APPROACHES TO SUSTAINABILITY IN THE AGRICULTURAL POLICY

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This present paper forms part of a longer piece of research. The focus of this research is in the concept of sustainable agriculture and in the potential sustainability measurement tools. Such a study is important in order to discuss the sustainable agriculture concept, to give a detailed overview of the definitions and measurement tools, and deepen the understanding of what is considered to be sustainable. The research approach adopted in this paper includes secondary research, the review of scientific literature on the concept, definition and indicators of sustainable agriculture. The paper recommends that sustainable agriculture can be ensured by adding a fourth pillar to the existing three pillar model that is the institution of the Agricultural Policy.

Keywords: sustainable agriculture, conservation, political pillar, agricultural policy.
JEL classification: Q20

Introduction

To study the concept of sustainable agriculture has always been important, both in developed and in developing countries. The most developed European countries have arrived at the crossroads. They have to make emergency decisions, since the slowdown in productivity growth is accompanied by increased pollution levels.

The CAP has undergone substantial changes since its beginnings, it intends to respond to the requirements of long term sustainability and its institutions serve as an essential tool to enhance sustainability. Without a strong CAP, as Garrett Hardin (1968) concluded: “in Europe each man is locked into a system that compels him to increase his heard without limit—in a world that is limited. Ruin is the destination toward which all men rush”.

Critical discussion on the sustainability of agriculture has existed for a relatively long time, yet, there is no consensus on its meaning and there is no one single formula for the good or best farming practices applicable to all the farmers worldwide. Attempting to arrive at an operational definition of the term is highly problematic; however, understanding will deepen, and efforts have been made to integrate sustainable farming practices into the agricultural policies all over the world.

The aim of this paper is twofold: to give a detailed overview of the notion and conceptual framework of sustainable agriculture, and to show that the Common Agricultural Policy of the EU could be the missing fourth pillar of sustainability.

Material studied, results and discussion

The notion of sustainable agriculture is essential for thought, since only within this conceptual framework the sustainability of agriculture can be interpreted. This paper is descriptive in nature and it is based on literary exploration. First, scientific literature was reviewed with special regard to the issues of sustainable agriculture, then the indicators suitable for measuring the sustainability of agriculture were considered followed by the study of the EU Common Agricultural Policy as the missing fourth pillar of sustainability.

1. The criteria system of sustainability

Sustainability can be defined as enhancing relationship between man and nature, as it is described by Gehlen (1976), and to be able to find his place in nature, man created institutions, a regulatory environment, politics (Weber, 1996). The three-pillar model of sustainability – that is the relationship between man and nature - does not take into account the modern components of economic equilibrium. For sustainable agricultural development, the traditional three pillar (natural, economic, social) approach cannot be complete, since the model lacks regulations, i.e. policies (politics). Game theory demonstrates that the traditional three pillar approach does not ensure sustainability, as it is shown with the example of the Tragedy of the Commons. Without policies, without a system of regulations, incentives and fines, the carrying capacity of the Commons is overwhelmed and because of environmental degradation and the depletion of the shared resources economic reproduction will not be possible.

In the modern world, without efficient regulations, namely without policies, no system can be sustainable. The three pillar approach - as it follows from the theory of market failures - does not take into account the modern elements of economic equilibrium, the lessons of Garrett Hardin’s (1968) often-cited article titled the Tragedy of the Commons. In the

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authors’ view, sustainability is based on four pillars - the economic, social, environmental, and political pillars. This present paper considers this notion, and finally arrives at the critical element of sustainability, at the tool of agricultural policy of vital importance, which is the institution of the CAP that will ensure the development of European agriculture and will promote sustainability. Market mechanisms in themselves do not contribute to the sustainability of agriculture. External pressure and extra supports are needed but on the long-term the results of sustainability provide benefits for the whole society.

2. Defining the concept of sustainable agriculture

There is an extensive literature on the concept of agricultural sustainability, including agricultural sustainability; thereby, it is not easy to select the sources containing really innovative, unique ideas and approaches. By definition, sustainable development of agriculture requires comprehensive economic research.

So far, no uniform, interdisciplinary definition standardised for each and every economy and country has been created; although, many have dealt with the interpretation of sustainable agriculture.

