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Agrokor Case: The Recent Past and The Uncertain Future of The Big Agribusiness Conglomerate In Croatia

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ABSTRACT

The leading agribusiness group Agrokor is one of the biggest in Croatia today with respect to number of integrated companies, employees, and revenues. Its constant growth was based on acquisitions and mainly financed through borrowing. Although questions about Agrokor indebtedness were raised occasionally, the first time the problem was taken seriously was in 2017. Hence, the special national law was adopted according to which Extraordinary Administration and government commissioners were appointed with the role to maintain day-to-day activities, and conduct settlement procedure and restructuring. The objective of this paper is to determine the nature of unfocused growth of Agrokor and its consequences on the business results. For that purpose, financial analysis of main Agrokor member companies was performed. The results reveal decrement in revenues, and increment in costs for the period 2012-2016, which caused lowering of profitability and rise of indebtedness. Altman Z-score showed that all companies are one step to bankruptcy. Furthermore, the main idea is to determine supply chain models through which the company is embedded in the national agribusiness.

Keywords: Agrokor; Croatian agribusiness; supply chain; financial analysis

1. Introduction

Agrokor is the largest vertically integrated private business group in Croatia. For the purposes of this paper, Agrokor is divided into three divisions: retail, agriculture, and food. Agrokor is also one of the biggest companies in Eastern Europe with € 6.5 billion of annual revenue, 60,000 employees and 77 affiliated and controlled companies. Besides Croatia, Agrokor companies are located and operate in Serbia, Slovenia, Bosnia and Herzegovina and Hungary.

The development of Agrokor started in 1976 with a family business in floriculture, but Agrokor that we know today was established in 1989. Since the establishment, Agrokor has grown through numerous acquisitions and green field investments in Croatia and in the region.

Considering its food division, Agrokor agricultural companies utilize more than 25 thousands hectares of arable land, vineyards, and orchards. With respect to the food processing, its companies are involved in sectors of meat processing, milling, and bakery, edible oils production, frozen food products, non-alcoholic beverages, wine, cheese etc. Agrokor retail chains hold significant market shares in Croatia as well as in the neighbouring countries.

As the biggest player in the Croatian agriculture, Agrokor receives about 4% of the total national direct payments in recent years. In addition, its companies have benefited from other public supports, e.g. rural

development, loan subsidies, market interventions etc. Regarding its role in the value chain, Agrokor has been associated with a large number of farms through contracted production.

Agrokor as the one of the largest system and after the years of business, instability, unsustainability, and illiquidity such as indebtedness emerged publicly. Because of the high importance of Agrokor's company for the Croatian economy, Government decided to take measures to prevent negative impacts of business problems in large systems on the state's economy. The large system in Croatia represents companies that have covered enterprise resource planning, production system, implementation of production and at the end supervisory control. Some main characteristics are more than 250 employees, more than € 50 million of annual turnover, and more than € 43 of annual assets.

The agribusiness environment around the globe is changing fast. It is characterized by the globalization of food industry and changes in the market and consumption structure. Price volatility, trade liberalization, consumers' demand for food quality and safety, climate change and environment protection, renewable energy resources and rural development, represent challenges for society, business, and individuals alike. Globalization in the food industry puts emphasis on concentration and growth through mergers and acquisitions. At the same time, governments' role in agriculture shifts from production toward efficient and inclusive value chains. Value chains encompass the full range of activities and services required to bring a product or service from its conception to sale in its final markets- whether local, national, regional or global. Links within a chain could range from vertical coordination (different forms of cooperation between value chain actors) to vertical integration. The full vertical coordination is called vertical integration, where one firm controls different levels of the value chain, implying that market transactions are replaced by intra-firm transactions (Goetz et. al, 2009).

Vertical integration describes the idea to integrate multiple production stages of the end-to-end value chain within one enterprise. It can be upward oriented towards the customer by an integration of farm production, processing or even marketing activities, or backward oriented by the integration with input production. Horizontal integration assumes organic growth (growth in the number of hectares, number of livestock, and increase of production capacities and similar) which should lead to the economy of scale and competitiveness based on the low costs.

Coordinated value chains are important from their potential to improve the rural economy. They integrate family farms in the market, introduce new technologies, quality schemes and knowledge and decrease barriers toward the capital. Also, coordinated value chains enhance entrepreneurial capacity, social inclusion and gender equality, and sustainable development in general.

The paper discusses the historical development of Agrokor, possible restructuring scenarios and their consequences for future of the company and the Croatian agribusiness.

