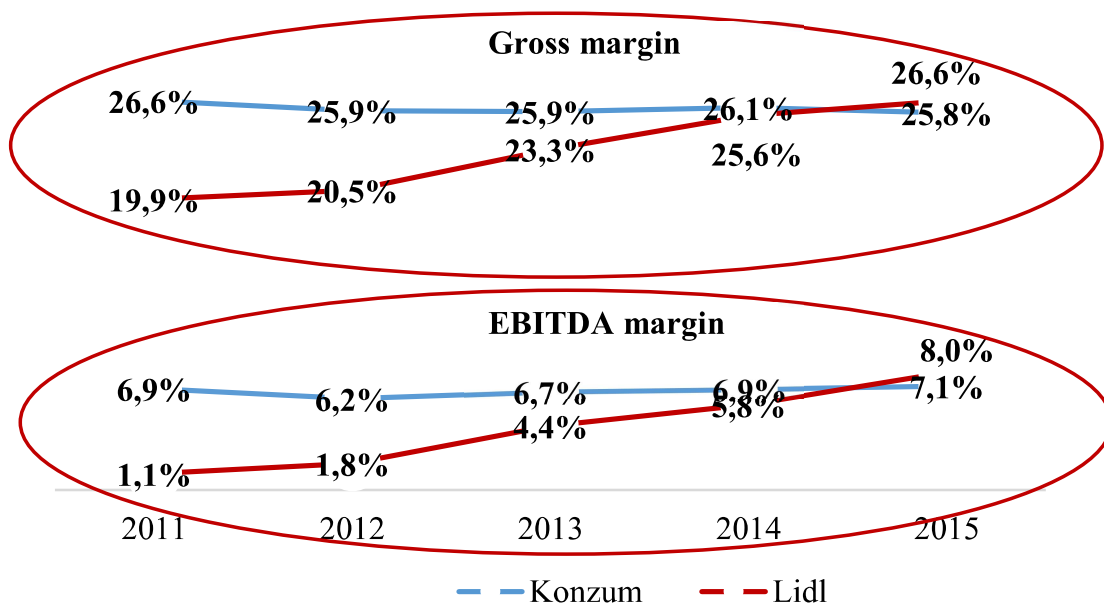
<sup>27</sup> <http://www.boniteti.hr/BoniteteCE/Pages/Company.aspx?Lang=hr-HR&Mode=HR&App=HR&CompanyId=471779&CompanyDetailType=FinancialData&CompanyDetailSubType=FinancniPodatki>

<b>10</b>	Metss	5,1%	3,8%	3,0%	2,8%	4,0%
	<b>Average TOP 10</b>	<b>5,3%</b>	<b>4,8%</b>	<b>5,4%</b>	<b>5,7%</b>	<b>5,7%</b>

Source: boniteti.hr, authors analysis

When analysing a profitability on the level of EBITDA, Tommy represents the most profitable retailer among the TOP 10.

**Chart 5.** Profitability analysis of Lidl and Konzum<sup>28</sup> from 2011 to 2015



Source: boniteti.hr (Konzum and Lidl reports), authors analysis

After the liberalization of Croatian market in July 2013, discounter Lidl made a strong expansion in Croatia. The gross profit margin has increased from 19.9% in 2011 to 26.6% in 2015, what represents overall growth of 6.7pp. Meanwhile, Konzum, the biggest retail chain recorded a slight decrease in profitability of -0.8pp in the same observed period. When analysing the EBITDA margins, the differences are even bigger. Lidl closed 2011 with result of 1.1% EBITDA margin, and Konzum had EBITDA margin around 6.9%, while in 2015 Lidl increased its EBITDA margin to 8.0%.

Chart 5 shows that the movement of profitability significantly accelerated after 2013. The high level of Lidl's profitability and profitability of other retailers had an impact on other participants in supply value chain. Wide availability of cheap goods from abroad, forced domestic producers to be more competitive with prices, thus, they declined their margins. This was pointed in the beginning of this paper.

<sup>28</sup> <http://www.boniteti.hr/BoniteteCE/Pages/Company.aspx?Lang=hr-HR&Mode=HR&App=HR&CompanyId=457425&CompanyDetailType=FinancialData&CompanyDetailSubType=FinancniPodatki>

The local food sector wasn't ready to answer on exogenous shocks from foreign import from international retailers, therefore profitability in whole value chain was significantly disrupted. The external trade balance is also affected.