The idea of agricultural sustainability was published first in the 1798 Thomas Malthus’ work “An Essay on the Principle of Population”. Malthus draws attention to unlimited population growth that might outstrip the ability to produce food leading to starvation and war, meaning that in agriculture the law of diminishing returns prevails (Malthus, 1798). Until the beginning of the 21st century this has not yet occurred, as the growing needs for food can be satisfied through technological development. Growth constraints and the adverse impact of agricultural productivity have become even more important.

There have been numerous attempts to define sustainable agriculture, in which common features can be observed including the three main interdependent and interactive issues, namely, the demand for satisfying humane food and fibre needs, enhancing environmental quality, and satisfying the society’s needs.

One possibility of clustering the sustainability definitions was provided by Szakal (1998) who classified the definitions into four main groups: a group emphasising the maintenance of human well-being, in a way that the situation of future generations will not be worse than that of present generation; a group with concepts built on the survival of the human race; a group with concepts built on the flexibility of the producing systems; and finally the group of non-economic concepts whose major role is to preserve cultural heritage and communities, and maintain the diversity of the ecological system.

Another possible version of clustering is when the three main elements of sustainability are emphasised to different degrees. The role of the technology-centred approach includes strategies that aim to reduce environmentally harmful activities. These are, e.g. organic farming, bio farming, extensive or low-input farming. It is a controversial question whether all of the above mentioned farming methods are truly sustainable. Another broader approach goes beyond the scope of the farming systems and contemplates sustainability as a system that is able to neutralise or tolerate the harmful effects. The concept – in line with the broader concept of the three pillars of sustainability – also integrates three pillars: the economic, environmental, social, and political pillars. Among these, the environmental and ecological dimension received the greatest emphasis; sustainability itself can be interpreted as an environmental problem. It deals with the impacts of negative externalities of the agricultural activity, the preservation of biodiversity, and the impacts of positive externalities of agriculture. It is a fact that agriculture is one of the most important users of natural resources, and sustainability depends upon their availability (DFID, 2002). The increasing level of production causes significant environmental problems, which directly affect the environment, particularly, at a local and regional level. The economic pillar involves subsidies, impacts of competition, indication on profitability and competitiveness while the social pillar involves the preservation of cultural values, the continuing existence of rural communities, and the role of local institutions. Besides these, agriculture fills a part in guaranteeing food supply and food quality and in creating intergenerational equity.

The three pillar integrated approach of sustainable agriculture was formulated by the UN Food and Agriculture Organisation 1991 (FAO) and other US organisations as follows:

The FAO definition of sustainable agricultural development is “the management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such development (in agriculture, forestry, and fishing) conserves land, water, plant and animal genetic resources; it is environmentally non-degrading, technically appropriate, economically viable, and socially acceptable.”

The US Congress (CRS Report for Congress 1991) provides the following definition: “An integrated system of plant and animal production practices having a site-specific application that will, over the long term, satisfy human food and fibre needs; enhance environmental quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of non-renewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations; and enhance the quality of life for farmers and society as a whole.”

The Sustainable Agriculture Research and Education 1997 (SARE) programme embraces three broad goals for sustainable agriculture: stewardship of the environment;
Sustainable agriculture’s mission – besides taking into account the sustainability of global economy – is to provide copious amounts of nutrients for inhabitants of the earth so as not to contaminate the environment and natural resources. Sustainable agriculture is a system of crop and animal production which operates under the law of nature meaning that similarly to nature it is self-supporting. Sustainable agriculture also takes into account social values, namely, bearing in mind the existence of rural communities. Sustainable agriculture is a complex system similarly to natural healthy ecosystem, in which similar to nature cycles are functioning meaning the waste generated in one process is input to another process (ATTRA, 2005).

Besides the general approach, the problem’s inverse (negative) observation, i.e. observing what is not sustainable is a more prevalent approach than the practical applications. The inverse approach, “unsustainability” can be easier diagnosed – though many times only retrospectively or too late – and measured more precisely and not only allows the possibility of evaluating the current situation by applying the sustainability indicators but also future situations will be predictable. Interpretation of unsustainability among others can be found in the works of Douglass (1984), Yunlong and Smit (2003), Hansen (1995), and Smit and Smithers (1993).