The objective of this paper is to determine the nature of the unfocused growth of Agrokor and its consequences on the business results. Furthermore, the main idea is to determine supply chain models through which the company is embedded in the national agribusiness. Additionally, Agrokor business results, as officially stated in the financial statements, are compared with the respective agribusiness sectors. The analysis covers the period from 2012 until 2016. The analysis covers Agrokor's companies in Croatia only. In conclusion, the objective of this paper is also to evaluate the possible consequences of Agrokor restructuring for agribusiness in Croatia.

2. Results

2.1. Agribusiness environment

The Croatian economy needed six years to recover from negative effects of a global financial crisis that hit Croatia in 2009 when the real GDP growth rate fell from 2.1% to -7.4% (CNB, 2018). In 2015 growth rate became positive and the recovery is apparent in other macroeconomic indicators as well. In 2016 Croatian GDP grew for 3.2%, and the similar growth is expected in 2017 and 2018. Despite the three-year growth, the GDP per capita has not yet achieved the pre-crisis level. Recent economic growth is also reflected in growth of

export in relation to GDP, which has been higher than growth of imports in recent years. Due to the strict national monetary policy, average annual inflation rate has been low for a long period, whereas since 2014 it is even negative due to the fall in consumer prices. This phenomenon influenced the boosted consumption and growth in retail sales. The unemployment rate was at its peak in 2013 and 2014 (17.3%) after which it started to fall to 13.1% in 2016.

In the five-year period from 2012 to 2016 economic trends in the three business in which Agrokor companies operates were affected by the general economic situation. All three sectors recorded a large drop in economic activity with the onset of the financial crisis that lasted from 2009 to 2014. The annual growth rates of the sector are mostly negative until 2014 when they rose to positive values.

Compared to the EU average, the importance of agriculture for national GDP in Croatia is relatively high. The sector of agriculture, forestry, and fisheries generates 3.6% of GDP at the national level, while at the EU level it is 1.5%. Agriculture is also a significant source of employment due to large number of small, family-owned farms with a high share of family workforce in total labour. According to the LPIS system data (ARKOD in Croatia), Croatian agricultural holdings used 1.12 million ha of agricultural land in 2016 (APPRRR, 2018). The total agricultural area, as well as the total number of livestock units, are allocated to a large number of farms, so the average holding is rather small (10 ha). In the total number of holdings, those with less than 3 ha dominate (59.3%), using 10.1% of the total utilized area. On the other side, 0.8% of holdings with 100 or more ha use 29.8% of the area.

The worrying fact about Croatian agriculture is that its total output has been steadily declining since 2008. Croatia is the only EU member country with such a trend. As a consequence, the output value in 2015 was 27% less than in 2008, while in 27 other EU member states the output grew for 7% in average. Another concern is that the share of livestock production output has been almost continuous since 2005, so the livestock production in the year of 2015 generates 34% of total value only. At the same time as there was a decline in production value in Croatia, agricultural support was high and close to the EU level of support. Three members of the Agrokor Group involved in agriculture are among the largest 21 agricultural producers in the country that utilize more than 1500 hectares. Accordingly, they enjoy a significant agricultural support on a variety of grounds. With the total of HRK 140,000,000-150,000,000 per year (around € 20,000,000), these companies are ranked among top 5-10 beneficiaries in terms of the amounts received.

Food and beverage industries in Croatia make up an important part of the manufacturing sector GDP with a share of 26.9%. They also make 4.0% of the total national GDP. In 2016, the food industry had an annual growth rate of 2.0%, while in the beverage industry the growth was somewhat weaker. In the observed 5 year period, productivity increased in both industries, but it is still below productivity in the EU-15 countries (Palić, 2017). What encourages is the growth in exports of food and beverages that, together with the expected growth in consumption in the future, should contribute to the development and strengthening of these industries. The food and beverage industries make up the majority of the manufacturing sector total export in Croatia.

The Croatian retail sector is an important source of employment with 15.7% of the total number of employees in the country. In recent years, however, there has been a decrease in the number of employees and an ongoing concentration within the sector. In the sector itself, the real value of total turnover, as well as the number of registered companies, increased in 2016 compared to the previous year. However, some large retailers recorded low liquidity and high indebtedness in the same year, which may negatively affect the operations of their suppliers. The anticipated continuation or even acceleration of BDP growth and consumption in 2018 is expected to stimulate a further increase in the total turnover of the retail business. As for the Agrokor Group members, Konzum d.d. is the biggest retailer in Croatia. Besides Konzum, another member of the group, Tisak d.d., is also among the five biggest.

