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THE CAP REFORM BEYOND 2013: THE ECONOMIC PERFORMANCE OF AGRICULTURAL ENTERPRISES WITHIN THE VISEGRAD GROUP

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Abstract

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The economic performance measurement of agricultural companies involves wide range of traditional and modern performance indicators, both aggregated and analytical. The applicability of those indicators, especially the analytical such as Balanced Scorecard or Benchmarking, is still at least disputable due to the specifics of this branch of business. However, there are some efforts to modify the policy of this branch through the EU Common Agricultural Policy reforms, which are based on many open discussions among concerned parties on both national and international levels. The objective of this paper is to assess and analyse the current situation of measurement and management of economic performance of agricultural enterprises within the Visegrad group and further delineate the possibilities of efficient management of economic performance of those entities, especially in the context of scenario proposals of agricultural development beyond 2013. The future development of the agriculture in the EU member states, which is projected via proposed scenarios beyond the year 2013 calls up the employment of modern economic performance indicators both for production and non-production outputs of agricultural business entities. The objective of this effort should be seen via ensuring the sustainable and balanced development of European agricultural sector.

agricultural business entities, Economic Accounts for Agriculture, Economic performance, EU Common Agricultural Policy

The corporate economic performance and its management and sustainable development is a multidisciplinary area with specific aspects, especially vis-à-vis various business specialization, business size or company life cycle. As far as the agricultural enterprises are concerned, it can be stated that small and medium-sized agricultural enterprises suffer from poor economic performance.

From the perspective of national economy in the Czech Republic, the Economic Accounts for Agriculture (EAA) are the methodological instruments for performance measurement in the agricultural sector. The EAA consist of four individual accounts, namely the production account, the generation of income account, the entrepreneurial income account and agricultural labour input (ALI) account.

In terms of measurement of agricultural companies' economic performance, there is a wide range of traditional and modern performance indicators, both aggregated and analytical. The applicability of those analytical indicators, such as the Balanced Scorecard or Benchmarking, is however still at least disputable due to the specifics of this branch of business. Nevertheless, there are some efforts to modify the policy of this branch through the Common Agricultural Policy (CAP) reforms, which are based on many open discussions among concerned parties on both national and international levels. The CAP serves to the EU citizens and is adjusted and applied according to the latest incentives. The intention of branch

modernization was already proved by the reform in 2003 and 2008. The current market impulses offer the opportunities for further potential modernization of present CAP so that prospective CAP may properly and relevantly respond to the current challenges (Paloma, Ciaian, Cristoiu, Sammeth, 2012). However, those challenges are not only environmental or technological, but also economic.

The objective of this paper is to assess and analyse the current situation of measurement and management of economic performance of agricultural enterprises within the Visegrad Group (V4) and further delineate the possibilities of efficient management of economic performance of those entities, especially in the context of scenario proposals of agricultural development beyond 2013.

The paper is structured as follows. The methodological framework is outlined in the next section. Section "Future perspectives on economic performance measurement under prospective CAP scenarios" presents the key challenges of three scenarios of upcoming CAP. The empirical illustration in section "Results and Discussion" focuses on agricultural enterprises in countries within the Visegrad Group, namely the Czech Republic, Poland, Slovakia and Hungary, and our main findings are summarized. The last section concludes and outlines some opportunities for future research.

Future perspectives on economic performance measurement under prospective cap scenarios

From the macro-environmental point of view, the agricultural sector has witnessed two different tendencies: firstly, the long-term upward tendency of input prices and secondly, the downward tendency of output prices; both of them belong to the most unfavourable relations within the agricultural sector. This fact is supported by the decrease in value added in the whole EU agri-sector, namely in comparison with the year 2000 by the decrease of 13% at constant prices, compared to the year 1996 even by the decrease of 30% (Staff working paper: Issues paper on high food prices, 2011; High commodity prices and volatility: …what lies behind the roller coaster ride?, 2011).

Moreover, there are some negative aspects related to asymmetric transfers of price changes within the agricultural supply chain, which result in lowering the rate of participation of agricultural producers on value added created within this chain. Naturally, the profitability of these entities in the EU lowers as the consequence of aforementioned negative factors. Therefore, any effort of agricultural producers to enhance the efficiency of production, marketing, or political activities needs to be supported. In connection with these aspects, the area of income disparities is often discussed in terms of interdisciplinary comparison and also among individual agricultural entrepreneurs influenced by, among others, global economic crisis and steep price decrease of agricultural commodities. Inevitably, approved CAP scenario needs to reflect the situation and development of changes occurring on the global agricultural market, as these are obligations to the World Trade Organization (WTO) (Mickiewicz A., 2012).

