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TO WHAT EXTENT ARE THE REQUIREMENTS OF SUSTAINABLE DEVELOPMENT INTEGRATED INTO THE ROMANIAN ACCOUNTING MODEL?

This paper aims at establishing the elements of sustainable development in the accounting of the economic entities. Emphasis is placed on the principles of sustainable development both in the national context and in the European space. The entities' approach to integrating the requirements of sustainable growth into the accounting model has long been debated since the consumed natural resources are not to be found distinctly in the accounting records of the entity. The debate on this topic is carried out through specific instruments in the form of sustainable development indicators. Thus, in this paper, macroeconomic elements are promoted and, through their compositions, they integrate as many elements of the sustainable development into the accounting model and they are the most appropriate to meet the requirements of the development.

Key words: *sustainable development, accounting model, integration.*

Introduction. The Sustainable Development Program has been evaluated and monitored over time and its results are reported by EUROSTAT through the sustainable development indicators. The indicators are used and applied in the EU member states and in the states outside the organization [1]. The permanent revision and updating of the indicators is carried out to ensure a high level of quality, of

relevance and in order to make comparisons with the objectives of the development strategy. The method of classifying and approaching of the indicators is determined both in an analytical and synthetic way through accounting. The first and most important body to support the implementation of the sustainable development and to provide information is the World Bank. Other bodies involved

in the sustainable development process are: the International Association for Development, the International Bank for Reconstruction and Development, the International Financial Society, the Multilateral Investment Guarantee Agency and the International Centre for Resolving Investment Differences. The European Bank for Reconstruction and Development, a strictly European body, has the role of ensuring and monitoring the transition from the centralized economy to the market one, both at European level and at the level of other non-European countries.

Methodology. This paper represents a qualitative research carried out as a result of the theoretical approaches analysis regarding the extent to which the requirements of sustainable development are integrated into the national accounting models. The reason that determined the choice of qualitative research is due to the elements that can only be presented through this method. There is also a comparative method which balances the vision of sustainable development in the European space with that in the national space. Regarding the sources of information, the article is inspired by books, by the articles published in specialized magazines, thematic websites. Through induction and deduction, the paper is directed towards an exhaustive analysis regarding the extent to which the requirements of the sustainable development are integrated into the national accounting models. By appealing to the content of the paper and to the contribution made, the text can be considered as a documentary work. In order to get this article accomplished, the following actions have been carried out: planning, data collection, data analysis and, in the end, the elaboration of the paper

Brief Literature Review. *The sustainable development manages to bring together, by means of indicators, relevant ecological and social factors, by increasing the interest on the topic [2]. The sustainable development also contributes to the economic and social processes and interacts with the final results, specific to the statistical domain [3]. The concept of sustainable development implemented in the economic environment is widely debated among economic factors, especially if we refer to the small and medium-sized entities [4]. A considerable contribution to the subject is made by the President of the Roma Club, an organization whose purpose is to discuss the existing issues related to the state of the planet. It is considered that "the sustainable development represents the only true version for our country, a real and a long-term one, inspired from the European Strategy, and an alternative to this one is not possible...for Romania" [5]. At European level, there*

are a series of bodies which have focused their attention on the European sustainable development, with input from their own policies [2].

The Use of Sustainable Development Indicators in the European and National Space. As it is desired to measure the outcomes obtained as a result of the sustainable development policies, it is necessary to establish the instruments to measure this data with. In the absence of these tools, neither the problems nor their size or nature can be quantified. Thus, the effects of the results cannot be highlighted as a result of the application of sustainable development. The indicators can be applied to all areas of sustainable development, from the environment to the social and economic fields, too. The used indicators are selected according to a series of criteria so as to observe the dosage of relevance in terms of the politics of Sustainable Development Strategy. The simplistic formulation of information is promoted so as to be understood by as many persons as possible. The data and information is characterized by their availability and representativeness. The process of the elaboration and use of the sustainable development indicators is shown in Figure 1. For a continuous improvement of the set, the stages are resumed from the review and adaptation steps. At the EU level, the calculation of sustainable development indicators is based on themes that reflect the main challenges of the Sustainable Development Strategy, on guiding principles referring to a good governing and on economic prosperity, too. The themes are divided into sub-themes in order to reflect the specific objectives of the actions and operations of sustainable development. Sustainable development indicators are set according to a pyramid in order to facilitate communication. The Strategy Structure is classified on pyramid levels and it has the ability to respond to the users' needs due to the indicators capacity to communicate. The information provided by the indicators is valuable information. The Strategy Structure is classified on pyramid levels and it has the ability to respond to the users' needs due to the indicators capacity to communicate. The information provided by the indicators is valuable information. A minus would be that that the information is not capable to directly monitor the objectives of the strategy, namely the general and operational objectives and those of the action. This system, apart from the information it provides, also reveals that these indicators are under development because it is necessary to get a complete image regarding the progress recording.