2.2. Agrokor group in Croatia

Agrokor is the largest vertically integrated private business group in Croatia. It is one of the biggest companies in Eastern Europe with € 6.5 billion of annual revenue, 60,000 employees and 77 affiliated and controlled companies. It operates in three divisions agriculture, food, and retail.

Agrokor's headquarters is in Croatia. Besides Croatia, Agrokor companies are located and operate in Serbia, Slovenia, Bosnia and Herzegovina and Hungary.

In the retail sector, Agrokor has two companies in Croatia: Konzum d.d. and Tisak d.d., a network of newsstands. In the whole region, Agrokor retail sector serves a population of about 17.5 million on over 2,800 locations and about 1.1 million square meters of space. Konzum d.d. is the biggest significant market player retail chain in Croatia (about 7000 stores and 350,000 sqm. More than $\frac{3}{4}$ of Agrokor's retail division revenue comes from business with around 25% market share, or more (Slovenia and Croatia) (Agrokor, 2017).

Food division consists of 21 companies in 4 segments: drinks, frozen food, oil, and meat. The companies in food sector encompass milling and bakery, meat processing, production of ice cream, frozen food, edible oils, margarine and mayonnaise, sea salt, non-alcoholic beverages, and water. Agrokor companies are leaders in all the sectors mentioned except for the milling industry and frozen food production. According to the Annual Report (Agrokor, 2017), the companies have a great development potential as well as potential to provide innovative products and the ability to open markets to additional and completely new product categories. There is also a significant potential in the rationalization of production processes between production companies in different countries. Agrokor's food segment has a strong market position with well-known brands and loyal customers. It realized as much as 64% of total Agrokor's core businesses EBITDA in 2016 at the amount of € 230 million.

The agricultural division is a major player in primary agricultural production in Croatia. It is a leader in terms of capacities and production, but it also leads in knowledge, innovation and marketing aspects. Due to their size, Agrokor companies received around € 20 million of agricultural subsidies in 2015 and 2016. On almost 35 thousand hectares of agricultural land and with the production of 400 thousand pigs, 18 thousand beef, 10 million liters of wine and more than 53 million liters of milk annually, the agricultural division had the turn-over of € 507 million and € 31 million EBITDA in 2016 (Agrokor, 2017).

The development of Agrokor started in 1976 with a family business in floriculture, but the Agrokor that we know today was established in 1989. Since the establishment, using the circumstances of the economy in transition and political fondness, Agrokor has grown through numerous acquisitions and green-field investments in Croatia and in the region. For the decades, Agrokor was considered as a jewel in the crown of Croatian economy, an example of successful privatization, while Todorčić family, as the major owner, was used as the role model of hardworking and successful entrepreneurs.

At the beginning of 2017, the signs of problems in Agrokor have emerged publicly. Its credit rating fell sharply. Rumors about the possible collapse of the company started to spread over the media (abundantly funded through advertisements, the media used to write about Agrokor's successes only), politicians started to discuss the problem, and stakeholders and general public showed concern about the company future. Due to the fact that the total annual revenue of Agrokor makes some 15% of the Croatian GDP, the government enacted the 'Law on the Procedure of extraordinary Administration in Companies of Systemic Importance for the Republic of Croatia'. The law requires a fast and efficient procedure for the preventive restructuring of companies of systemic importance for the Republic of Croatia in order to ensure liquidity, sustainability, and business stability. An extraordinary administration and a government commissioner were appointed to Agrokor. Among the first steps of the extraordinary administration was a thorough analysis of finances and determination of total liabilities. For that purpose, an internationally recognized audit company has been hired. The audit for the financial year 2016 found around € 3.0 billion (HRK 22 billion) of equity reduction through various adjustments and operating results together with € 1.1 billion (HRK 8.3 billion) of undisclosed borrowings, not represented operating and financial expenses, loans improperly classified as capital reserves and cash and cash equivalents restatement. Meaning that total liabilities exceed total assets for almost € 2 billion (Agrokor, 2017). In the claim management process, creditors lodged almost 11 thousand claims which were fully or partially recognized in

the amount of about € 5.5 billion. Konzum received 16% of all claims. It was followed by Tisak as the second biggest debtor company (8%). (Agrokor, 2017).

Extraordinary administration initiated work on the restructuring the Agrokor. Viability plan suggests the following “...restructuring of Retail and continued growth and optimization of EBITDA effects in the Food business group. Agriculture business sector will reap the fruits of capital investment from the past, while at the same time the assets of other activities will be sold, and employees of Agrokor d.d. will be transferred to operational activities. This sustainability plan will enable long-term survival of most Agrokor companies and improve profitability and other key business indicators in all business segments, which will also ensure maintaining employment levels and further positive impact on the Croatian economy as well as the economy of the region (Agrokor, 2017).