Assuming monitoring the indicator of income per employee, the results proved that the level in agricultural sector is considerably lower than in other sectors of national economies. In the period 2008–2010 the average income from agricultural activities represents only 40% of average incomes within the EU-27 economies. The competitiveness of individual agricultural entities depends on various aspects of the agricultural sector structuring, for example according to the business size. In 2010, there were 13.7 mil agricultural enterprises in the EU, micro-sized entities accounted for 47% employing almost 23% of the workforce and farming on 7% of the farmland. On the other hand, 11% of the total agricultural entities farm on the land larger than 20 ha, which is actually 77% of the EU farmland. Despite the lowering number of actively farming agricultural enterprises in the EU together with increasing tendency of company concentration, the relevancy of small agricultural enterprises in the EU is legitimate for the future, especially for the EU-12. Another negative aspect of sustainable agricultural performance is the demographic structure. The owners of agricultural enterprises by the age of 35 years accounted for 6.1%, whereas the owners over 65-year age reached 34.1% in 2007 (What is a small farm, 2011). In terms of the competitiveness improvement, the larger agricultural enterprises feature higher potential for resource deployment to enhance the economic efficiency and marketing (Large Farms in Europe, 2011).

Small farms have usually more fragmented structure, lower economic profitability and insufficient human capital in comparison with more concentrated agricultural enterprises. This combination creates a significant constraint on integration within the food chain and also on production optimization (A better functioning food supply chain in Europe, 2009).

The level of cooperation within the agricultural sector is defined according to the specific factors, such as historical and cultural approaches towards cooperation, the structure of agricultural enterprises, the function of retail sector with broad production specialization, the unwillingness to change the existing distribution channels, the perceived utility and credibility regarding the payments and specific factors related to production. The process of producers' groups' creation is still limited with the transformation of business approach (Banaszak, 2007). In other words, the producers' groups have to replace the competitive approach of participating entities with cooperative approach. As a result, the individual competitiveness is enhanced and their bargaining

power is improved (Commission staff working paper: Impact assessment, 2011).

The future perspectives of enterprises in the agricultural sector are inevitably related to the EU CAP. According to the CAP 2003, those entities should be more competitive in a global world, should meet the expectations of the public sphere and should support the rural development environmentally, socially, and economically (Mickiewicz B., 2012). In terms of economic performance of agri-businesses, the CAP reflects aspects such as rising economic pressure on agricultural producers resulting in unfavourable development in the commodity market, lowering company's competitiveness or challenges related to agricultural markets liberalization. These facts are considered further, in the context of sustainable development of rural and environmental aspects throughout the EU. Complying with these criteria and with the strategy Europe 2020 for prospective CAP of the EU, there are three wider strategic objectives (Commission staff working paper: Impact assessment, 2011):

- *Smart growth objective*: The protection of the potential for food production in the long-term across the EU, together with the support of sustainable food security for EU citizens. This objective may result in improvement of agricultural incomes, through increase in value added of these entities and support of cooperation tendencies. This aim is then focused on economic safety nets, sustainable competitiveness secured by innovations, modernizations or efficient resource allocation. All these efforts aim to enhance the low profitability of agri-sector and reduce the consequences of income volatilities.
- *Sustainable growth objective:* Farming enhancement to produce quality food, complying with the environmental and public health criteria, supporting the rural development and biodiversity, relieving the effects of climate changes. Sustainability of natural resources management, namely water or soil, and fostering the growth of green issues to reduce the potential damages caused by agriculture.
- *Inclusive growth objective*: Support the efficient rural development through improving local employment. Enhancement of sector attractiveness and economic diversification.

Besides those strategic objectives, there are also operational objectives to be met by the prospective CAP in the context of economic performance improving and agri-business competitiveness enhancing:

- To improve the communication and cooperation among the agricultural producers, professional consultants, research institutions, food companies and consumers. The innovative approaches need to be employed, together with external grant funding aiming to efficient rural development.
- To support any initiatives for agri-business and food chain competitiveness improvement to economical use of resources, product development and product marketing.
- To provide incentives to deploy the tools of crisis management and strategies of active prevention.

Those objectives of prospective CAP can be met by various instruments deployment. All those instruments can be analysed from three different perspectives: market perspective, governmental incentives perspective or purely regulatory perspective.

On the example of sustainable environment can be illustrated, that voluntary initiatives can be remunerated by the system of benefits and compensations for reflecting the environmentally-friendly agricultural practices. On the other hand, from the regulatory perspective, there can be imposed some sanctions in the case of not meeting the stated rules and practices. Finally, as far as the market perspective is concerned, the public goods lie purely on the market mechanisms. Naturally, the unbalanced level of environmental outputs within the agricultural production becomes the potential threat.

Based on ongoing negotiations on both national and European levels, including not only politicians but also representatives of academic and public spheres, there are three prospective scenarios of EU CAP beyond 2013:

1. The adjustment scenario – this scenario tries to reflect the need for adjustments of CAP in a way of enhancing the part of current CAP and improve the parts which need to be updated. This scenario is the least reforming.
2. The integration scenario – this scenario includes the current responses to support the policy objectives, however, this means the incorporation of brand new elements into the existing framework.
3. The re-focus scenario – this scenario is the most reforming, it aims to introduce the new way of performing agricultural business without any support, only through reliance on markets. In this context, the rural development and territorial balance should be highlighted through the prospective CAP.

The CAP reform of 2012 is the first reform negotiated as "co-decision" between the European Parliament and the Council of Ministers. Therefore, this reform involves the positions of both MEPs and farm ministers from all the EU member states and hence the positions of all EU citizens which all together should jointly agree the outcome. There are commentators expecting the new CAP to be in force from 1. 1. 2014, due the dependency of CAP on the next EU budget for the period 2014–2020 (Soutar, 2012).