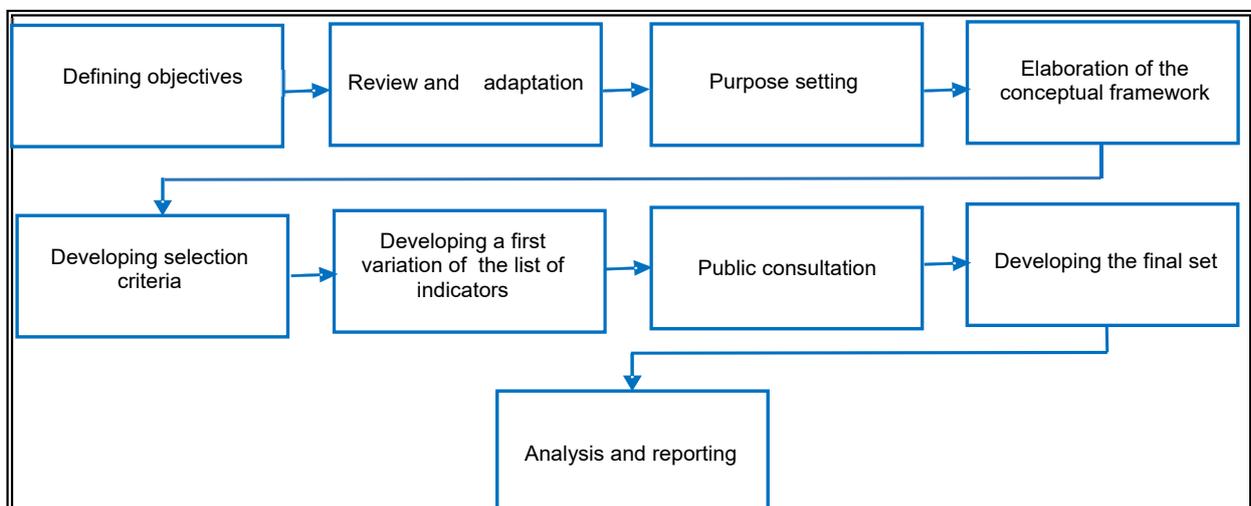


Fig. 1. The process of Achieving Sustainable Development

Source: Author's projection.

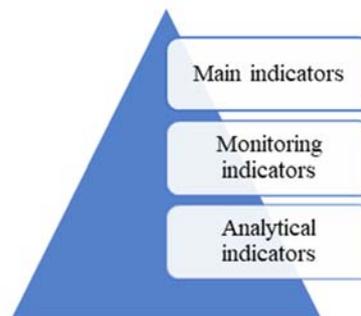


Fig. 2. Indicators classification

Source: Author's projection.

Sustainable development indicators have been conceived by the effort of institutions, economic entities, experts, local administrations, governments, non-governmental institutions and other interested parties. The presence of these indicators is necessary because they cover a wide range of applications and overcome methodological impediments. The sustainable development and the set of indicators related to it are designed to link the distinctive areas that share the concept of sustainable development

The development of the set of indicators at European level lies with the European Commission which has also the duty to improve and update these indicators. At present, the existing indicators are appropriate for monitoring and evaluating the planned objective through the European Union Strategy. According to EUROSTAT, there are three levels of indicators' classification [1]. The first set of indicators is the representative one, the second set is for operational objectives and the third one is in line with descriptive and associated policies indicators. In addition, there are contextual indicators which are additionally found outside the structure. These indicators are specific for outstanding phenomena, difficult to explain or whose intervention is unidentified.

