SECTION 1
Macroeconomic Development in Conditions of EU Integration

Room 2620

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Thursday, April 22, 2004

11.00-11.15   **1. Interconnections between the sub-system of foreign direct investments and other macroeconomic sub-systems**
Assistant **Alecu Teodora**, PhD student ASE

Abstract

This article is meant to reveal the way in which the theory of interconnections between systems and sub-systems participating to the creation of economic value, which have been described by prof. univ. dr. Paul Bran in his book *Economics of value* is outlined in practice and how its analysis may help us to control the effects of the policies applied at the level of each macroeconomic sub-system.

       The fact that the macroeconomic sub-systems interconnect between them, as well as with other surrounding systems is a certainty. It remains however unknown what laws governs in each specific case, and which random element falling under the probabilities nature may interfere and what may it generate in this chain of intra-systems interconnections, thus changing evolutions of ratios, of economic realities.

       There is a famous equation derived from the basic macroeconomic theory according to which *Investments equals saving*, as follows:

Total direct investments	=	External saving (saving of foreigners = Deficit of current account)	+	Saving at the level of the government (budgetary surplus plus public investments)	+	Private saving (companies and population)

       According to the above equation the total direct investments realized in a country depend on: (1) saving outside the country, which is reflected in the deficit of the current account of the balance of external payments of the country, showing the level of the external financing received by a state, as result of the saving of other states, (2) governmental saving which is reflected in the deficit of the state budget and is expressed either by granting of tax incentives, or by simple relaxation of the tax system, and (3) private saving, of population and companies.

       The European Bank for Investments have analyzed how the above equation becomes reality and how at the level of south-eastern Europe the domestic saving realized at the level of company and population remains slightly constant, the increasing of the direct investments being realized mainly as result of the influence of the external financing. External financing becomes the main factor resulting in growth of the by direct investment capital.

       Why the countries generally wish investments and why the south-eastern European countries particularly wish foreign investments? We all know that an increase of the invested capital finally results in an increase of the level of life. But how can we demonstrate that the things are as they appear to be, that foreign investments are indeed a launching gate toward superior levels of economic development and social content?

       I used as method of calculation for establishing the existence of correlations the usage of correlation coefficient *r*. Taking as reference the level of foreign direct investments realized in the south-eastern European countries and then the level realized in other central-European countries, I identified other variables and I analyzed if from a mathematics point of view there are correlations and how these correlations are materialised at the level of different countries.

       As a result of the calculations, it resulted that in all the subject countries there is an

almost perfect correlation between foreign investments and GBP, the correlation coefficient being around 0.98, which is very closed to 1. Therefore, the GBP of the south-eastern European countries is influenced directly and strong by the level of the foreign investments. There is only one exception, that of Poland, whose GBP is not so strongly influenced by the investment process. Practically, Poland is the country with the highest level of foreign investments, as shown in the below graphic. Under such circumstances, when the foreign investments made in Poland clearly exceed those made in other countries in the region, the GBP and the general economic status remain influenced by foreign capital inflows only up to a threshold.

Consequently there is *a level, an optimum point* up to which the foreign investments influence the GBP and implicitly any other macroeconomic sub-system of a country. Up to this level the foreign investments must be stimulated by focusing the state's policies in this regard.

After the optimum point is reached, the new foreign investments influence less and less the GBP and the country's economy in general. It is similar to the individual level, where up to a moment the increasing financial sources bring higher satisfaction levels, but after aan optimum level the personal satisfaction increases only as result of other stimulants than financial.

Analyzing the investment equation described above, I wanted to see the manner and the extent to which the external financing reflected in the deficit of the current account of a country influences the level of foreign investments. In the majority of cases it resulted that there is no correlation. There are however certain exceptions, which may bring to conclusions applicable in specific economic levels , which I will bring to attention after the brief presentation of the results obtained.