Mostly, everyone agrees on the guiding principles of sustainable agriculture, i.e. stewardship (the importance of environmental protection), and economic justice (profitability and social impacts). However, because each farm is different, it is very difficult to create a single formula for success or to define the practical guidelines which may serve as a standardised, acceptable guidance on farming issues for every farmer. Farmers optimise their behaviour subject to the local market and societal rules, and farm policies should be able to support their efforts.

However, as Green (1993) points out, many farmers consider sustainable agriculture to be offensive; attacking criticism, because its principles – contrary to the theories of traditional or also known as modern, maybe large-scale or industrialised agriculture – would assume that their operations so far have not been sustainable. Farmers feel, Green continues, that they are the ones to be blamed for contaminating the environment by extreme 300-400-fold productivity growth achieved.

Sustainable farming ensures both the increase of profitability and the improvement of life and food quality. There is increasing intention for a change over to sustainable farming where farming practices are harmonised with the natural resources and the special characteristics of the ecosystems. Many practices, as alternatives to industrial agriculture, have been consistent with sustainable agriculture, e.g. extensive agriculture, low input, alternative, regenerative, holistic, biodynamic, biointensive, or organic agriculture. All of them, representing thousands of farms all over the world, have contributed to our understanding of what sustainable agricultural systems are, and each of them shares a vision of “farming with nature”. In an attempt to be sustainable, such farming practices minimise the amount of pesticide residue on the products, particular pest control practices and renewable resources are used as much as possible. Diversification, green manuring, crop rotation, cover cropping are key strategies for soil building. Low-input farming refers to using less off-farm inputs, while extensive agriculture combines practices like crop rotation and green manure crops, weed management with careful use of current technology. There is no single solution; farmers are required to pursue farming to ensure sustainability that is suitable for local circumstances and is profitable amongst an ever changing structure of the economy (AFSIC, 2007).

3. Measurement and indicators of sustainable agriculture

In modern agriculture, in the developed countries in particular, attention is focused on the positive and negative externalities of agricultural production. The reason, on the one hand, is that environmental pressure (soil, water, and air pollution), as a consequence of intensive production, became measurable, while social tensions (rising unemployment, deepening of income disparities) have increased as a result of the slowdown in earlier economic growth rates and especially of today’s crisis.

The changing structure of the economy is manifested in the growth rate of the service sector, and in this expanding tertiary sector rural areas have to find their place by the diversification of activities, such as by the development of tourism or maintaining traditional rural activities and preserving the landscapes.

Sustainable agriculture must be regarded as more than the collection of idealistic principles or theoretical questions. To facilitate decision-making, it is essential to study the actual state of the complex, dynamic environment and to define the ways and conditions of changes. Sustainable agriculture can be described and measured by cost-benefit analysis, risk analysis, charts of ecosystems, and indicator systems.

Sustainability indicators support decision-making, they describe and quantify human activities and the state of the environment. Agriculture is a complex and complicated system, thus, systems approach is the most reliable way to describe inter-relations between agriculture, society, and environment. When defining indicators, on the one hand, systems approach should be applied, and on the other hand a differentiated approach focusing on regional differences is needed. The available aggregate data are often misleading, non-specific and do not support effective decision-making.

Sustainable agriculture in itself is a dynamic rather than static concept. What may contribute to sustainability today may not work a few years later; thus, it is extremely difficult to monitor and measure. Besides, data are often difficult to gather or they are missing, and it must be highlighted that the effects
of sustainable practices are long term, thereby, the indicators have to be associated with behaviours years even decades earlier, when societal valuation, local and global contexts of sustainability might have been different.

The implementation of the European agricultural model can be determined by the development of an indicator system that facilitates the accurate measurement of agriculture’s sustainability with three interdependent and interactive components. A number of indicators are currently available to assess the components of the three pillars of sustainability but these indicators are difficult to aggregate, and they are not useful for assessing the interactions and interdependencies among the three pillars of sustainability. In addition, the trade-offs of pursuing one component at the expense of another is also problematic, and there are cases when exceeding one indicator threshold undermines the sustainability of the whole system. The measures currently available are not particularly useful to farmers to monitor location or situation specific progress or to help assess current problems and provide ideas on what needs to be done.