At national level, via EUROSTAT, constantly updated by the National Institute of Statistics, there are presented the specific sustainable development indicators, which are transmitted to the European system of indicators [6]. This stage of inter-institutional collaboration is an effective one where elements of the natural, human and social capital are quantified.

The tracking, maintenance and verification of the national system of indicators specific to national sustainable development is in harmony with the system of indicators used for the management of sustainable development at European Union level. The gathering and processing of up-to-date and relevant data for sustainable development will allow the measurement of performances and the closeness to the objectives set by a correct reporting of the proposed results [7].

In the case of Romania, by EUROSTAT proposal, the set of indicators is prioritized on three levels, as main indicators, as indicators achieved by monitoring and reviewing sustainable development and its programs and, not the least, as analytical indicators. The Romanian system is in line with the European one, observing the basis of pillars and their levels. Like the European system, the Romanian system integrates the pillars of sustainable development into the structure of the pyramid but, in addition to the European system and to the pillars of sustainable development, there appears the institutional category, too.

From the above presented, one can make a classification, namely of the types of indicators, respectively

national sustainable indicators and national progress indicators specific to the National Strategy for Sustainable Development. The first category of indicators is centred on key elements which are considered to be foreground if they compare the information obtained at national level with the information from the international level. The objectives of the National and European Strategies for Sustainable Development are also highlighted. The second category of indicators belongs to the whole set of policies generated whether or not they are included into the European Strategy or into the National Strategy. This way, it is intended to monitor all policies in the form of an objective by admonishing authorities and public power, the results of the actions carried out are therefore monitored and evaluated.

How to Approach the Macroeconomic Indicators of Sustainable Development. The environmental management systems are in conjunction with the existing quality standards at national level. The Romanian legal environment allows the assessment of economic entities from the point of view of their impact on the environment, the economic entities having the possibility to obtain environmental agreements. Regarding the implementation of the sustainable development concept and of its pillars, a longer period of time is estimated to be needed so as each economic entity should have in their activities at least one of the elements of sustainable development pillars. Regarding the environment and the quantification of its specific elements, there is a problem from an accounting perspective. This issue refers to the fact that there is no standard report to be used as a template or that theoretical definitions are not universally valid. Starting from this, it has been noticed that the information is difficult to be put into practice when there is data ready to be processed. Failure to produce environmental reporting is due to the fact that reports are cost-generating, which are not entirely justified by the confidential nature of the processed data. If we refer to public institutions, given the transparency of the activity carried out, there is no question of confidentiality. In parallel, the economic entities, through their actions reported to the environment, may not have an image that could be considered as convenient to them [8].

Since there is no uniformity of the sustainable development practices at the level of all practicing countries, the ISO Standards help maintain or improve the quality of the environment [9]. A series of macroeconomic indicators of sustainable development are particularized as follows:

- *The link between the welfare indicator and the gross domestic product*

The high level of life quality, the welfare or a better life is considered as defining elements of well-being. In order to measure well-being, a real relevant indicator in this respect is the Genuine Progress Indicator (GPI- Genuine Progress Indicator). This indicator is used to measure the economic

growth of a country. This indicator is often similar the Gross Domestic Product indicator (GDP), however the latter is no longer considered as the most relevant indicator to measure well-being. Daly H. and Clifford Cobb are considered to have been the founders of this indicator since 1989, according to Richard J. and his work [10] The first form of the welfare indicator is referred to as *the economic sustainability indicator of welfare* (ISEW) and it was applied at the level of America. The interpretation of this indicator as seen through

the eyes of the authors refers to the natural resources of a country, which are rapidly consumed. The money earned from the use of the resources is considered as revenue rather than the impairment of the asset. This model represents the fact that the country has a false vision of its own economy. The price of natural resources is also under discussion and how it truly reflects the level and the value of resources. In this case, the authors propose the solution of the valuation method, namely that of a replacement cost [10].