The surprise appeared regarding the interconnections between the deficit of the state budget and the level of foreign investments. Thus, in case of Romania the correlation coefficient r between the budgetary deficit and the level of foreign investments is 0.95, which indicates that the foreign direct investments are strongly and directly correlated with the level of foreign investments. With a correlation coefficient of 0.95, indeed the foreign investors come in Romania more when the tax system is more relaxed. Empirically or not, the tax incentives granted impact directly and strongly the volume of the direct foreign capital inflows.

11.15-11.30 **2. The Plan Colombia, The impact of Colombian Government and World Bank Liberalization reforms on Poverty and Inequality**
Economist **Andrea Imperato**, Palermo University of Studies.

Abstract
The "Plan Colombia" is a Development Plan of made by Colombian Government especially for Peace, Economical Prosperity and Institutional Strenghtening. It was started by President Andres Pastrana's Administration on 1998 and presently it is lead by President Alvaro Uribe Velez.
The Colombian Government and the World Bank have approched Key Economic Reforms to attain economic growth and reducing Poverty in Columbia.
Assessing the final impact of Liberalization Reforms on Poverty and Inequality is a difficult task. Liberalization Reforms affect poverty through numerous channels: some with positive, others with negative effects.
Furthermore Key Economic Reforms and growth are essentially macro-phenomena, while poverty is fundamentally a micro-phenomenon so for each of them are necessary specific instruments.
This paper analyses the impact of Liberalization Reforms on Poverty and Inequality and those factors desturbing the achievment of economical benefits coming from Liberalization Reforms by affected groups in Colombia.

11.30-11.45 **3. Income - Health - Environment Interdependence Identification for Romania**
Professor **Oprescu Gheorghe** Ph.D, Academy of Economic Studies
Lecturer **Voicescu Ioana** Ph.D student, Ecologic University Bucharest

Abstract

In this paper, our study is focused on the relation between health and income in our country, starting from well known positive relation between environment and health proved by Environmental Kuznets Model.

It is proved that as income increase, the health increase, but in the same time there are losses in the environment quality parameters. The empirical analyze consist in applying two stage least squares model for identification the relation income – health – environment for Romania. The statistical dates used are taken from Statistic Year Book of Romania and the program used for parameter estimates is "STATISTICA".

Our results show that the environment variable has a negative effect on health status. We have proved in the same time that the level of GNP has a positive influence on health but a negative effect on environment; so that the positive direct influence of the rise of income on health may be diminish by indirect influence of that rise via its impact on environment

Key concepts*:* environment quality indicators, GNP, two-stage least squares, health indicators.
JEL *Codes: C52, E23, I12, R11*

11.45-12.00 **4. The Sensitivity Coefficients and the Rightness of the Macroeconomic Analysis Models**
Professor **Marius Băcescu**, Ph.D, Dept. of Cybernetics, ASE Bucharest

Abstract

The paper emphasises the importance of using scientifically founded sensitivity coefficients, as one of the main conditions of elaborating some models of right macroeconomic analysis.
We only remind sensitivity coefficients of investments to the interest rate, of the money demand at the level of income or interest rate, of the marginal propensity to imports over net exports, of the marginal propensity to consumption over the level of consumption.

12.00-12.15 **5. Pattern of Sustainable Development of Natural Areas in Tourism**
Lecturer **Adina Liana Camarda** Ph.D student, "George Baritiu" University Of Brasov

Abstract

The sustainable development is a type of development which fulfills the needs of the present generations without menacing the ability of the future generations of fulfilling their needs.
The common theme of the strategy for the lasting development is the need to include the economic and ecological reasons in the process of making decisions.
The practical introduction of the model of sustainable development cannot be done without any costs and with certain benefits. These benefits are especially qualitative and long lasting, regarding the keeping of the touristic patrimony of the area.
From the performance point of view the patterns of economical development are grouped into quantitative and qualitative patterns. The interdependence between the environmental and economical development became more and more obvious because of the degradation of most of the under-developed economies. As a consequence, there emerged various attempts of drawing up patterns able to contain the environmental dimension of the economical activity. The pattern of sustainable development is one of them.
The objective of the sustainability is ensured by three categories of environmental restrictions:
- the use of renewable natural resources must not surpass the renewing ratio;
- the ratio of depleted resources must allow their replacement with renewable ones;
- the volume of wastes must be below the assimilation capacity of the environment.
Starting from these general restrictions, specific restrictions for the organization of an environmental tourism in the natural areas were drawn up.
1. Trespassing in the natural reservations
2. Picking up and trading of plants, poaching, dislocation and trading of minerals, speleological, paleontological parts found within natural monument areas.
3. Performing damaging activities within the areas of natural reservations.