In the supply value chain, the profitability has rapidly decreased. The "Paret's" effect occurred.

From the last few years, Croatian market is facing a strong pressure on producers' prices from mostly retailers and from some distributors. In the last several years, the expansionary monetary policy did not push the price in positive level on consumer side. Inefficiency of monetary policy in terms of increasing prices (CPI) led to double deflation effect (CPI, PPI).

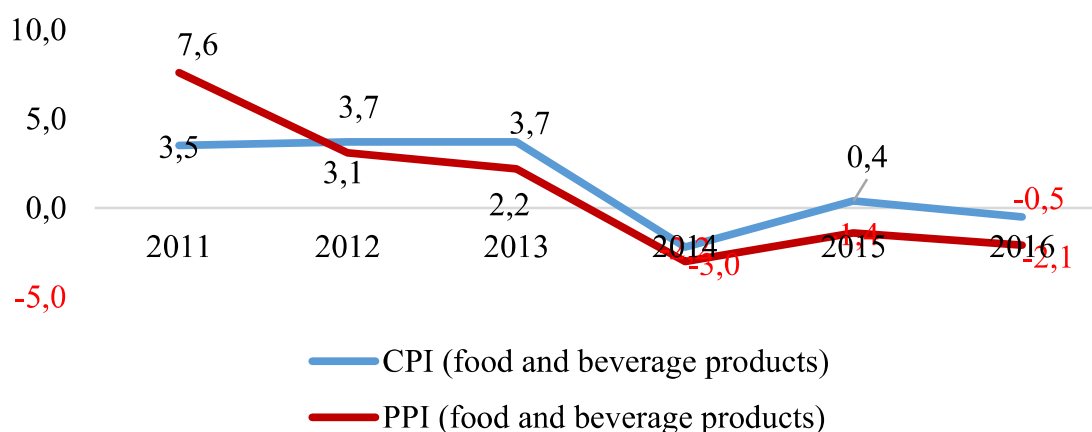
**Table 7.** Inflation trends in consumer and producer prices (CPI and PPI) 2011 – 2016, in %

	2011	2012	2013	2014	2015	2016
CPI (food and beverage products)	3,5	3,7	3,7	-2,2	0,4	-0,5
PPI (food and beverage products)	7,6	3,1	2,2	-3,0	-1,4	-2,1
GAP (CPI-PPI)	-4,1	0,6	1,5	0,8	1,8	1,6

Source: CBS, authors analyses

Followed is graphical display.

**Chart 6.** Inflation trends in consumer and producer prices (CPI and PPI) 2011 – 2016 in %



Source: CBS, authors analyses

After 2011, Croatian economy was faced with negative gap between inflations (consumer price index and producer price index). In the observed period, the retailers had more deflated prices than producers and other players in supply value chain. Because of all mentioned factors, retailers amortized a big amount of margin caused by producers and distributors imperfections until the period 2011 where the gap between retailers and producers was on the producer side (4,1% difference). In the next period (after 2011), the trend of inflations was turned around, where producers

in supply value chain were faced with big pressure from the retailers and foreign competitors. Because of this trend, producers cut off part of their margins, in order to maintain competitiveness on the market by reducing their own profits (chapter 2). The significant pressure on prices competitiveness came after 2013 when Croatia joined EU28. In this period, producers were faced with imported inflation and they were forced from the retailer side to reduce their price to maintain a competitive advantage. Moreover, the deflation on the consumer side (CPI) began in 2014, but comparing with the deflation on the producer side (PPI), the gap between this two deflations remained positive in favour of retail chain +1,6pp. Although, the TOP 10 retailers are employing more than 30,000 people and they present the biggest employer in observed value chain, compared to the other players (TOP 10 distributors 13,000 employees, TOP 10 producers 4,000 employees) they are still the one with the lowest average net salary per person (4,387 Kuna in 2015).