International organisations like the UN, ECNC, EEA (1999, 2001), OECD, WB, WRI, or the Agricultural and Rural Development Committee of the European Parliament have launched research programmes in order to establish a comprehensive indicator system. The systems developed by these organisations, however, did not take into account the three dimensions of sustainability, their studies applied merely the environment or economy based approach. The present study introduces only the most important and comprehensive indicator systems.

**a) The ELISA project**

The results and evaluation of the Environmental Indicators for Sustainable Agriculture (ELISA) programme were published in 1998-1999 within the framework of the project.

The ELISA aimed at measuring the sustainability of agriculture and the effectiveness of agri-environmental protection.

The central purpose of the programme was to provide adequate tools for evaluating the effects of agricultural practices on the environment, determining Community programmes, moreover identifying the potential resources for a European agricultural model (ECNC, 1999).

This project identified 22 state and 12 pressure (driving force) key indicators. State indicators encompass soil, water, biodiversity, and landscape, while driving force indicators are land use intensity, nutrients, and pesticides.

The authors consider the exclusive examination of sustainability’s environmental aspects as a disadvantage of this framework of indicators, thereby, it is inadequate for measuring agriculture’s sustainability as a whole.

**b) PAIS programme of the European Union**

The PAIS programme was launched in the year 2000. It aimed at developing a framework for agri-environmental indicators in order to contribute to the EU system of agri-environmental indicators. The project covered the fields of landscape protection, agricultural practices, and rural development including a proposal for almost 500 indicators. The project partners intended to classify these different indicators into categories; they distinguished 35 landscape, 23 agricultural practice, and 58 rural development key indicators (Geniaux et al., 2009). Involving a great number of components, the indicator system is rather complicated, inappropriate, and unmanageable.

The Institut de l’Agriculture Durable (IAD) indicators measure the results of sustainability from a series of 26 indicators. Of the 26 IAD operational indicators, 19 deal with the results of ecological services and 10 of them measure the agricultural carbon sink.

According to the data collected from the 26 indicators, the IAD created seven basic themes such as economic, social viability, input efficiency, soil quality, water quality, GHG emissions, and biodiversity; thereby, showing that agriculture can produce a number of important ecological services: increase in biodiversity, water purification, biomass production, generation of energy, landscape maintenance etc.

The IAD considers ecological services of farming practices easily measurable. Whilst keeping the two Common Agricultural Policy pillars, they provide guidance for the creation of the future agricultural policy (IAD, 2011).

**c) OECD Sustainability Indicators**

The 2001 three-volume publication of OECD about agri-environmental indicators (OECD, 2001a, b, c) aimed at providing information to policy-makers on the current state and changes in the condition of agricultural environment, focusing on agri-environmental impacts and promoting sustainable agriculture.

Sustainability indicators are structured into four parts. The first part of indicators considers the influence on agricultural relationships of economic forces, societal processes, and environmental preferences. The second part of indicators examines the relationship between different farming practices and systems, and their impact on the environment; the third part tracks trends in the use of farm inputs (e.g. fertilisers, manure) and agricultural water use intensity, while the fourth part monitors the extent of agriculture’s impact on the environment covering soil quality, wildlife habitats, landscape etc.

At the core of OECD’s 2008 definition of sustainable development is the need to consider three pillars: economy, society, and environment which are inter-related and have mutual impacts on each other. A balance must be achieved among the three pillars, as they are all vital to sustainable development. Sustainability can be defined as a process and a fundamental idea, a goal and an ultimate objective simultaneously (OECD 2008). The concept of sustainability refers to the need to strike the right balance between its three pillars, where the ultimate purpose is to enhance the overall well-being.
d) The four-pillar aspect