4. Building of chalets, hotels, villas within the natural areas should observe the environment aesthetics and should not interfere with its natural integrity.

5. Placing of tents should be restricted to special equipped areas.

6. Running out annoying activities for the other tourists or for the inhabitants of the corresponding areas.

7. Disposing or storing on the lakesides or edges, inside the river beds and in wet areas of any kind of wastes.

8. Water pollution with dangerous substances.

9. Washing in natural waters of vehicles, oily recipients, liquid fuels, oils, dangerous substances or pesticides.

10. Wood cleaving for fire making.

11. Fire making within unprotected areas.

12. Dry branches, already fallen or dry trees should be used for fire making.

13. Temporary or permanent access of certain types of vehicles.

14. Minimizing the number of tourists to the capacity of the area.

The institutional approach of the environment suggests the use of certain procedure rationalization (regulations, improvements).

The use of the principle of procedure rationalization consists in stating objectives, under a global objective, for which there will be identified the most suitable means of their carrying out. So comes that if the global objective is the development sustainability (indirectly measured), intermediary objectives will be established: environmental, social and economical. At their turn, they can be split into other intermediary objectives (that can be transformed into norms that need to be observed); such a process can go on until homogenous measurable sub-objectives are achieved, so that the entitled authorities can choose the most satisfactory solution from the environmental, economical and social restrictions point of view.

By respecting this "algorithm", in order to determine the means necessary for the objectives fulfillment, the mentioned objectives will be considered.

Economical objectives:

- drawing up environmental politics and strategies with the purpose of sustainable exploitation of natural areas;

- drawing up procedures for the assessment of the tourism impact on the environment and minimizing its effect;

These objectives can be reached by calling into action a commission of specialists recruited by the Environment Protection Agency, commission governed by Brasov Town Hall, which is going to finance a part of the actions of the commission. The rest of the finances will be provided by the Government and other companies interested in the protection of touristic areas.

The commission is in charge with studying carefully all the processes with environment degradation potential and will draw up the procedures necessary for the reduction and prevention of degradation with the purpose of the exploitation and sustainable development of the areas of extreme importance for the economy of Brasov region.

- introduction of economical levers and use of financial instruments either stimulating or restrictive in the organization of tourism in natural areas.

These measures will be adopted by the Town Hall representatives and the Environment Protection Agency. Their final target is to reach the global objective, sustainable exploitation and development. These measures consist in introducing certain taxes, making decisions for the reduction of the number of tourists, enabling the visiting of strictly monitored areas, leading to the creation of protecting natural reservations. There will be collected fees for visiting, hunting and fishing permits, trees cleaving, trees scratching, trespassing of certain areas, caves damaging, water pollution and car washing and various objects and solutions disposal into the rivers.

- facilities will be provided for the tourism organization by developing the means necessary for an environmental tourism

This objective can be achieved mainly by reducing or exempting of duties the investors willing to build chalets, camping-sites, villas s.o., providing thus accommodation for tourists. The building will be located in well-defined areas, so as not to interfere with the environment aesthetics and not to damage the environment.

Social objectives

Training and providing information to the population concerning the environmental field.

The measures will be adopted by the Environment Ministry and Environment Protection Agency, authorized by the Ministry in Brasov county.

They will consist in introducing of environmental studies in schools and universities,

and by getting everybody aware of the effects of a tourism in non-compliance with the environmental elements needed for environment protection.

The advertising is achieved by means of brochures, magazines, national and local radio and Tv shows.