$$\text{Net profit} = \text{Gross profit} - \text{Costs borne}$$

$$\text{GPI} = \text{GDP} - \text{Environmental costs} + \text{Social costs}$$

In the exploitation of the GDP, in order to obtain the indicator progress, common elements with the pillars of sustainable development are taken into consideration, respectively social, economic and environment elements. The GPI indicator is closely related to the GDP and the former takes into consideration everything that GDP utilizes. In addition, for an improvement purpose, GPI adds some more figures which represent the cost of negative effects related to the economic activity. GPI presents the positive and negative outcomes of economic growth in order to examine whether it benefited from global advantages or not. The GPI metric has been developed from the green economy theories, an economy which sees the active market as a piece within an ecosystem. The GPI supporters see this as a better measure of the sustainability of an economy in comparison with the GDP measure [11]. Since 1995, the GPI has increased in stature and it has been used in Canada and in the United States. Nevertheless, both countries still report their economic information in GDP so as to stay in line with the more widespread practices around the world. By comparing GPI with GDP it has been noticed that the second indicator increases twice when pollution is created. This occurs as a side effect of the value creation process, the process repeats itself again when the effect of pollution diminishes. By contrast, GPI classifies initial pollution as a loss rather than a gain. Generally, GPI is equal to the amount that will later be paid plus the negative impact that pollution has created in the meantime. Quantification of the costs and benefits of these social and environmental aspects is difficult to achieve. At a simple cost accounting of a company as a whole, in order to control or remedy pollution and poverty, GPI balances the expenses of the gross domestic product with external costs. GPI's supporters believe they can measure the economic process more reliably as they can distinguish between changing the stock value of a product and adding environmental effects to that product [11]. The relationship between GDP and GPI mimics the relationship between the gross profit and the net profit of an economic entity. The net profit represents the gross profit minus the costs borne while GPI is GDP (the value of all goods and services produced) minus the social and environmental costs. Consequently, GPI will be zero if the financial costs of poverty and pollution are equal with the financial gains from the production of goods and services, all other factors remain constant.

In the process of welfare one distinguishes the general welfare reported to society from the individual welfare reported to the individual. In fact, the notion of welfare is one with a multidimensional approach and can include

emotional, social, physical and other welfare, etc. In evaluating the welfare process, both subjective approaches and objective ones are available [12]. While the subjective approach is useful in effectively identifying the determinant factors of welfare, the objective approach appeals to making comparisons between the welfare in different countries at diverse periods of time. The two approaches are often used together. Among the opinion polls conducted, we mention the polls at European Union level, namely the European Survey on Life Quality [13]. As a conclusion, the element of welfare and its implications include, besides GDP, other elements referring to environment, to politics or to the level of education. An increased level of the GDP and a strong economy do not necessarily define the welfare state. If we take into consideration all the variables of the analyzed indicators, it can be stated that that particular strong economy is actually far behind other welfare countries.

The Component of the Sustainable Development – The Sustainable National Income

The Sustainable National Income (*The Sustainable National Income- SNI*) measures the distance between the present level and the future level of production and consumption. SNI is represented by the maximum level of an economic activity achieved in an accounting period. It lays emphasis on the development and the observance of sustainability standards. In order to meet the pollution standards, to adequately use the resources and to reach sustainability standards, all costs are taken into consideration. Pollution standards are added to the calculation regardless whether they are to be produced by the industry, by the government or by households. Simply, SNI is the difference between the standard national income and the expenses that are to be made in order to meet the sustainability standards. According to Hueting's approach on sustainable income accounting, he makes a clear distinction between lasting sustainability seen as an objective and the sustainable use of the environment seen as a process of activities [13]. There is a clear distinction between the subjective preferences of the society on the one hand, and their use on the other hand.

$$\text{Sustainable National Income} = \text{Standard National Income} - \text{Expenses made for standards abidance}$$

The environment and its functions are seen as a set of possible utilizations. The sustainability process involves the use of environmental functions in such a way that an indefinite availability can be ensured. By the definition of durability, it is not necessary to conserve all the assets the environment disposes of. In this situation, the substitution of environmental goods is encouraged, for example fossil energy resources such as coal, gas, oil are replaced by renewable sources of energy, solar, wind, hydro power, etc. By intensely usage of a natural resource, its depletion is more rapid and the replacement of the respective natural resource with another resource is accompanied by an equivalent increase in the stock of alternative assets [13].