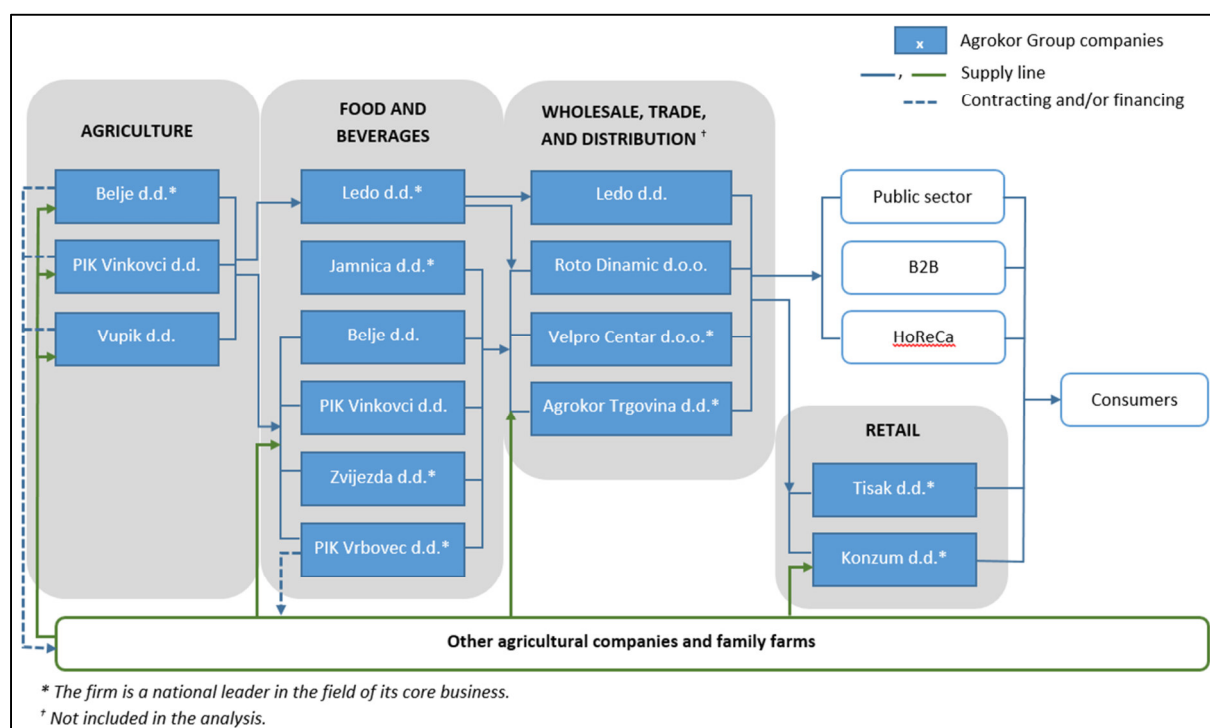


Figure 1. Agrokor Group companies by sector and their relations with other agricultural producers in Croatia.

2.3. Financial analysis

The financial position of Agrokor Group and its divisions is analyzed for the period 2012-2016 (except agricultural division – from the period 2012-2015) by calculating average values of financial indicators based on data available in financial reports/statements.

Towards a better understanding of the financial position (indebtedness, profitability, solvency) of the whole Agrokor and its divisions, we calculated current ratio, return on asset (ROA), return on equity (ROE), Equity-asset ratio (E/A), Debt-asset ratio (D/A), receivables and payables days and Altman Z-Score indicator. The mentioned numbers show us Company's position regarding bankruptcy and which company from divisions is in the better or worst situation.

Box 1. Financial analysis

Current ratio = Current assets/Current liabilities

<p>Return on assets (ROA) = Net income/Total Assets</p> <p>Return on equity (ROE) = Net income/Total Equity</p> <p>Equity – assets ratio (E/A) = Equity/Total Assets</p> <p>Debt – assets ratio (D/A) = Total Liabilities/Total Assets</p> <p>Days receivable = 365/Accounts Receivable Turnover</p> <p>Days payables = (Short-term liabilities * 365)/Material costs</p> <p>Altman's Z-score = $1.2X_1+1.4X_2+3.3X_3+0.6X_4+1.0X_5$</p> <p>$X_1$ – (Current Assets - Short-Term Liabilities)/Total Assets</p> <p>X_2 – Retained Earnings/Total Assets</p> <p>X_3 – (Net Profit + Interest Rates + Taxes)/Total Assets</p> <p>X_4 – Market Value of Total Shares/Total Liabilities</p> <p>X_5 – Net Sales/Total Assets</p>
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For the purpose of the financial analysis, the authors included the biggest company such as Konzum and Tisak in the retail division, Belje, PIK Vinkovci and VUPIK in agriculture division and Ledo, Jamnica, Zvijezda and PIK Vinkovci in the food industry.