- Rural areas restoring

It is a more difficult to achieve objective and requires an extended period of time. Restoring of rural areas implies the organization of an aggressive, top-quality rural-tourism which eventually leads to the increase of the income of the areas, amount meant to be used for the villages development.

Another means is the repopulation of the villages, deserted by German ethnicity, and their turning into touristic and holiday villages.

1.1. <u>Costs and benefits triggered by the implementation of the pattern of sustainable exploitation of natural areas for tourism</u>

The implementation of sustainable exploitation and development of natural areas pattern for tourism should become a priority for all the areas in Romania with touristic potential.

Turning into profit and optimal exploitation of tourism might represent for Romania a significant source of income, which could be used for economy restoring. Unfortunately, in our country the environment protection is not considered as a priority, as it should be in a developed society.

The achievement of such a pattern requires though certain costs, but the most important aspect is that it represents a source for important benefits for the society. The profit is delayed and it is difficult to quantify.

Costs are connected to the objectives achievement.

For <u>economic objectives</u> the costs are connected especially to the payment of specialists in charge with strategies drawing up, existent damage assessment, creation of economic levers and financial instruments.

Another part of the resources is used for the purchase of instruments needed for assessment and indirectly for reducing the duties and allowing financial facilities to those willing to invest in this pattern.

A cost that worth paying attention is represented by the losses incurred by reducing the tourists number or visiting and camping areas, result of its implementation. This cost can be avoided through a careful choice of objectives and decisions and taking into account all the requirements of a quality tourism.

The costs corresponding to <u>social objectives</u> require a much longer period of time and are much greater.

So comes that, for achieving the education of the population in this field, the costs are represented by printing of brochures, magazines, mass-media broadcasting, teachers wages.

For the restoring of rural areas, the costs are increased and can not be measured because their effect is felt over a much longer period of time.

The costs connected to achieving this objective are triggered by the rural-tourism organization and the creation of touristic villages, which need the building of faciliities compulsory for this type of tourism.

The benefits of the implementation of sustainable exploitation are not to be neglected.

Firstly, the environment is the main beneficiary, the landscape, on the whole, which is preserved untouched for a long period of time and provides relaxation and enchantment for the tourists.

Environment preservation assured by this pattern, eventually leads to the increase of the number of tourists and to a better valuation of the touristic potential. The result of such an activity is the income increase, a positive aspect for the county and country economy.

The choice of the funds for environment preservation is difficult to make, mainly because of the lack of attention paid to this field, lack of radio and TV shows approaching this topic, as well as because of the effects that everyone can notice in our touristic areas.

The Romanian society, in full development must become aware that environment protection and its preservation represent a highly important field, because a developed society can not exists without a healthy environment, able to provide healthy living conditions.

12.15-12.30 **6. The sustainable Development and the Role of the State in Supporting the Touristic Activities**

Lecturer **Adina Liana Camarda**, Ph.D student, George Baritiu University - Brasov

Abstract

By using the concept of eco-tourism they try to minimize the negative effects upon the local, natural and anthropic environment by providing the upward economic development of the local communities. During the last years there was given a special attention to the areas for protection and maintenance of the environment and for the keeping of the biodiversity and of the national geno-nature. The developing of the rural areas represents a prior objective due to the risk of their non-peopling, considering the fact that, especially in the mountain area, there is the tendency of the people migration to the town areas.

At international level, in the countries with old touristic traditions, the touristic planning at national level has taken into account the problem of protecting the touristic resources.

For this reason, the problem of sustainable development of tourism has included three main domains:

Economy – essential for identifying, revaluating and increasing the degree for the exploitation of touristic resources.

Social – special by making the population permanent, the increase of the degree of occupying the work force, sustaining the practice of some traditional jobs and attracting the population in practicing the tourism.

Ecological – important for avoiding the degradation of polluting the environment and ensuring an equilibrated exploitation on long term of the touristic resources.