## **9. CONCLUSION**

The profitability of the participants in the supply value chain from manufacturers through distributors and end customers is extremely complex. It depends on the type of production, distribution methods and bargaining power of retailers. Entrance of foreign retail chains, which was even more significant after the liberalization of the market, together with Croatia joining the EU28, was followed with a strong pressure on the price competitiveness among all participants of the supply value chain. Cheap products from abroad had the effect of importing deflation in Croatia. Afterwards, the import inflation caused deflation in the domestic market, where domestic producers were the one most negatively affected by that. Other participants of the value chain, retailers and distributors were mostly shifting their "inefficiencies" to the manufacturing sector (food and beverage production). Moreover, in 2013 Croatia was faced with the challenge of double deflation on the manufacturing side and on the consumer side (Chart 6). Despite of expansionary monetary policy and the increase in personal consumption, manufacturing sector needed to give up part of their margins to maintain a competitive position in the market. Even though the deflation was partially present on the consumer side, on the manufacturing side was significantly higher. In the Food Industry (NKD C10 and NKD C11), the EBITDA margin is almost the same as the EBITDA margin of the retail chains, which is a long-term problem and can cause a disruption of profitability in the supply chain. The world practice is that average producer has at least 3% higher EBITDA margin than a retailer (see references), and over 5% higher EBITDA margin when comparing with distributor. If the trend of putting the pressure on domestic producers directly or indirectly by retailers continuous, Croatian economy will be faced with tremendous negative consequences. Altogether, the competitiveness of domestic food production will be distorted. In 2016 the profitability of food producers in Croatia is showing a negative trend, while the profitability of retailers is increasing. Retail sector was growing in 2016 for 1,3% (NKD G47.11, Chart 3) in comparison with 2015. Therefore, the overall stability of the participants in supply value chain is for sure going to be distorted. The most affected participants will be producers,

followed by distributors whose business is becoming more risky due to the market complexity. The expectations are that the relationship between the participants in supply value chain will be negatively changed, namely affecting producers. The competition in supply value chain will be more aggressive in the following period, due to the negative trend of consumers spending in Croatia. The results of all mentioned facts are causing a spiral effect on Croatian economy. Croatian economy is also facing with deficit of workforce followed by decrease in personal consumption, negative demographic balance and finally with a drop of profitability in the supply value chain. To summarise, it is expected that the retail sector will continue to grow, while distributors will most probably face with some difficulties. Their survival will depend on their negotiation skills and their flexibility to adapt to fast moving market conditions. The producers will be the ones most negatively affected, which was mentioned in the hypothesis in this paper.

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[http://www.dpdhl.com/content/dam/dpdhl/Investors/Events/Reporting/2016/FY2015/DPDHL\\_2015\\_Annual\\_Report.pdf](http://www.dpdhl.com/content/dam/dpdhl/Investors/Events/Reporting/2016/FY2015/DPDHL_2015_Annual_Report.pdf) - below 3% EBITDA margin

[http://www.groupe-achan.com/fileadmin/documents/2016/RAPPORT\\_FINANCIER\\_GB\\_-\\_FINAL.pdf](http://www.groupe-achan.com/fileadmin/documents/2016/RAPPORT_FINANCIER_GB_-_FINAL.pdf) - calculated EBITDA margin in 2015 is 5,2%

[https://www.nestle.com/assetlibrary/documents/library/documents/annual\\_reports/2015-annual-review-en.pdf](https://www.nestle.com/assetlibrary/documents/library/documents/annual_reports/2015-annual-review-en.pdf) - some production sector EBITDA margin over 20%

[http://www.parmalat.com/attach/content/4909/Parmalat\\_Eng\\_web.pdf](http://www.parmalat.com/attach/content/4909/Parmalat_Eng_web.pdf) - calculated EBITDA margin 7,0% - 8,0%

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**Abbreviations for NKD or NACE:**

[http://narodne-novine.nn.hr/clanci/sluzbeni/2007\\_06\\_58\\_1870.html](http://narodne-novine.nn.hr/clanci/sluzbeni/2007_06_58_1870.html), NKD or  
NACE - National Classification of Activities, Version 2007 or  
[http://ec.europa.eu/competition/mergers/cases/index/nace\\_all.html](http://ec.europa.eu/competition/mergers/cases/index/nace_all.html)

NKD C10 - Manufacture of food products

NKD C11 - Manufacture of beverages

NKD G46.90 - Non-specialised wholesale trade

NKD G46.36 - Wholesale of sugar and chocolate and sugar confectionery

NKD G47.11 - Retail sale in non-specialised stores with food, beverages and tobacco predominating

NKD G47.19 - Other non-specialised stores