According to the new CAP creation and Europe 2020, the CAP performance needs to be measured

as a whole by, for example, structure of indicators applicable for the integration scenario (see Tab. I).

As far as the areas of results measurement are concerned, these can be classified by the specific objectives, or rather interest areas, by the groups of instruments. Tab. II. summarizes some examples of such a grouping.

MATERIALS AND METHODS

This paper is based on both theoretical and empirical research of economic performance measurement of agricultural enterprises within the V4 under the prospective scenarios of CAP 2014–2020. Data were extracted from the Eurostat covering the years 2004–2011 and for the correlation analyses the MATLAB was employed. All the findings are supported with the literature review on CAP, agricultural enterprises and measurement of their performance from valuable resources as for example Bigliardi and Bottani (2010), Božík (2011), Erjavec *et al.* (2011), or Paloma, Ciaian, Cristoiu, Sammeth (2012) mostly retrieved from the scientific database *SciVerse ScienceDirect*. This article draws primarily on the work of Commission Staff Working Paper: Impact Assessment of European Commission (2011).

RESULTS AND DISCUSSION

In the context of proposed scenarios of future EU CAP development beyond the year 2013, there is a possibility to frame the problem area of measurement and management of agricultural business' economic performance with the ultimate factor. This factor is considered to be the inclusion or exclusion, respectively, of government regulations within the agricultural sector. This aforementioned factor is the starting point of the proposed scenarios of EU CAP development. It is obvious, according to the interpretation of Fig. 1, that the volume of agricultural subsidies is increasing during the

I: *Prospective structure of indicators within the Integration scenario, refecting the strategy Europe 2020: CAP EU – Sustainable agriculture throughout the EU*

	Interest areas		
General aims	Sustainable food production	Sustainable management of natural sources and sustainable climate	Balanced rural development
Impacts	*Agricultural incomes:* ● Income development ● Comparison of the development with other sectors of economy *Agricultural productivity:* ● Productivity development ● Comparison of the development with the global trends *Price stability within the agricultural production* *Trade terms development* *Increase in food sector* *Trade balance development* *The rate of food products with higher value added on exports*	*Greenhouse gases emission* *Quality and structure of land, soil erosion* *Biodiversity:* ● birds development (FB index) ● HNV areas development *Quantity and quality of water*	*Rural employment* *Situation of poverty in the rural area* *GDP per capita in the rural area (compared to the other areas)*

Source: own work based on (Commission staff working paper: Impact assessment, 2011)

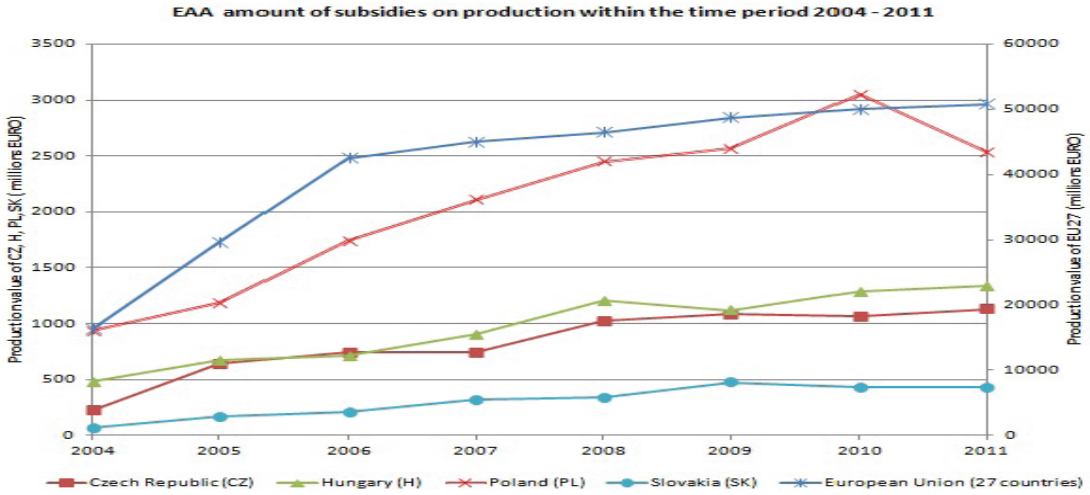
II: *Illustration of possible instruments grouping by the results measurement according to outcomes of chosen indicators in individual interest areas*

Instrument	**Direct payments**	**Rural development (incl. EIP initiative – „European Innovation Partnership")**	**Market measures**
Interest areas	● support of income basis ● compensation of less favourable production conditions ● environment and climate protection ● safety, health, welfare	● knowledge transfer ● competitiveness of agricultural producers and agricultural sector ● organization of the food distribution chain ● ecosystems ● efficient use of natural sources ● employment potential and rural development	● price development and market stability ● producers' cooperation ● the rate of agricultural producers in the food distribution chain