According to these new requirements, the necessity for elaborating and adopting some national touristic development is imposing, which should allow the conjugation of experience and positions of the main economic agents – public administration, professional organizations, professional, union, social associations and organizations, specialists in the profile research.

Taking into account the European and international experience, the sustainable planning in tourism supposes the following:

1. Long-term prognoses - global and on tourism forms (mountainous, balneary, seaside) according to the tendencies of the external markets.
2. Concrete plans – achievable on medium term (4-5 years) or on short term (1-3 years) and that can be issued on regions, counties or tourism forms.

These plans must be elaborated on the basis of European standards and rules concerning the exploitation of touristic resources, of developing and modernizing the touristic standards and services. The process of the planning has to be the basis of the touristic reform in Romania and to create the necessary frame for a sustainable development in this field.

At the moment the acceptance of the sustainable development concept in the Romanian tourism is connected to the structure changes within the economy, to the privatization process and to that of awarding financial-banking facilities, to the necessity of an adequate legislative frame.

The issue of the development of touristic prognoses and plans are the main points for supporting a sustainable tourism and which assumes:

The preservation of natural and anthropic touristic resources, for a continuous use in the future.

The raise of the living standard and of the validity of local communities:

Better knowing and being aware of the preservation idea by the local population and by the visitors.

The ecologic planning supposes that all the environment elements should be supervised and analyzed in order to determine the most adequate development patterns and those for territorial arrangement. For instance, on the basis of this method, an intensive development shall not be admitted on the plains that can be flooded and in the abrupt hilly areas, or in the areas with fragile ecologic balance.

The main development prognoses and plans on national level have a rough guide role, informing and estimative role for the future perspectives. By the direct support of the state we can ensure the general protection plan of the resources, for establishing the exploitation regime or for accomplishing some special investments. In exchange, the plans on medium and short

term are benefic especially for the support of the local and regional development.

The lasting development supposes an approach at local level of the touristic activity. This refers to the involvement of the community in the planning and development process, as well as to the creation and developing of the tourism forms that generate benefits for the local people.

By maximizing the advantages for residents, these ones will be more interested in supporting a touristic development of that area, following at the same time the preservation of the local touristic resources. These advantages, which reflect upon national level, construe to supplementary revenues in convertible currency, the creation of new work places, the more efficient protection and preservation of the environment.

The support of the local initiatives may be done in several ways:

By the participation of the specialists, local agents at the issue of the regional, local plan. These plans may be construed by contests and project auctions for touristic revaluation and development, with the possibility that the best projects to be construed into real ones;

Supporting by information and logistics of some local development projects of some touristic activities.

The granting of financial support which has in view the economic efficiency.

1.1. <u>Sustainable development and the ecotourism in protected areas</u>

On international level, the diversification of the tourism forms led to the inclusion in the touristic patrimony of many countries with protected natural areas, as potential touristic resources, insufficiently revaluated.

In fact, between the tourism and the competences of the environment there is a complex relationship, the connections among them manifesting in both directions: the natural environment constitutes a major support for some touristic activities, and the tourism represents the economic activity, a high economic efficiency level, a more reduced impact on the environment.

Thus, the ecotourism is first of all a developing action under the form of a partnership among the tour-operators, tourism agencies, local communities, administrators of natural protected areas, environment associations and groups of specialists in this domain on the basis of a common charter, common principles and actions, having as final aim the preservation of an equilibrated touristic function and which is economically efficient.

The tourism ecologic development in protected natural areas mainly aims at four plans:

Economic – by increasing the revaluation level of the resources, especially those less known for reducing the pressure on the most exploited ones:

Ecologic – by ensuring the national utilization of all the resources, by reducing and eliminating the domestic wastes and residues, by using them again, preserving and protecting the environment;

Social – by increasing the number of work places, maintaining some traditional jobs or qualification jobs in the tourism field.

Cultural – by revaluating the civilization, arts, culture civilization special and genuine elements, which are the expression of a certain cultural identity and that may develop by tourism the tolerance spirit.