Over time, it has been questioned whether the sustainable use of environmental functions corresponds to all wishes or not and whether society does what it takes to keep the environmental functions unlimitedly and at all costs. The answer to these problems has proved to be a subjective one given by the society, implicitly by the use of environmental functions. Research on this topic highlights the fact that the preferences of the society are subjective and it is difficult to obtain individual preferences for environmental functions based only on an observed behaviour. The assessment of environmental preferences can be provided through techniques, but the used techniques cannot provide reliable data on the preferences of the present society that also apply to the preferences of the future society [13].

- *The bank model instrument – The adapted net saving rate*

The adapted net saving rate is the tool recommended by the World Bank. By this rate, they allow the substitution and compensation of existing capital as a result of the production of an economic good. This indicator shows the level of savings generated by the depreciation of human capital. A disadvantage of this model is the fact that the indicator can only be calculated for a period of approximately 25 years. A null result of this indicator represents a sustainable growth.

$$\text{Adapted net saving rate} = \frac{\text{adapted net savings}}{\text{available gross income}}$$

This model is defined by measuring and estimating the wealth of an economic entity over a period of time because it possesses asset measurement tools. The model does not discriminate the capital, the assets are not depreciated if their destination is not the disposal, but the use, and in the short run it has the ability to influence decisions. The World Bank model presents revenue as composed of the detailed consumption in various forms. This sort of bookkeeping is not considered as a promoter of effectively preserving the capital because of the substitution between capitals. Without having a well-known profit because of the lack of amortization, the issue of capital waste and the impossibility to reinvest it when needed may arise. This model has been the core source of inspiration for International Financial Reporting Standards. Tracking the evolution of capital and preserving it for the purpose of integrating the total capital is not a guaranteed. There must be a distinction between the true rich economy and the genuine wealth that exist for real.

- *Accounting Model Adapted to Environment Renewal (CARE)*

The accounting model adapted to environment renewal amplifies the impact that the environment accounting has on economic entities and on their activities. An inward-to-out analysis is noticed when including environment specific elements [10]. Unlike the previously presented adapted net saving rate, when it comes to the accounting adapted to environment renewal, capital compensation is not possible. The accounting model adapted to environment renewal consists of component elements recommended along the way:

Table 1. Accounting specific steps adapted to environment renewal

Steps to follow

Step 1	Specific to the model which refers to highlighting everything that comes in and gets out of the entity by means of a social or environmental balance sheet.
Step 2	It studies human and social capital in the light of what comes in and what gets out. In this respect, they follow up on tracking the environment limits and they also calculate the differences when these ones are identified.
Step 3	It refers to the closest and most inexpensive measures in order to eliminate them after having included the differences into the expense section.
Step 4	It refers to the results account from the classical accounting in order to include the corresponding accounts in such a way that, after the amortization of the capital, the result be reflected.
Step 5	It refers to the Balance Sheet and its updating with the purpose of highlighting the capitals.

Source: Author's projection.

Environment renewal is the objective suggested by the model of accounting adapted to environment renewal and it is based on the balance sheet. Richard J. claims that the accounting model adapted to environment renewal includes human and social aspects in sustainable development [10]. Considering all these, they propose amortization lines specific to the natural, human and financial capital. The accounting formula proposed by the author takes into consideration the historical course for creating sustainability. Changing the entity's way of thinking and recovering the value of the environment are the basic premises of the CARE model, according to the author. In carrying out the amortization process, an environmental statement is not mandatory to be prepared. The accounting model adapted

to environment renewal forces the current assessment of the economic entity to be performed through the impact this one has on the capital renewal. By automatically determining the impact, renewal is ensured by the recording made. The comparison of the impacts, as a result of the activities of economic entities, is done through disturbances thresholds, and due to these thresholds, the level of amortization is assessed. Disturbances highlight the amortization of the human capital, namely the necessary funds allocated for the investment renewal.