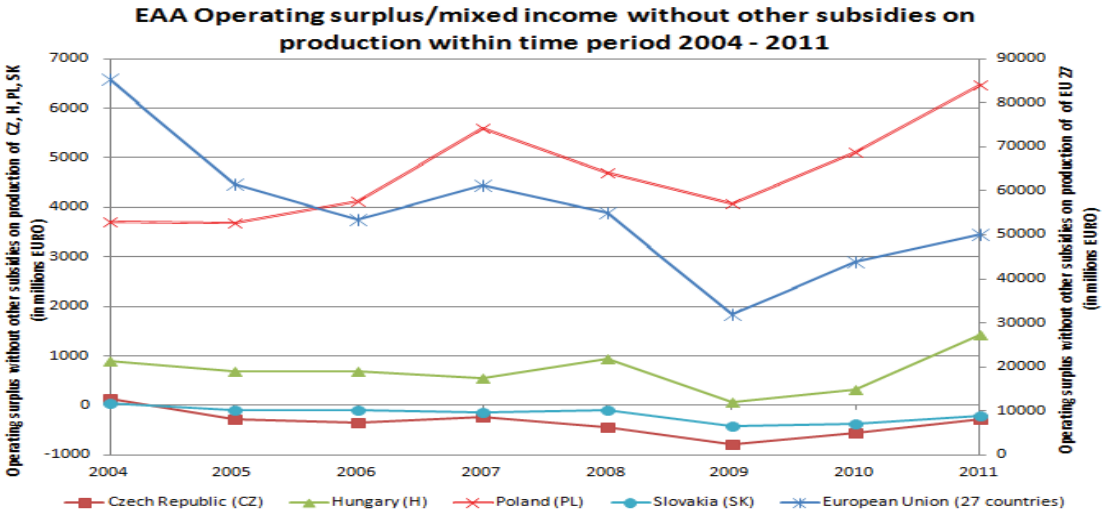
Source: own work based on (Commission staff working paper: Impact assessment, 2011)

year period 2004–2011 according to the pre-accession negotiations of the chapter agriculture. Nevertheless, the subsidies and regulation of agricultural market place is the focus of criticisms from the side both representatives of agricultural entrepreneurs and government authorities not only from the EU member countries. The reasons are especially the inequality of business environment in the respective EU member countries.

The aforementioned factor of agricultural sector government regulation classifies the three defined scenarios of EU CAP into two groups. Representatives of the group with inclusion of government regulations are the scenarios "Adjustment" and "Integration". On the contrary, the scenario "Re-focus" represents as the only one the group without any government regulations. So, under the scenario "Re-focus" the management of business entities' performance would mean the significant change of the approach in this area. Taking into account the fact of absence of subsidies on production and government regulations, it would be important for agricultural business entities to focus themselves on increasing the profitability of respective production for ensuring the suitable entrepreneurial income or operational profit, respectively. The operational profit is covered within the EAA by the item Net operational surplus / mixed income (OSMI). The development of this indicator after the subtraction of other subsidies on production is shown in Fig. 2. When we compare V4 countries, the highest total value of the indicator OSMI after subtraction of other subsidies is identified in Poland. Contrary, the Czech Republic shows the lowest value of this indicator among the observed countries. More precisely, it means that it was declared the operational loss during the time period of years 2005 to 2011. The indicator OSMI



1: *EAA amount of subsidies on production within the time period 2004–2011*
Source: own work based on data of Eurostat, 2012



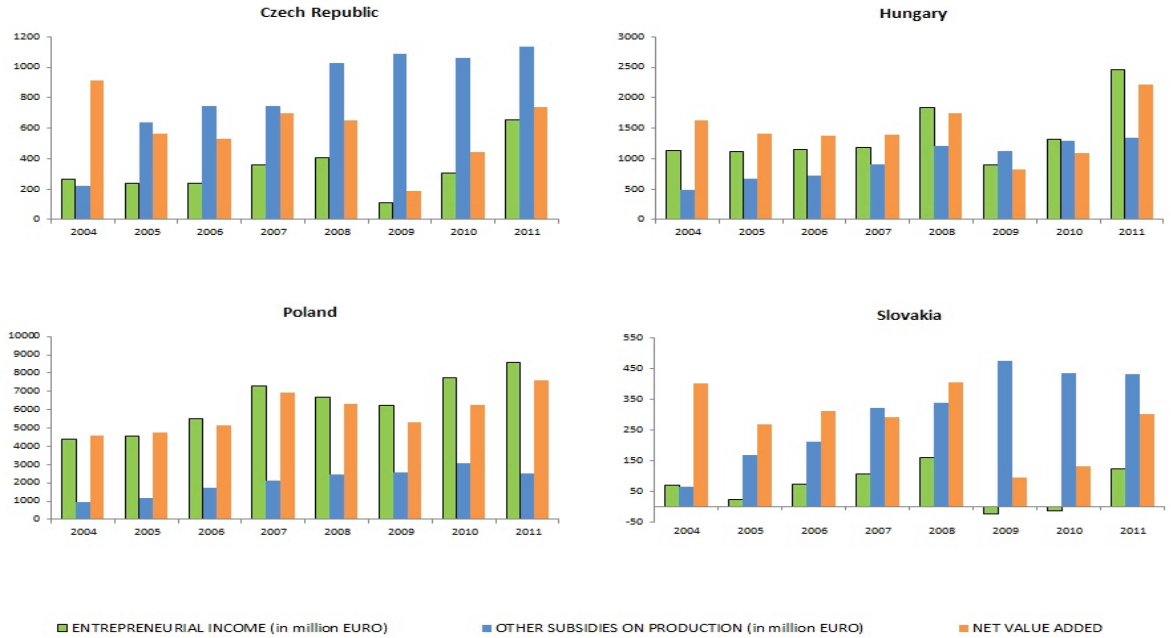
2: *Development of EAA Operating surplus/mixed income without other subsidies on production within the time period 2004–2011*
Source: own work based on data of Eurostat, 2012