First, we must not forget that the natural protected areas have a really special touristic potential. Thus, any administration and arrangement has to have in view a few important elements:

The natural protected areas must represent a scientific basis for the research of the natural sciences, with an essential role in the preservation of the national and world genetic form for preserving the natural ecosystems.

The protected natural areas may contribute to the socio-economic development, by the increase of the living standard on local and regional plan;

The protected natural areas must keep their educative function, especially the formation of a pro-ecological attitude by instruction forms specific for teenagers and adults.

The protected natural areas may assure the development of some international relations on the line of scientific and informational cooperation and by integrating them on certain touristic and research markets.

At this moment in our country there is a number of appreciatively 854 protected natural

areas, with different surfaces, with different typological, geological, forestry, botanic, speleological, mixt and complex structures . It hereby results that during the last years we have given more attention to the areas for the protection and preservation of the environment and for maintaining the biodiversity and the national genofoudation.

1.2. <u>The role of the state in supporting the ecotouristic activities.</u>

The state admits the efficiency of the ecotourism by taking into account the interests it has at one moment within the society.

The development of rural areas must constitute an important objective because of the risk of the fact that they are not populated, having in view the fact that, especially in the mountainous areas, there is the migration tendency of the population towards the urban areas.

In Romania, once with the decentralization process, the role of the state has been undertaken by the local and regional administration. The natural persons and the familial associations, authorized according to the law that develop ecotourism activities or the ecotouristic farms, benefit by the facilities for the small or medium enterprises, even though they do not accomplish the conditions of employees number and annual revenue, as well as the following facilities:

The local councils may put to disposal from the available fields in the forms and under the conditions provided by the law, the land surfaces necessary to the building, development and exploitation of boarding houses and ecotouristic farms;

The priorities granting for installing communication lines (telephone, fax, telex)

Technical specialty assistance of all kinds from the Ministry of Transportation, Constructions and Tourism and from the professional associations.

The inclusion of the ecotouristic offer of pensions and farms for ecotouristic promotion, edited by the Ministry of Transportation, Constructions and Tourism.

The presentation of the ecotouristic boarding houses and farms offer within the promotion actions made by the touristic information offices from abroad of the Ministry of Transportation, Constructions and Tourism.

The inclusion within the education institutions' programs with touristic or agricultural profile of problems specific to ecotouristic boarding houses or farms.

The payment exemption for the revenue taxes on a period of 10 years for the ecotouristic boarding houses and farms which have as an activity object, registered in the function authorization, ecotouristic services.

The development of ecotouristic boarding houses and farms may compensate the lack of accommodation registered in some localities, especially within the peak periods when the tourism is practiced, by allowing the increase of the touristic circulation.

For quickly solving the problems concerning the organization, the development and the promotion of rural tourism in Romania and within it, of ecotourism, at the level of the Ministry of Transportation, Constructions and Tourism the Technical commission was constituted in 1995, where there are representatives and specialists of the Ministries and Institutions that may bring a contribution in this field: the Ministry of Agriculture, the Ministry of the Environment, the National Institute for Managerial Formation in Tourism, the Ministry of Education, Culture and Youth.

12.30-12.45   **7. The Implications Of Ecotourism In Suistainable Development At The Communities**

Lecturer **Nedelea Alexandru**, Universitatea "Stefan cel Mare" Suceava
Assistant **Boghean Carmen**, Universitatea "Stefan cel Mare" Suceava
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Abstract

To developing countries, one of the most important drivers for ecotourism is the generation of less – destructive and consumptive levelihood and employment for local residents, and financial means for the management of protected areas. Resource – poor governmental park management agencies find in ecotourism a much – nedeed source of income. Overall, through, under the right circumstances, ecotourism has proven to be one of the most effective means to finance conservation.

In some cases, ecotourism can provide much needed business and income opportunities for

steward communities, and the negative effects of its implementation very often compare favourably to pother alternatives.

The creation and maintenance of hundreds of public, community –managed and private parks in developing countries can ultimately be linked to visitation revenues.