Orientation of Sustainable Development Requirements – The European Level as Compared to the National Level. Sustainable development is a worldwide known element and it applies to most countries,

irrespective of their levels of development, but, the question that arises is whether sustainable development is the same for everybody. Taking into consideration that sustainable development involves the same requirements for all, the way it is interpreted remains different according to each country. At international level, according to Boutaud, sustainable development is analyzed in terms of two indicators, namely the Sustainable Development Index and the Economic Development Footprint [4]. The author's research has shown that the economically developed countries present a high index regarding the development, which is beneficial, but they also present a high level of the ecological footprint, which is not beneficial. Another noticeable thing in the study is the fact that the countries under development lead towards an unfavorable situation because they put a significant ecological footprint through the phenomenon of intense exploitation of the planet.

The Sustainable Development in the European Space shows strategic orientations based and integrated into the fundamental economic, environmental and social fields. Due to the extent of the events, when speaking of the European level of sustainable development, it is required to have cooperation and understanding actions at political level by involving all the economic actors [14]. By the involvement of all parties in the process of sustainable development, one refers to people, legal personalities, professional bodies, public institutions and to international institutions and organizations such as the United Nations Organization. The international bodies have provided the necessary boom to the states for the implementation and trend towards the sustainable development. The lead position is gained through cooperation and the role assumed in the process

and also by attracting the bodies subordinated to the World Bank. Still within the European framework, but reported to the level of Romania, our country has had an active implication regarding the process of sustainable development. Referring to the present moment, we mention the Development Strategy of Romania entitled Time Horizons 2013–2020–2030 and also the previous program, the National Development Plan 2007–2013. Long before the emergence of these programs, there have been noticeable contributions from Romanians to the formation of eco-economy. The merits of Romanians have been recognized in the international context and Fuentes has noticed the work of N. G. Roegen, considering it as a true source of inspiration among the economists who support ecology. The effort of the economist with Romanian origins, Roegen, has directed towards the involvement of the natural factor into the economic science [15]. In other words, he aimed at explaining economy through the involvement of nature. The reason why the economist introduced this element is explained by decrease, a result phenomenon of nature's limits. By this, it is once more admitted that some product and resources of the nature are impossible to be replaced by capital. The currently existing technology does not reduce the impact of economic progress on nature; on the contrary, it increases the consumption of resources. Since the consumption of resources is inevitable, a worldwide acknowledged fact, the conservation of resources by means of a strategy is absolutely compulsory for a reduction of wasteful consumption [16]. In order to allocate resources so that they should be enough for all generations and, in addition, so that all generations understand this, Roegen's proposal is presented as follows:

Table 2. Proposals on the appropriate allocation of resources

✓ Improving life conditions for the Third World by stopping the conflicts and by blocking weaponry production
✓ Promoting organic farming and feeding the population with these products
✓ Improving life quality for the disadvantaged areas
✓ Promoting sustainable technology that is not easily replaced or repaired in the event of a fault
✓ Thorough management of time
✓ Looking for and discovering new resources of energy and, obviously, stopping energy waste

Source: Author's projection processed after Roegen G. N.

Roegen's proposals are ambitious and raise questions when we think whether these would ever put into practice or not [16]. Considered separately, the presented ideas are simple, and still they will not be implemented too soon because, at present, we live in an economic environment where world's interests come first. As it often happens, Roegen's sayings have arisen interest to other economists and, as expected, there have been lots of pros and cons regarding his statements. His merits have been acknowledged, but limits have been imposed, too. An admirable thing is the fact that regarding the laws of nature, attention has been aroused to the grounds of economy. A less admirable thing is the fact that focus has been paid just

on this aspect, when it is known that he law of nature is not the only one to be considered when we talk about the grounds/basis of nature [16].

At national level, Călin Georgescu stated that the natural resources of Romania are in harmony with the capacity of the country both in terms of the strategic position and in terms of the its capability in relation with other countries. For several years now, Călin Georgescu has created a program entitled "Sustainability Revolution in Romania" [5]. There are guidelines outlined in this program regarding the Romanian economy. In table no. 3, the measures outlined in this program are presented as a result of the economic reality analysis in Romania.

Table 3. Measures intended for the Romanian sustainability

➤ Position of sustainable development through the basic elements of State's policies.
➤ Improvement of State's institutions and of its regulations.
➤ Economic transition towards energy security and civic economy.
➤ Investment in Research, Education and Health.
➤ Good preservation and management of natural and cultural patrimony.
➤ Investment in Agriculture and promotion of alimentary independence.
➤ Development of the capital of the country by investing in rigorous policies and by adjusting taxation.
➤ Population protection.
➤ Equal opportunities for each person.
➤ Promotion of safe foreign policy in relation with the regional, European and global plans.