can be considered to be the most important for sustainable competitiveness of agricultural business entities under the scenario "Re-focus". Very similar development of the indicator OSMI as in the Czech Republic has been identified in Slovakia, as well. In that context Božík (2011) states that the scenario "Re-focus" would mean unacceptable solution for Slovakia because of slump of the entrepreneurial income.

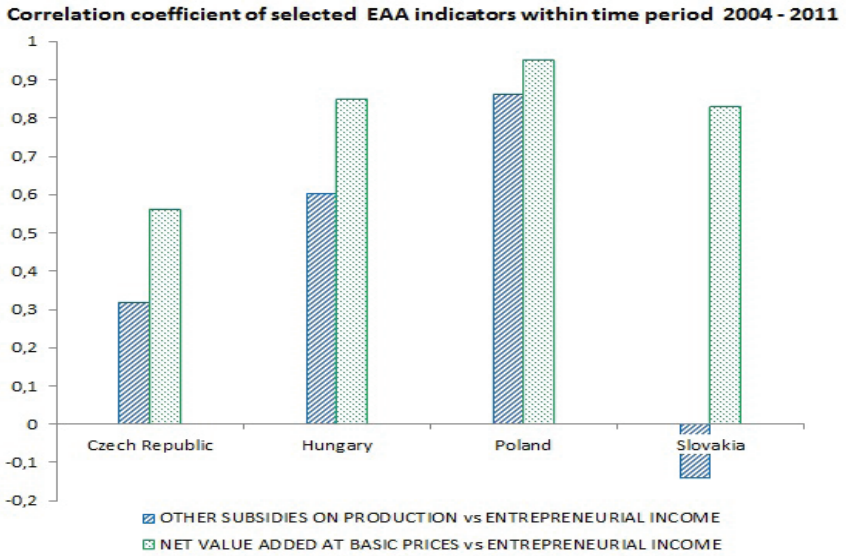
For further research of causality within the identified differences of indicator OSMI, it would be inevitable to compare internal conditions for agricultural business entities at the respective national level. The fact that agricultural entrepreneurs in Poland are beneficiaries of so called hidden or indirect subsidies, serves as the example (e. g. discounts on the obligatory insurance of employees). These kind of hidden subsidies have got a positive influence on the profit / loss results. That is why we are not allowed to state that agricultural business entities in Poland are more competitive than in the other V4 states according to our analysis. This fact was the reason to conduct further analysis of factors of production's productivity, namely agricultural area of production and annual working units (AWU).

Despite the discussed criticism of the currently valid EU CAP represent the agricultural subsidies the positive factor in creation the profit / loss indicator of agricultural business entities. There are shown values of indicator Entrepreneurial Income that consists above all of Net Value Added and indicator Other Subsidies on Production in Fig. 3. The Entrepreneurial Income represents within the EAA the profit / loss from ordinary activities before taxation.

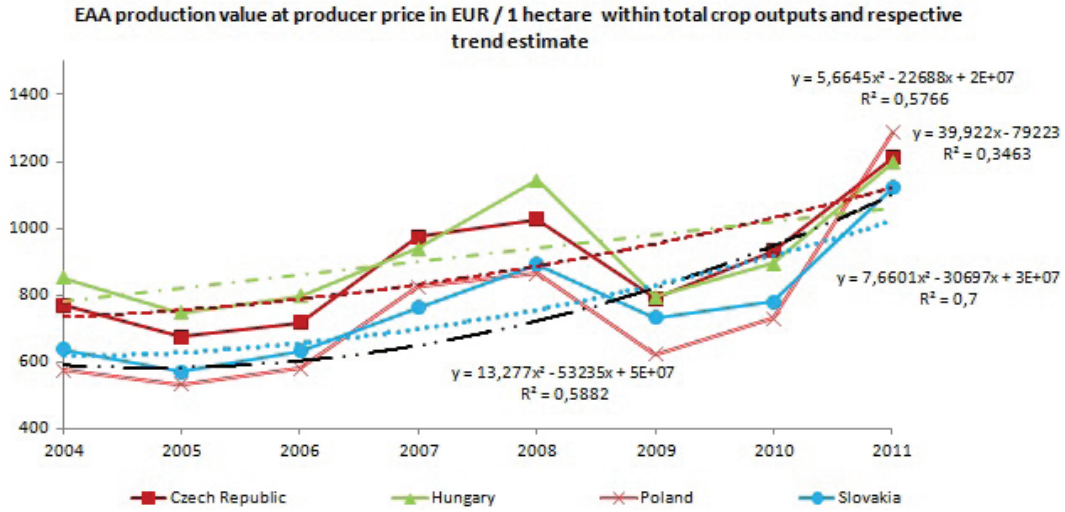
These descriptive statistic data were analysed via employing the correlation analysis, where the coefficients had been enumerated for the aforementioned indicators of Entrepreneurial Income's creation. The results of respective correlation coefficients are shown in Fig. 4. The results of the correlation analysis proved that dependence of the indicator Entrepreneurial Income on the value of the indicator Net Value Added is strong positive within the period of years 2004–2011 for Hungary, Poland and Slovakia. The case of the Czech Republic was only the modest linear correlation. So, it means that the value of the Entrepreneurial Income from agricultural production is positively depending on the Net Value Added indicator in the V4 member countries. On the contrary, the situation is slightly different regarding the dependence of indicator Entrepreneurial Income on value of the indicator Other Subsidies on agricultural production. The strong positive correlation was proved only for Poland. The Czech Republic and Hungary showed only the modest positive correlation. Contrary, the weak negative correlation was identified between the indicator Entrepreneurial Income and the indicator Other Subsidies on agricultural production for Slovakia. This identified negative correlation could be interpreted via statement that although there was showed the increasing trend of indicator Other Subsidies on agricultural production for Slovakia, its value was not able to compensate the respective volatility of the indicator Net Value Added. More precisely, there were showed negative values of the