In the retail division, Konzum and Tisak are in the same situation. Both companies have higher costs than revenues and the negative (-3.24% and -7.94%) return on asset (ROA). Return on equity (ROE) of Konzum and Tisak is among the highest compared to the other Agrokor companies, 6.57%, and 5.30%. Indebtedness of 98.88% for Konzum and 80.37% for Tisak show how high size of debt per one euro of own capital is.

According to the comparison of companies in agriculture division (Belje, PIK Vinkovci, and VUPIK), it appears that only PIK Vinkovci has positive ROA (0.09%) and ROE (0.30%) but it is not enough for effective earning money. Altman's indicators show us that all three companies are one step to bankruptcy (Altman Z-score is smaller than 1.8). Only VUPIK company has a negative Altman indicator of -0.27.

The food industry division has the best position since all companies have revenues higher than costs, but on the other hand, only Ledo and Jamnica have high capital and asset. Jamnica is a company that earns the highest level of money and is the most profitable (ROA=7.03%) of all the companies in the food industry. Ledo has the lowest financial risk which shows us that only 21.49% assets are financed by debt and it represents the higher degree of financial flexibility. Also, average receivables (67 days) and payables (59 days) days are the lowest compared to all other companies. Altman's indicator for Jamnica (2.22) is one of the highest among all other companies in the food industry. On the other hand, all other companies have a lower indicator which means they are probably headed for bankruptcy.

Agrokor Group, as the whole company has total liabilities more than € 2.5 billion in which long-term liabilities have a share of 72.60%. Agrokor has the high D/A ratio (103.89%) that represents a high financial risk for the whole company. Average capital is negative, receivables (687 days) and payables (308 days) periods are high. The share of revenues in total cost is only 45%. Average total cost (€ 531,909,113) for the last five years is much higher than revenues (€ 239,965,593) that indicates unprofitable business. Altman's indicator of 0.03 confirms a negative position of Agrokor Group and theoretically unveils that Agrokor is one step from bankruptcy. All companies have a positive trend of financial indicators from 2012 until 2015. In 2015 and 2016 financial indicators in companies fell down considering indebtedness, profitability, and solvency.

Zagreb Stock Exchange has historical data regarding share trade. The data for the companies Ledo, Jamnica, Zvijezda, PIK Vinkovci, VUPIK, Belje, and Tisak are presented (table 1). The data for Konzum and PIK Vrbovec are not listed on the stock exchange. The average share price through all years is increased and Jamnica had the highest value of € 16,037 in 2016. Ledo and Zvijezda, as the food companies also had the highest value. Other mentioned companies, from retail and agriculture division, had a lower mean value of the share (€ 17 average of all four companies). In 2016 the value of a share decreased since its indebtedness problems that became more volatile for all companies and Croatian economy.

Compared to the average share price on January 17th, 2018 value dropped for more than 90% for all companies, except Tisak company (-83.62%). Average share price is lower than € 1 for two agricultural companies, while companies in the food industry have the highest average share price.

Table 1: Average share price through years

Name of the company	2012 (€)	2013 (€)	2014 (€)	2015 (€)	2016 (€)	Today (€) (17/01/2018)	Percentage change today/2015
Ledo	776	1,060	1,122	1,107	1,332	33.28	-96.99
Jamnica	4,833	7,287	9,606	13,133	16,037	532.52	-95.95
Zvijezda	429	504	399	369	464	17.97	-95.13
PIK Vinkovci	25	29	32	27	28	1.61	-93.99
VUPIK	11	16	12	9	5	0.40	-95.37
Belje	10	9	5	4	3	0.31	-91.51
Tisak	24	27	23	24	20	3.99	-83.62

Source: Zagreb Stock Exchange, 2018

To conclude, the most successful division is food industry. They achieved better results, higher revenues, and it is more profitable than agriculture or retail. The food industry division has the lowest financial risk in comparison to other divisions. Ledo, Jamnica, and Zvijezda are known as the market leaders in their area of business and also have the best results in this analysis.

In 2017 when the first business problems occurred, Croatian Government appointed extraordinary Administration. His first assignment was to check out company's finances and total liabilities. Therefore, an internationally recognized audit company has been hired. They conducted audits for the 9 smallest companies within Agrokor Group which are analyzed in this paper.