Source: Author's projection processed after Georgescu C.

The proposals of C. Georgescu aim at supporting and encouraging small economic entities in Romania. Under the slogan personal development and then of local community development, we focus our attention on prosperity, which belongs to civic economy. Therefore, Georgescu presents his opinion on economy stating that "economy is a continuity of life within a community; economy has to do less with science and more with morals" [5]. By reflecting upon this research, sustainable development has the role to balance the existing discrepancy between rich and poor countries. A balance would be created if the level of poor countries is increased by a fast production, thus meeting with the generations' needs and, at the same time, if the ecological footprint is maintained at a medium level [4].

Conclusions. In our opinion, the current accounting model has a partial way of recording consumption because it does not consider the consumption on environment. We can also say that the results from the accounting model also influence nature indirectly, even if this is not certified. By these facts, we encourage economic entities, irrespective of their size, to integrate into their own accounting model the aspects related to environment and to put into practice the principles of sustainable development, aiming at the accounting adapted to sustainable development.

We encourage the implementation of the accounting adapted to environment renewal because aspects related to environment are taken into consideration by the activity of the entity. By the consumption of non-renewable resources, the economic entity will have higher costs because it will have to somehow replace the consumed resources so as to maintain the natural capital at the same level. One important thing in this model is the human factor because it is not seen as a simple labor factor, but as a factor that directly influences the objectives of the economic entity and the way they are eventually carried out. So far, we consider that the model of accounting adapted to environment renewal provides most answers regarding the integration of the sustainable development into the requirements of the accounting model. Among the principles of this model, we can mention global responsibility, governance, cooperation and, last but not least, the production process and services provision are encouraged, together with the principles specific to this model. The best example of integrating accounting into the requirements of sustainable development is by relating to the costs seen as elements of natural or human assets, but it also incorporates the costs of assets recovery without promoting the compensation of assets among themselves.

Another model that meets the requirements of sustainable requirements is, in our opinion, the World Bank Model. We refer to the fact that, within this model, Education and social inclusion are promoted. Basically, this model supports aspects related to the human capital. Moreover, it uses as indicator the net adapted saving and it measures whether the depreciation of human capital is made up or not of a surplus of savings. A sustainable growth implies a null or positive net adapted saving. A weak point of this model is the fact that decisions are made on short term and another minus would be the substitution

of capitals between various types. In other words, a loss of natural capital may be compensated for an increase of another type of capital. We consider this to be a minus since the model does not come with a cautious and correct assessment because there may be compensation situations between real losses and possible gains.

As a conclusion, the impact on the environment, made by the economic entities active in the market, is inevitable, and all that can be done is related to the impact remission on the environment. Under the circumstances, we can say that the requirements of the sustainable development are partially integrated into the Romanian accounting model. At present, it has been proven that these requirements are totally integrated into the accounting model when referring to large-dimension economic entities. Updating the Romanian legislation must be made in such a way as to include the requirements of sustainable development into the accounting model of all economic entities, irrespective of their size.

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ЯКОЮ МІРОЮ ВИМОГИ СТАЛОГО РОЗВИТКУ ІНТЕГРОВАНІ В РУМУНСЬКУ МОДЕЛЬ БУХГАЛТЕРСЬКОГО ОБЛІКУ?

Мета даної статті полягає в обґрунтуванні елементів сталого розвитку в бухгалтерському обліку господарюючих суб'єктів. Особлива увага приділяється принципам сталого розвитку як в національному контексті, так і в європейському масштабі. Підхід суб'єктів економічної діяльності до інтеграції вимог сталого зростання в модель бухгалтерського обліку давно обговорюється, оскільки спожиті природні ресурси не можуть бути чітко відображені в бухгалтерській звітності організації. Обговорення цієї теми ведеється із

залученням конкретних інструментів у вигляді показників сталого розвитку. Таким чином, тут пропагуються макроекономічні елементи, які завдяки своєму складу інтегрують найбільше число елементів сталого розвитку в модель бухгалтерського обліку і є найбільш підходящими для задоволення вимог розвитку.