3: *Comparison of values of indicator Entrepreneurial Income, Other Subsidies on Production and Net Value Added of V4 countries during the period of years 2004–2011*
Source: own work based on data of Eurostat, 2012



4: *Correlation coefficient of selected EAA indicators within the time period 2004–2011*
Source: own work based on data of Eurostat, 2012

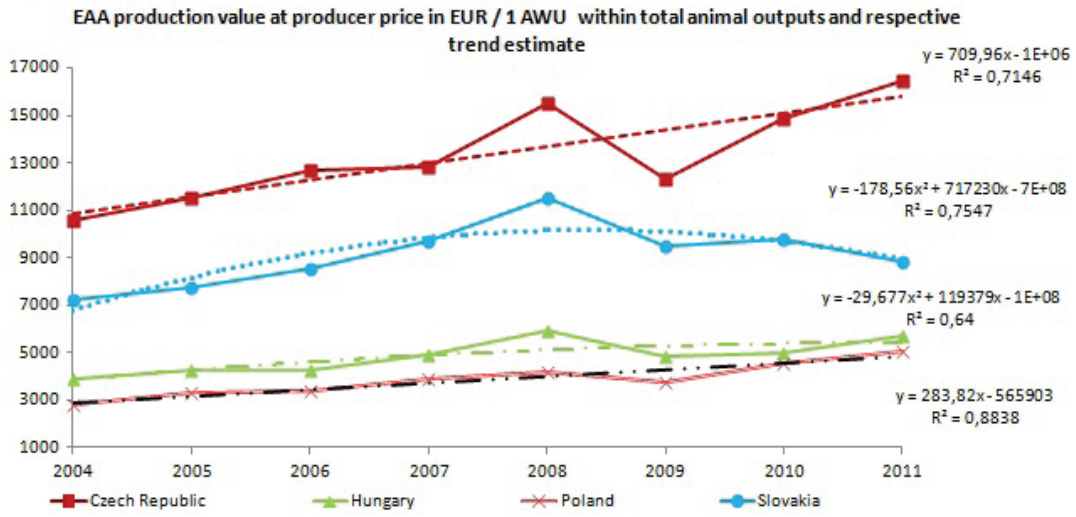


5: *Development of EAA production value at producer price in EUR/1 hectare within total crop outputs and respective trend estimate in V4 countries during the time period of years 2004–2011*
Source: own work based on data of Eurostat, 2012

indicator Entrepreneurial Income in years 2009 and 2010 (see Fig. 3).

It is obvious, regarding the partial results of conducted analyses, that managing the economic performance of agricultural business entities is an important factor within the need for their sustainable competitiveness development, even during the existence of the current EU CAP. Another possible growing importance of the management of agricultural business entities' economic performance can be seen through the aspects of scenario "Re-focus", comparing to the current practise in this area. So, when we consider the possible future validity of the aforementioned scenario beyond the year 2013, the economic performance of agricultural business entities would follow so called best practise of business entities from other industry sectors. The need for increasing the economic performance instead of relying only on the subsidy schemes can be seen via development of Crop and Animal productions' productivity of V4 countries measured by indicators of EAA, namely Crop and Animal production at production prices (see Fig. 5 and 6).