12.45-13.00   **8. Sustainable Development In The Framework Of Financial Programming Model**

Dorian Drucioc, Elvira Naval, Institute of Mathematics and Cybernetics of the Academy of Sciences of Republic of Moldova

Abstract

This article is the attempt to combine macroeconomic model approaches such as sustainable development and financial programming in order to obtain macroeconomic model, which would attain sustainable development targets in the framework of financial programming model.

Sustainable development was considered as the balance and consensus of three factors of equal importance, which formed the system elements: ecological, social, and economic. The main goal of this system consists in satisfaction of the human society necessities and environmental protection in scope to insure the vital and development condition for future generation.

The generalized economic-mathematics models study sustainability of the socio-economic systems, which merge economic, social and economic elements and allow to incorporate in the system both necessity and priority of the human component and environmental capacity and resources. The experience existing in integrating ecological and economic models for the quantitative analyses often lead to some incommodes mathematics structures hard to be assembled and analyzed. In general these models need enormous data and can operate in enough restrictive domains.

Other alternative for the quantitative analyses of the sustainable systems parameters can be simplest generalized models, which don't contain details and potential competence for simulation on a large scale. But, its can formulate curious theoretical results, leading to some approaches and knowledge about sustainable concept. Theoretical models don't generate accurate foreseeing, but must generate understanding of a hole system's dynamic, possible system behavior under parameters and force functions and therefor possible methods of precaution that must be take in order to avoid unacceptable state.

As a result of the investigation was proposed conceptual macroeconomic model of the sustainable development, which contains next elements: economy, environmental medium, and government. Government was introduced in the system as the regulator of the socio-economic system. Links between the system elements are treated as inputs-outputs. This structure with links between its elements formed the basis of the growth mathematical models under sustainable development conditions.

In the base of the conceptual model of socio-economic system the generalized mathematical model was elaborated. Each element of this system was formalized by equations or identities. The variables of the model represent links between system elements and formed its inputs-outputs

Considered sustainable development model [1] contains four variables: population, economic development, investment, and environmental degradation. Its evolution is described by ordinary differential equations. This generalized ecology-economic model examines very important theoretical conceptual problems with a view to obtain possible scenario of sustainable development and expose possible dynamic behavior of the considered systems. This model is complicate enough and doesn't offer accurate foreseeing for examined systems.

That is why we decide to consider less complicated models such as financial programming models.

Financial programming model [2] is based on the macroeconomic accounting framework covering the main sectors of economy. In this simplified consistent macroeconomic framework economy is represented by four sectors: the private sector, the government sector, the foreign sector, and the monetary sector. Each accounting identity describes budget constraints of the private, government, foreign sectors and balance–sheet constraint for the monetary sector. The variables identified in it are classified as exogenous, endogenous, and policy variables. Behavioral equations were specified to supplement the accounting identities. Combination of the variables, behavioral equations, which describes economic relationships, and identities yields the

economic model that underlines policy decisions. Given the values of the six behavioral parameters, the model is solved for the endogenous and targets variables conditional on the exogenous variables and policy instruments that would attain the desired outcomes for the target variables. Conversely, given chosen values for target variables, some policy variable can be selected arbitrarily and the model will then determine values for the endogenous variables and remaining policy instrument.

In the integrated approach we add ecological component, population, and investment in the structure of financial programming model. Economic development was associate with Cobb-Douglas production function. The model obtained was formulated in the finite difference terms. So, we will determine financial program, which permit to attain economic growth in order to maintain sustainable development targets.