Audits found the following irregularities: 'not showing operational and financial expenses, improper classification of borrowings, inadequate classification of loans granted as cash and cash equivalents, improper classification of assets and reserves, and incorrect presentation of loans as equity' (Agrokor. Extraordinary Administration, 2017).

Audits concluded that € 385 million (HRK 2.9 bn) undisclosed borrowings, € 305 million (HRK 2.3 bn) of previously not represented operating and financial expenses, € 279 million (HRK 2.1 bn) of cash and cash equivalents restatement, € 133 million (HRK 1 bn) of loan improperly classified as capital reserves, € 2,8 billion (HRK 21.7 bn) of equity reduction through various adjustments and operating result. Total liabilities exceed total assets for € 1,9 billion (HRK 4.5 bn) (Agrokor. Extraordinary Administration, 2017).

After the audit analysis, the extraordinary Administration has engaged additional international company specialized in forensics to further explore identified irregularities listed above.

Table 2: Business indicators of selected Agrokor companies by divisions: Average for the period 2012-2016

	Retail			Agriculture*			Food industry			
	Agrokor	Konzum	Tisak	Belje	PIK Vinkovci	VUPIK	Ledo	Jamnica	Zvijezda	PIK Vrbovec
AVERAGE (thousand €)										
Total revenues	239,966	1,738,812	384,702	231,894	63,123	57,956	164,073	201,698	121,832	274,622
Total costs	531,909	1,762,512	394,850	247,642	62,932	59,500	154,134	181,056	120,251	264,060
Asset	2,540,742	1,481,010	125,542	510,427	151,942	181,838	301,755	243,881	169,340	189,194
Capital	-23,389	90,431	20,888	146,218	33,302	83,119	233,997	179,312	127,152	81,096
Total liabilities	2,536,165	1,379,665	101,338	363,405	118,295	97,634	67,253	64,039	41,626	105,149
AVERAGE										
Current ratio	1.69	0.30	0.96	0.90	0.68	0.55	3.76	2.43	2.33	1.39
ROA (%)	-14.30	-3.24	-7.94	-3.02	0.09	-0.83	1.22	7.03	0.11	4.22
ROE (%)	-2.26	6.57	5.30	-13.74	0.30	-1.79	1.52	8.53	-0.73	10.63
Equity-asset ratio (%)	-5.03	0.30	16.97	29.23	22.14	45.71	78.33	73.51	74.97	43.72
Debt-asset ratio (%)	103.89	98.88	80.37	70.62	77.64	53.70	21.49	26.27	24.69	54.70
Days receivable	687	22	38	63	99	47	59	73	83	52
Days payable	308	91	77	49	64	91	46	78	67	44
Altman Z-score	0.03	1.45	2.72	0.34	0.36	-0.27	1.43	2.22	1.49	1.68

* Average for the period 2012-2015, data for 2016 were not available

Source: Boniteti, 2018

Table 3: Comparison to other companies in the food processing industry (2015)

2015	Total revenues (thousand €)	EBITDA (thousand €)	ROA (%)	ROE (%)	Debt-asset ratio (%)
<i>Agrokor's companies</i>					
Belje d.d.	219,678	19,680	-1.68	-4.80	45
PIK Vrbovec – Meat industry d.d.	289,143	24,829	6.02	13.51	39
Ledo d.d.	177,078	22,879	7.28	8.7	18
Zvijeda d.d.	108,989	7,923	3.01	3.71	18
Jamnica d.d.	218,129	23,851	11.47	14.65	21
PIK Vinkovci d.d.	60,656	10,036	-0.39	-1.95	81
VUPIK d.d.	55,210	6,996	-1.49	-2.8	47
<i>Other leaders in food processing industry</i>					
Vindija d.d.	339,471	12,312	0.63	1.73	62
Podravka d.d.	267,816	24,304	5.37	9.55	38
Dukat d.d.	223,350	8,687	3.99	6.08	28
Meat industry-brothers Pivac d.o.o.	164,883	11,397	10.98	18.51	48
Kraš d.d.	117,643	7,501	1.11	2.07	46
PPK d.d.	125,117	6,377	5.8	10.76	46
Franck d.d.	114,147	4,116	2.55	4.13	37

Source: Boniteti

The comparison can be made according to the data in between Agrokor and other big food industry companies Vindija, Podravka, Dukat, Meat Industry Pivac Brothers, Kraš, PPK, and Franck.