The analysis of factor of production the agricultural production area's productivity within the crop production based on EAA revealed that respective productivity of V4 countries differs. The causality should be sought both in natural/climate conditions and through the economic indicators such a technical equipment of work, as well. Namely, technical equipment of work takes into account the amount of intangible assets, which are utilised for agricultural production. There is another finding



6: *Development of EAA at producer price in EUR/AWU within total animal outputs and respective trend estimate in V4 countries during the time period of years 2004–2011*
Source: own work based on data of Eurostat, 2012

III: *Descriptive statistics of the indicator EAA crop production at producer prices related to the production area in V4 countries within the year period 2004–2011*

Country	Minimum (EUR/ha)	Maximum (EUR/ha)	Median (EUR/ha)	Variation range	Index 2011/2004
Czech Republic	677	1 212	861	0.19	1.57
Hungary	747	1 198	874	0.17	1.40
Poland	533	1 286	676	0.31	2.24
Slovakia	570	1 121	748	0.21	1.76

Source: own work based on data of Eurostat, 2012

IV: *Descriptive statistics of the indicator EAA animal production at producer prices related to the AWU in V4 countries within the year period 2004–2011*

Country	Minimum (EUR/AWU)	Maximum (EUR/AWU)	Median (EUR/AWU)	Variation range	Index 2011/2004
Czech Republic	10 575	16 445	12 744	0.14	1.56
Hungary	3 917	5 961	4 876	0.14	1.46
Poland	2 795	5 092	3 816	0.18	1.82
Slovakia	7 248	11 496	9 157	0.14	1.22

Source: own work based on data of Eurostat, 2012

related to the indicator agricultural production area's productivity within the crop production. It has been proved the increasing trend of this indicator in every V4 member country. Nevertheless, despite the growing trend of this indicator in the given time series, there is obvious slump of this indicators' value in connection with the start of world financial crisis in the year 2008. Tab. III shows that the highest growth of the productivity of crop production at producer price based on EAA was identified in Poland. Namely, it has been identified more than twice growth of this indicator measured by its index of years 2011/2004. On the other hand, the lowest growth of the indicator productivity of crop production at producer price based on EAA was identified in Hungary. Namely, it was identified growth of aforementioned indicator in the year 2011 comparing to the year 2004 for 40%. These results were proved also by employing the variation range as the indicator of variability. Namely, the highest value of the indicator variation range was identified in Poland, compared to Hungary, where the value of the indicator variation range differs from the mean value of crop productions' productivity only for 17%. Consequently, it is important to stress, that Hungary showed the highest mean value of crop productions' productivity measured via the production area. The unfavourable results of crop production in Slovakia, related to aforementioned indicators of crop production compared to Poland, is also stated by Božík (2011). This author provides evidence, that Slovakia faces the decreasing trend of the agricultural land area, especially the arable

land, in favour of setting the arable land aside of the production.

The analysis of productivity within the animal production measured by producer prices related to AWU proved similar results as the analysis of productivity at the crop production area, namely the differing productivity among observed V4 member countries (see Tab. IV). The causality should be sought at the respective situation of animal welfare among agricultural business entities and the demandingness for labour inputs. Namely, the highest animal productions' productivity measured via AWU is showed within the data sample in the Czech Republic. Nevertheless, this assumption is followed by stating the fact that total value of animal production in the Czech Republic stagnates at value about 2 billion EURO. Despite this fact, there was identified the lowest mean value of animal productions' productivity in Poland, however the total value of animal production at producer prices in the year 2011 was about 10 billion EURO. This fact can be completed with information about increasing animal production in Poland, namely it increased from the year 2004 to the year 2011 for 60%. There was identified similar development regarding the animal production to the Czech Republic in Slovakia, as well. Namely, Slovakia showed under average values of productivity within the animal production; however the increase of animal production at producer prices was from the year 2004 to the year 2011 only about 3%. This evidence is supported by work of Božík (2011), as well. This author states that the slump of animal production is very significant and there are many regions in Slovakia, which face ending of animal production at all.

There are possible approaches for measuring and managing the economic performance of agricultural business entities under the scenario "Re-focus". These approaches were aforementioned as the best practise. Beside the economic indices for measuring the economic performance (e. g. indicators of profitability, activity etc.), which are being used frequently among agricultural business entities nowadays, should be taken into account the modern economic performance indicators (e. g. Saunders *et al*., 2007). These are both aggregated and analytical indicators. As the suitable aggregated indicators can be considered as follows:

- Economic value added (EVA), which is enumerated as the difference between the net operational profit after taxation (NOPAT) and the cost of capital measured by discount interest rate (e. g. Beranová and Basovníková, 2011; Chen, 2011);
- Market Value Added (MVA), which is enumerated as the difference between the current value of business entity at the capital market place and value of invested capital by its owners;
- Shareholder value added (SVA), which is enumerated as the difference between range of total monetary revenues of shareholders and respective weighted costs of capital;
- Profitability of investments based on respective cash flow (CFROI), which is enumerated as the required discount interest rate within the known present value of capital expenditures of the investment, supposed cash flow from the investment and the value of involved assets, whose value is constant during the lifetime of investment.

The possible analytical indicators, which could be suitable for effective management and measurement of agricultural business entities' performance under the scenario "Re-focus" can be considered as follows:

- Benchmarking as the tool for inter entity comparison. This approach is based on premise that the business economic performance is linked with the given similarities among respective business processes. This approach helps to better understand the business processes of the economic performance assessment. Moreover, the comparison of particular aspects of business processes with referential business entities can be the important source of information to identify specifics or uniqueness of the business processes;
- Balanced Scorecard as the methodological tool for conversion of overall business strategy to a system of particular objectives within the individual perspectives, which allows to measure, monitor, manage and evaluate the given goals in conformity with the approach named "The cause – The consequence" (e. g. Kaplan and Norton, 2007; Bigliardi and Bottani, 2010; Brezuleanu and Brezuleanu, 2011; Chmelíková, 2011).