Many Hungarian researchers have investigated potential ways of measuring the sustainability of agriculture and rural development. Remarkable studies were conducted by Farkasne et al., since they defined sustainability as having not the conventional three but four dimensions adding institutions as a fourth pillar of sustainability. According to Farkasne et al. (2004) agriculture’s sustainability should be measured by a four-dimension matrix system of indicators which is rather a regulatory than a descriptive model. Indicators describing the role, effectiveness, competitiveness, and viability of agriculture are included in the economic pillar. Social indicators are related with human resources, income distribution, and equality. The environmental dimension contains soil, air, water, landscape and biodiversity indicators. In this model, the institutional pillar indicators are related with land property, land lease, environmental protection regulations, and taxes, which exclude agricultural policy or institutions like rules and governance structures. In this present paper, however, the authors suggest that the existing three pillar model of sustainability should be completed with a fourth pillar, the so-called political pillar. The political pillar/dimension could comprise a supranational (EU) institution, the Common Agricultural Policy.

c) Evaluation of agricultural efficiency with integration of environmental indicators

Beke (2010, 2011) studied the possibility to introduce some of the environmental indicators that could be integrated into the measurement of the performance of the agricultural sector. Beke presented some previous attempts to integrate environmental factors into national accounts and then compared the performance of the agricultural sector of selected countries by applying environmental indicators. Beke examined broader spectrum of inputs to measure the sector’s performance. To calculate the sector’s output, she took into account the application of a number of indicators that express negative environmental impacts (externalities), such as nitrogen balance, water contamination, water abstraction, air pollution, and waste generated by agriculture with the emphasis of institutional environment (Lisanyi, 2009). Although an increasing number of environmental indicators are available, there are limited options to apply them to evaluate agricultural sustainability due to their high degree of integration. At present, the exploitation of natural resources and environmental degradation is one of the biggest global challenges; however, their integration into economic statistics is not justified in Beke’s study.

4. Indicators from the inverse approach to agricultural sustainability

The logic to approach to sustainability in an inverse (backward, negative) manner is, that it is easier and quicker to identify constrains of economic progress rather than identify all the factors that contribute to that progress.

The creation of indicators of unsustainability is desirable for a number of reasons (Svendsen, 1990), they are normally already available and measurable; from past experience, cause and effect are usually known; and may be used in place of explaining the complex concept of sustainability.

Directly visible indicators of unsustainability (Jodha, 1990) are listed such as land degradation, changed botanical composition of forest and pastures, prolonged negative trends in yield, lower per capita availability of agricultural products, increasing use of sub-marginal lands, high intensity of input use, and reduced biodiversity. Other indicators of change are the substitution of deep-rooted crops by shallow rooted crops and excessive dependence on outside resources such as fertilisers and pesticides.

5. The future of agricultural sustainability

In the 21st century, the transition to agricultural sustainability depends on the changes of institutional environments in both the developed and low-income countries (Ruttan, 1999). By obtaining the study of Raskin et al. (1998), Ruttan presented three basic scenarios. The Conventional Worlds Reference Scenario assumes that the economies of the developing countries grow rapidly and advance to the level of the developed economies. The ratio of per capita GDP of the rich OECD countries and the rest of the world declines but the absolute difference continues to widen and the rapid population growth could become a serious source of economic stress. This world is richer but dirtier than the world we live in at the threshold of the 21st century, and is defined by frequent social conflicts. The institutional reforms would improve environmental quality and ease the socio-political stress.

The Barbarisation Scenario arises out of failure to realise to achieve the institutional reforms necessary. The most significant element of this scenario is the major decrease in the standard of living while the gap between rich and poor grows, both within and among countries, and conflict over access to natural resources intensifies. Population, level of technological development, and economic growth reduce.

It seems unlikely (Ruttan, 1999) that the progress projected in the Barbarisation Scenario will materialise; yet, the New Sustainability Scenario is partially implemented. As stated in Ruttan’s study, it is also unlikely that soil loss and the lack of water resources would become a severe constraint on global agricultural production; however, the global climate change and the spread of pests and pathogens facilitated by international trade represent a greater threat. The problem of the growth of agricultural production appears at the regional and local level, and the solution depends on the maintenance and enhancement of institutional innovation.