Ключові слова: сталий розвиток, модель обліку, інтеграція.

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В КАКОЇ СТЕПЕНІ ТРЕБОВАНИЯ УСТОЙЧИВОГО РАЗВИТИЯ ИНТЕГРИРОВАНЫ В РУМЫНСКУЮ МОДЕЛЬ БУХГАЛТЕРСКОГО УЧЕТА?

Цель данной статьи состоит в обосновании элементов устойчивого развития в бухгалтерском учете хозяйствующих субъектов. Особое внимание уделяется принципам устойчивого развития как в национальном контексте, так и в европейском пространстве. Подход субъектов экономической деятельности к интеграции требований устойчивого роста в модель бухгалтерского учета давно обсуждается, поскольку потребленные природные ресурсы не могут быть четко отражены в бухгалтерской отчетности организаций. Обсуждение этой темы ведется с привлечением конкретных инструментов в виде показателей устойчивого развития. Таким образом, здесь пропагандируются макроэкономические элементы, которые благодаря своему составу интегрируют наибольшее число элементов устойчивого развития в модель бухгалтерского учета и являются наиболее подходящими для удовлетворения требований развития.

Ключевые слова: устойчивое развитие, модель учета, интеграция.

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DECENTRALISED CENTRAL MANAGEMENT: NEW PERSPECTIVES ON THE SOCIALIST PLANNING DEBATE

The importance of the centralisation/decentralisation debate has been highlighted during the Covid-19 pandemic. This controversy is not new. The paper examines the two possibilities. – planning from the centre or, from the periphery and finally proposes a third way which combines the best of both. The debate is approached from various angles – a cybernetic perspective, socio-political perspective and an economic perspective. The core result is the creation of Decentralised Central Control (DCC) which allows optimal control at nodes/regions and data transmission and decision implementation is optimised. The DCC is predicated on the assumption that technology advance can create a system of central planning which is essentially decentralised and is not inhibited by the fatal flaws of traditional Central Planning such as leads and lags in decision making and information exchange on the back of a static and unchanging technology. The fractal system envisaged in this paper is almost a clone of the rational expectations configuration of the perfect market where there is instantaneous market clearing and near-perfect foresight for all agents on the basis of common knowledge. In this paper, we have demonstrated the notion of the problem of externalities and the divergence between private and social cost in common scarce resources and the solution offered by Eleanor Ostrom which is in fact a qualitative version of the Folk Theorem of Game Theory where perfect solutions arise once all parties realise a commonality purpose given a low discount rate and trigger price strategies.

Key words: Central Planning, Decentralisation, Fractal, Complex Adaptive System.

1. Introduction

In an episode of the US political thriller "House of Cards", Frank, the political fixer, forces one of the senators under his control, Peter Russo, to cease supporting a shipyard in his constituency. Russo follows orders and becomes very unpopular with his constituents as the shipyard closes resulting in the loss of 12000 jobs. Later, for political reasons of his own, Frank decides to make Russo the governor of the state. To overcome Russo's unpopularity, Frank organises a new development in the constituency which will bring in more than 12000 jobs and has a better future than the shipyards which would be always under threat of closure. Ignoring the ethical and moral issues, let us analyse this situation cybernetically. Frank can be regarded as a Central Planner. In Frank's mind there is a macromodel of the situation which is entirely focused on Frank's political agenda and is divorced from the micromodel in Russo's

brain (which is for him to be appreciated by his voters). What is beneficial for Frank (the nation) is not beneficial for Russo (the region). It is an example of Central Planning being non-aligned with local planning. How can these different mental models/plans be aligned? The purpose of this paper is to investigate such cases which are part of the continuous centralisation-decentralisation debate.

The debate is not new. The paper examines the two issues. – planning from the centre or from the periphery and proposes a third way which combines the best of both. The debate can be approached from a cybernetic perspective, socio-political perspective and an economic perspective. Each is discussed in turn.

2. The Cybernetic Perspective

Cybernetics is the study of organisations, their purposes, structures and ethics. It is a methodology that takes a dispassionate stance and can be applied to every type of