CONCLUSIONS

Contrary to current state of measuring and managing the agricultural enterprise performance, approaches applied in the CAP need to be modified to reflect the latest requirements of the EU public beyond the 2013. Particularly in the case of Re-focus scenario adoption, which introduces the new agricultural perspective without any support or governmental subvention. Assuming these conditions, the recommendations may lie in learning the best practices from other business when assessing their business performance and later on when managing this performance. However, these recommendations are not only applicable to the V4 countries, but also analogically, to the all EU-27. The agricultural producers should focus their attention namely on:

- Managing the creation of net value added
- Managing the creation of operating profit
- Implementation of modern performance measurement tools in the context of managing the costs of capital, company value for the owners and shareholders, or capital expenditures. All these indicators then apply generally within the inter-entity comparisons to form or modify the current business strategies.

On the other hand, in the case of adoption the resting two scenarios, Adjustment or Integration, the agricultural business performance measurement needs to be considered differently. Both scenarios involve some regulative measures in terms of environmental protection; naturally, in the form of various directives and regulations may those scenarios ensure the creation even of non-commodity outputs. European agricultural producers are price takers on the global commodity market. This fact is confirmed also by Blass (2009) who highlights the unbalanced competition conditions on the global agricultural commodity market, mainly in the terms of compliance with environmental legislation for EU business entities in comparison with other non-EU business entities. The optimal solution for securing the non-commodity agricultural outputs is their internalization into the primary business activity. Blass (2009) also stresses the need for highly-developed and aim-oriented directives of CAP EU pointing at efficient use of EC budget funds.

Agricultural outputs passing through the market are individually measurable on the microeconomic level, via companies' financial reporting, or in aggregate, via the EAA. Assuming adoption of scenarios Adjustment or Integration, current framework of performance measurement techniques is applicable. However, the efficient aiming of governmental regulations of prospective agricultural policy together with meeting the public expectations of non-commodity outputs, the performance within the sector of non-commodity agricultural outputs also needs to be measured. Moreover, there are some constraints related to their measurement. Therefore, we recommend creating a brand new method for valuation of these outputs via valuation of objects, rights and other assets, or services related to these outputs. Current practice of subvention calculation is based on the approach which measures the total farmed area in the form of lump sum to calculate the opportunity costs for creator of the non-commodity output. Especially the area approach for subvention calculation provides a space for optimization in the context of the two scenarios, Adjustment or Integration.

Needless to say that profitability of agricultural enterprises based on economic performance management and production efficiency should not shield their potential for multifunctional benefits regarding the rural area development and food securing since those are primary objectives of agricultural production. However, there is still an important research question: *How to sustainably ensure these aspects in the context of slowly rising, regulatively created, demand for biofuels?*

The fact of the matter is that the adoption of one of three scenarios inevitably means significant changes especially in terms of direct payments and EU budget, instead of direct affecting the agricultural production. Studies on modelling various scenarios confirm this fact (Erjavec *et al.*, 2011; Brady *et al.*, 2012; Schwarcz *et al.*, 2012). Naturally, the CAP should reflect the current requirements, according to the Rome Treaty from 1955: primarily should improve the productivity, stabilize the markets, ensure the food base and maintain the reasonable prices for consumers (Rome Treaty, cited in Cong and Brady, 2012). Direct payments are therefore significant instruments for agricultural producers how to ensure these requirements. Any further research on aiming to answer the question: *How to efficiently distribute these payments according to maintain the social welfare and meet the strategic objectives* needs to be conducted.

SUMMARY

The objective of this paper is to assess and analyse the current situation of measurement and management of economic performance of agricultural enterprises within the Visegrad group (V4) and further delineate the possibilities of efficient management of economic performance of those entities, especially in the context of scenario proposals of agricultural development beyond 2013. This contribution is based on both theoretical and empirical research of economic performance measurement of agricultural enterprises within the V4 under the prospective scenarios of EU Common Agricultural Policy (CAP) 2014–2020. Data were extracted from the Eurostat covering the years 2004–2011, namely it was utilised the data of Economical Accounts for Agriculture (EAA). All findings are supported with the literature review on CAP, agricultural enterprises and measurement of their performance. The proposed scenarios of future EU CAP development beyond the year 2013 can be framed within the problem area of measurement and management of agricultural business' economic performance with the ultimate factor. This factor is considered to be the inclusion or exclusion, respectively, of government regulations within the agricultural sector. Representatives of the group with inclusion of government regulations are the scenarios "Adjustment" and "Integration". On the contrary, the scenario "Re-focus" represents as the only one the group without any government regulations. So, under the scenario "Re-focus" the management of business entities' performance would mean the significant change of the approach in the problem area economic performance of agricultural business entities. Nevertheless the need for increasing the economic performance instead of relying only on the public subsidy schemes can be seen among agricultural firms even nowadays. This fact was proved via development of crop and animal productions' productivity of V4 countries

measured by indicators of EAA, namely crop and animal production at production prices. So, the future development of the EU agriculture under any of proposed scenario calls up the employment of modern economic performance indicator both for production and non-production outputs of agricultural business entities.

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