Data from the financial statements (2015 year) has shown that Belje, PIK Vrbovec, Jamnica, Vindija, Podravka, and Dukat have total revenues higher than sectorial average (€ 177,236 thousand) and that Ledo company is a little below average. All Agrokor companies are above industrial average.

Only 5 of 14 companies have EBITDA higher from the average (€ 13,635 thousand) and also Agrokor's companies are included. 50% of listed companies have a return on assets and equity higher than average (ROA=3.90% and ROE=5.99%).

Analysing indebtedness of all listed companies we can conclude that companies do not have any major problems with indebtedness. Since the only two companies (PIK Vinkovci and Vindija) have a debt-asset ratio higher than 50% which is considered as a limit of indebtedness.

In conclusion, the position of Agrokor companies (PIK Vrbovec, Ledo, and Jamnica) is in all indicators more successful than other compared companies in Croatia. They make higher revenues, consequently high EBITDA (it means they have lower expenses than some other companies), positive ROA and ROE, and the lowest indebtedness.

2.4. Value chain analysis

“The company’s crisis is a “typical combination of fast expansion, overinvestment, low profitability and high-cost borrowing, which resulted in not enough cash flow to service its credit obligations”, Financial consultant Andrej Grubisic told Politico (Harper, J. 2017).

Although correct, the handbook explanation from above should be put in the context of Agrokor’s role in the national economy and side effects it created laterally. For example, Croatian Postal Bank reported net profit down 89 percent year on year in the first quarter due to provisions for exposure to the Agrokor Group (Harper, J. 2017).

This chapter analyses the role of the agriculture division in the Agrokor group and, secondly, coordination between farmers and Agrokor, namely division agriculture.

Reasons for forward integration are expensive and unreliable distributors, growing sector with high-profit margin and internal strengths of the company (capital and human resources). On the other side, reasons for backward integration lies in the needs for reliable supply (suppliers) and importance for a stable price and quality of raw materials (David, 2006). Reasons for integration within value chain are portfolio diversification, cost sharing, joining complementary skills, negotiation power and synergy effects (Gonan Božac, Tipurić, 2014). Grega (2003) discuss reasons for vertical integration and should the firm internalize the transactions. Allen and Lueck (2002) reasons for the dominance of family farms see in seasonally, crop cycles, task specialization, and random events.

Analysis revealed that agriculture division share in total Agrokor’s revenues is about 8% (€ 505 million, 2016), but share in EBITDA is 13.7% (€ 31 million). Just as an example, the whole retail network across former Yugoslavia (2800 stores and 1.1 million square meters of space) earned € 50 million EBITDA. Nevertheless, about 20 million in agricultural division’s EBITDA came from agricultural support (Bešević, M. et. al, 2017). Although one could believe that support from Common Agriculture Policy Funds and Government will continue, the agricultural division could be a subject to capping (limitation in the support due to the size) and convergence (redistribution of support payments toward the smaller size farms).

Two main sources of risk appear in agriculture business model. First one is huge dependence on the Group. About half of revenues come from the sale to the Agrokor’s companies. The highest share belongs to the sales to other companies in division agriculture (23%), 20% of revenues were earned selling to the Food and 8% to the Retail Division. The second risk lies in the fact that most of the products are commodities. Only small percentage of product belongs to the product with value-added like wine, cheese, salami and olive oil) (Bešević, M. et. al, 2017).

The agricultural division is characterized by modern production technologies, higher than average yield, care for the environment (biogas plants), high investments and skilled labour (about 3 thousand employees). Agrokor has been invested about billion Euros in the agricultural division from 2005 until today. It should be noted that Agrokor’s agriculture division mostly contain large estates (so-called agrokombinats) from the former, socialist system. These estates were acquired in the process of privatization. Although most of those large agri-complexes were pretty destroyed, still they accumulated quite of know-how and reputation during the history (for example, development of Belje could be tracked from the 17th century onward). Most of the agricultural land within agriculture division belongs to the state.

Currently the inefficient use of new investments (ratio between revenues and investments is about 0.6 for agriculture division and 1.61 for the agricultural sector in Croatia.) open space for the better use of the production capacities (Bešević, M. et. al, 2017). The problem of sales channels still remains under the question and will depend on the destiny of the whole Agrokor. But, regardless the future of the Agrokor, agricultural division should find new market channels, products and strategy in general to face local as well as global challenges in agribusiness. Last but not the least, companies from agriculture division should be better embed in the agri-food value chains in the way it benefits companies’ profit as well as complete rural economy and society.