In the third scenario, the global economy shifts towards sustainability. As the result of the New Sustainability Paradigm, the governments and economic systems reflect a stronger will of environmental preservation to sustain economic and agricultural growth. The developing regions...
of the world converge more rapidly and the quality of life improves for the people living in the increasingly urbanised world. The transformation of institutional conditions is the key to success. If the world fails to meet the challenge of a transition to sustainable growth in agricultural production, the failure will be at least as much in the area of institutional innovation as in the area of resource and environmental constraints (Ruttan, 1999). The design of institutions capable of achieving compatibility between individual, organisational, and social objectives remains an art rather than a science.

6. Institutional system of sustainable agriculture: the Common Agricultural Policy

The creation of a Common Agricultural Policy (CAP) was proposed in 1960 in accordance with the objectives of the Treaty of Rome to meet the economic and social challenges after the years of war. Its aims were to achieve sufficient production of food supplies, to increase agricultural productivity, to ensure fair income and standard of living for the farmers as well as market stabilisation. The industrial production did not accomplish agricultural self-sufficiency and caused significant environmental damage, and became the centre of controversy with particular emphasis during the CAP reform in 1992.

The individual steps and reforms after the proposed changes of the CAP in 2013 emphasise the three pillar approach to sustainability, including the importance of the environment. The proposal of George Lyon (2010) states that the post-2013 agricultural policies should subsidise farmers who provide positive externalities beyond production. Lyon highlights the three main challenges the future CAP has to respond to the economic needs (competitiveness, food security), social expectations (farmers’ income stability, the development of the rural areas and to tackle rural unemployment), and delivering benefits in terms of public goods. To achieve these aims in the future, strong agricultural policy and the maintenance of the existing budget is needed where the focus is on environmental protection.

The aims of the CAP clearly emphasise the environmental and landscape protection and awareness as the main advantage of European agriculture. Complying the environmental requirements, crop protection and animal welfare standards is hard to compensate, thereby, it represents a disadvantage to the global competitiveness for the EU farmers (Feher, 2011).

Lyon also insists that the only way to reach the aims of the CAP is to survey and measure the benefits of the eco-system services (Lyon, 2010). The background to the CAP reform is one of economic crisis and serious financial difficulties facing all European taxpayers, farmers, and consumers.

Recent months have brought an increasing number of studies and professional events concerned with changes expected in the sphere of the Common Agricultural and Rural Policy following 2013. The 2008 CAP “Health Check” indicates significant changes (Feher-Madarasz, 2010), thus, the preparation for the next planning period should result in actual changes of the CAP regulation. In reality, it must be acknowledged that the findings of the “Health Check” have not substantially improved the payment scheme, although, they foreshadow the direction of post-2013 reforms, which is reflected by the views relating to the budget.

It may be established that the subsidised sectors have mostly preserved their favourable position. However, cross-compliance with its costs involved as well as the estimation and accountability of its benefits have been brought into focus. Assessment and incorporation into the scope of research priorities of the conditions of long-term climate change adaptation have become key issues. Various analyses establish the unsustainable nature of the current system. With major changes to be implemented, frequently quoted cost-benefit correlation being more thoroughly examined, spending of money being replaced by the evaluation of costs and benefits of investments, and permanent value creation becoming a vital issue, the CAP still remains in effect after 2013. The frequently arising questions are how to abolish the distorted and unfair current CAP system and the untraceable and inexplicable distinction among specific sectors and regions based on historical reasons.

The players of agriculture and rural development should expect that more emphasis will be placed on certain objectives such as the concept of public goods becoming a primary focus in the hierarchy of priorities. Decision makers are also expected to concentrate on addressing environmental, cost-benefit efficiency and good governance issues.

The changes require gradual and careful preparation allowing time for the elaboration of adaptation conditions. Transparency is to be improved both in terms of beneficiaries and the impacts of subsidies. The CAP is certainly expected to get “greener”, also enabling the social issues of the European model to remain in the focus of attention. Changes may also involve the introduction of simpler CAP measures and stricter methods of evaluation relating with measurable effects and indicators.

Sustainability should form an integral part of the adjusted agricultural policy. The alteration of basic principles should be carried out in a way that the environmental, economic, and social aspects of sustainability contributing both to environmental values and competitiveness are brought into focus. The transformation process of the agricultural policy has already been launched by an increasing proportion of resources spent on specific axes of the second pillar of the CAP (rural development policy) promoting sustainability (Feher, 2009).