Over the years Agrokor has invested significant funds in agricultural development. In doing so, it did not only increase the yields on its own fields and farms but has indirectly, by transferring its expertise to contractors, influenced their progress and improvement as well (Agrokor, 2015). We have already described agricultural division shortly. Here we should add that as much as 35 thousand hectares of land cultivated by Agrokor, the same amount of land is cultivated by farmers that cooperate with Agrokor and produced about 390,000 tonnes of crops annually (Agrokor's web page). Agrokor cooperates with about 10,000 family farms around Croatia (Bešević, M. et. al, 2017). About 2100 suppliers, mostly family farms submitted claims for payment (HRT News, 2017). According to the data from the Ministry of Agriculture (2017), agriculture division cooperated with about 1400 farmers while the whole group cooperated with 2200 farmers.

Despite the fact that Agrokor (including contracted production) produce about half of Croatian pigs, 12% of milk, 10% of beef production and cultivate 75,000 hectares of land (Ministry of Agriculture, 2017), empirical evidence of vertical coordination between Agrokor's companies and Croatian farmers is difficult to find. Research on fresh fruit and vegetable sector in Croatia showed that Konzum's supply chain models for fruit and vegetable (Goetz et. al, 2009) encompass many forms, from direct procurement from farmers, through wholesalers, distributions centers and through own production (fully vertically integrated supply chain). In addition, mentioned research revealed how Konzum provides the most comprehensive assistance within outgrower schemes and has even acquired some farmers. Konzum provided farm assistance of varying degrees and kind (provision of inputs, machinery rental or technical advice, and credits). Konzum distinguishes between 3 types of suppliers and has the strongest relationships with "A" suppliers, followed by "B" suppliers and "C" suppliers, with whom Konzum works only rarely. (Goetz et al., 2009).

The reasons for Agrokor's backward integration could be found in the unfavorable farm structure in Croatia (small and fragmented farms, low productivity, low level of investment and technology), and dependence of food division on raw materials. Although a significant amount of money has been invested in both, agriculture and food divisions, they still haven't reached EU level in productivity, innovation, and competitiveness in general. Part of that inefficiency was softened by selling via Agrokor's retail network, but it is questionable who bear and who will tolerate those costs in the future, after and if the restructuring process would result in segmentation of the whole Group?

3. Conclusion

Agrokor is cross-linked across the whole Croatian economy, but it has a particularly strong influence on the agriculture. Agrokor participates in the primary agricultural production, it sells agricultural inputs, and cooperate with a large number of farmers through production contracts. Its food division buys raw agricultural material from agriculture division, but also directly from farmers, while retail influence access to the market for (small) farmers either via direct procurement or passing through wholesales channels.

Therefore, it is not unusual that the research is focused on the models of supply chains within the Agrokor and with the business entities outside the group. Having in mind the current unenviable situation of the Agrokor's group, one could reasonably believe how current situation in the Agrokor would lead to great changes the organization and in the ownership structure of the company. The changes would influence either company's divisions as well as whole Croatian economy, namely agriculture. Knowing the situation based on the relevant and reliable facts could help managers and policy makers to shape those changes in the right direction.

The main results of financial analysis represent the decrement in revenues in comparison to increment in costs, low profitability, and high indebtedness. Altman Z-score showed that all companies are one step of bankruptcy.

A strong vertical integration within the Agrokor group exists. Agrokor has developed primary sector (agriculture division) with a high level of knowledge, modern capacities, and new technologies. The agriculture division earns half of its the revenues selling to other members of the groups, namely Food and Retail division. It is the highly risky position for the companies. Lack of value-added products, seasonality and climate change, uncertain level of government support and the high cost of production (low ration of revenues per investment) constitute a challenge for the companies in the future. Opportunities are access to EU market, global demand for agricultural products and preferable agri-ecological conditions.

The future operations of agriculture division are important for the farming sector as well. Cooperating with 2,000 to 10,000 farms (depending on the source) and providing outgrower schemes will influence farmers' market position. Agriculture division in the future as well as the supply chain models of cooperation with the farmers should be based on the sustainable supply chain relationship pushed by consumer preferences and should follow current trends in agriculture and food industry toward organic, environmentally friendly, health safety and climate neutral production.

In the way to improve farmers' involvement in the value chain, make it more inclusive and competitive, policy makers should use Common Agriculture Policy and national funds to enhance the level of cooperation between farmers with the consequences on bargain power, market information, and marketing costs, the introduction of quality standards and risk management.

The paper should develop in two directions: toward teaching case study for the agricultural economics students on the sustainable growth, competitiveness and efficient supply chain and in the direction of the more comprehensive analysis of the Agrokor's supply chain management, its efficiency and possible models for restructuring.

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