Therefore, it is our vital interest to improve the functioning of the CAP, for the accomplishment of which the following conclusions must be highlighted:

- a balance must be struck among intensive farming, sustainability, and environmental concerns, raising the dilemma of how to measure the effects thereof;
- consideration of new aspects and reaching agreements of a broader scope are necessary for adjudging the role of
rural areas, cities and suburban areas, especially in respect of issues relating with sustainability. The spread of direct sales methods and diversification mechanisms is expected to take place in the field of food supply for towns and villages;
- investigating the methodology of good governance, the reserves of simplification, the operation of institutions as well as utilising partnerships and applying innovative solutions have become essential;
- the success of agriculture and rural development depends on decision makers as well as people influencing and executing such decisions, thereby, the role and activity of agricultural sector institutions must be pointed out;
- more efficient tracking of market signals as well as opportunities and tools of risk management will come into view;
- the management of the CAP adjustment requires a transitional period the length of which is to be chosen wisely. Gradualness is inevitable in making the planned actual changes successful, thus, it is recommended to introduce a transitional period lasting until 2019;
- special attention must be paid to attracting young farmers and addressing the problems of old age in rural areas, particularly, in terms of social services;
- establishing a partnership between the representatives of the civil society and the private sector is an important element of networking the new institutional philosophy. Networking activities are to be characterised by a mutual cooperation approach especially during the process of integrated regional development, taking into account the incorporation of economic, social, cultural, and environmental considerations into future projects (Feher, 2009).

One should aim at producing the largest possible amount of foods in the most effective way, while protecting our environment and implementing a more equitable distribution of income both among countries and regions. This objective would contribute to the ideal allocation of community budget funds devoted to the agricultural sector. A brief summary of the authors’ proposal includes the allocation mechanism of CAP subsidies to be aligned to the individual characteristics of each country, paying utmost attention to the basic principles of solidarity, equal access, justice, and fairness.

The above detailed system of the EU funds could serve as the fourth pillar of sustainability (Lisanyi, 2011), and it may also be considered as a crucial element of agriculture. Sustainable agriculture appears to be remote and hard to achieve at this stage. Agriculture must be subsidised due to the lack of market mechanisms contributing to its sustainability. The activities of politics, the government and local municipalities also have an impact on sustainable agriculture and rural economy including food production, background industry and services, commerce but also agricultural research, university education and vocational education.

Consequently the existing three pillar model of sustainability should be completed with a fourth one, the so-called political pillar, comprising, namely, an institutional background, perhaps a supranational (EU) institution (Figure 1).

**Conclusions**

Sustainable farming may not be accomplished by traditional market incentives. A single way to its development is leading through political decisions and will via regulation as well as the involvement of government and international resources. The evolution of an adequate regulation system would be enabled by the introduction of the political pillar which is a broader concept as the previous ones, since besides land property, land lease, environmental protection
regulations, and taxes it includes agricultural policy (subsidy system, rules and regulations, governance structures). In the absence of such regulation, decision-making would be based on short-term interests, leaders would be unmotivated due to the lack of tangible political gains and guaranteed results. This may lead to the short term overexploitation of natural resources generating a social trap situation as described in Garrett Hardin’s often-cited article of 1968 titled “The Tragedy of the Commons”. It is only in the long term that the outcomes of sustainability may prove beneficial for the society as a whole.

The CAP should promote core values such as preserving the quality of soil, water, and environment, producing healthy food and retaining markets and jobs in the long term. It is obvious for everyone that, due to the contradiction between effective interests and promoted core values, the allocation of subsidies may not be based on anything else but political decisions. The amount of EU resources showing a decreasing tendency instead an increasing one, in parallel with more and more newly-joined countries requiring additional resources, may result in a serious struggle among interests. The authors’ proposal will be aimed at underlining the following mainstream principles: (i) countries’ individual characteristics are to be taken into account when making decisions on the granting of subsidies and (ii) environmental and sustainability concerns are to be treated as priorities. Finally, the fact that the global agriculture and food production will need to grow from 6 billion today to 9 billion by 2050 emphasises the importance of sustainability.

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