15.30-15.45   9. On The Dynamics and Optimal Control of Stochastic Pension Fund Models in Continuous Time

Eliza Baiasu, Faculty of Mathematics and Computer Sciences "Spiru Haret" University, Bucharest, Romania

Abstract

The analysis and control of pension fund dynamics is becoming increasingly important as members start to pay more attention to the security of promised benefits and as sponsoring employers become more concerned about the timing and stability of cashflows. This paper discusses some current problems in the analysis and control of defined benefit pension funds. A continuous-time stochastic pension fund model is proposed in which there are n risky assets plus the risk-free asset as well as randomness in the level of benefit outgo. This model was developed by Dufresne (1990), Boulier et al. (1995) and Cairns (1996). We consider Markov control strategies which optimise over the contribution rate and over the range of possible asset-allocation strategies. We may allow for the possibility of a risk-free asset (or cash) which has a value at time t of $dR_0(t) = \delta_0 \cdot R_0$. There are n risky assets, the prices of which we assume follow correlated geometric brownian motion. Thus, if $d\delta_X(t, X(t))$ is instantaneous return on assets between t and $t + dt$,

$$\frac{dR_i(t)}{R_i} = d\delta_i(t) = \delta_i \cdot dt + \sum_{j=1}^{n} \sigma_{ij} \cdot dZ_j(t), i = \overline{1,n} \text{ , or } d\delta(t) = \delta \cdot dt + S \cdot dZ \text{ ,} \tag{1}$$

where $Z(t)$ is standard n-dimensional Brownian motion, $S = (c_{ij})_{i,j=\overline{1,n}}$ is instantaneous covariance matrix.

In this paper we consider the following continuous-time stochastic model for pension fund dynamics which allow for n risky assets and for noise in the level of benefit outgo

$$\min_{c,p} J(t,x)(c,p) = E\left[\int_t^\infty e^{-\beta \cdot s} \cdot L(s, c(s, X(s)), X(s)) \cdot ds \Big| X(t) = x\right]$$

$$\begin{vmatrix} dX(t) = X(t) \cdot d\delta_X(t, X(t)) + c(t, X(t)) \cdot dt - B \cdot dt - \sigma_b \cdot dZ_b(t) \\ d\delta(t) = \delta \cdot dt + S \cdot dZ \end{vmatrix} \tag{2}$$

where $X(t)$ is fund size at t and the value function $V(t,x) = \min_{c,p} J(t,x)(c,p) = J(t,x)(t^*, c^*)$ is a function of the chosen Markov contribution strategy $c(t, X(t))$ and investment strategy, $p(t, X(t)) = (p_i(t, X(t)))_{i=\overline{0,n}}$, ($p_i(t, X(t))$=proportion of the assets invested in asset i, $i = \overline{0,n}$). In this general model $e^{-\beta \cdot s}$ is a discount function and $L(s, c(s, X(s)), X(s))$ is a loss function given at time s, B is expected rate of benefit outgo, σ_b is volatility in benefit outgo, $Z_b(t)$ is standard n-dimensional Brownian motion , $Z(t)$ and $Z_b(t)$ are independent.

Assuming that the optimal control strategies c^* and p^* exist, the optimal value function $V(t,x)$ satisfies *Hamilton-Jacobi-Bellman equation*

$$\min_{c,p}\left\{e^{-\beta \cdot s} \cdot L(t,c,x) + V_t + \left[(\delta_0 + p^T \cdot \lambda) \cdot x + c - B\right] \cdot V_x + \frac{1}{2} \cdot V_{xx} \cdot (x^2 p^T D p + \sigma_b^2)\right\} = 0 \tag{3}$$

where $D = S \cdot S^T$, $\lambda = (\lambda_1, \ldots, \lambda_n)^T$, $\lambda_i = \delta_i - \delta_0$ =risk premium attached to asset i, $i = \overline{1,n}$.

For a general (not necessarily quadratic) loss function it is shown that the optimal proportions of the fund invested in each of the risky assets remain constant relative to one another. Furthermore, the asset allocation strategy always lies on the capital market line familiar from modern portfolio theory.

A general quadratic loss function is described which provides an explicit solution for the optimal contribution and asset-allocation strategies. These solutions are not dependent on the level of uncertainty in the level of benefit outgo, suggesting that small schemes should operate in the same way as large ones.

15.45-16.00   10. Economic Cybernetics Modeling Paradigms
Professor **Eugen Tiganescu** Ph. D, Academy of Economic Studies

Abstract

Plecand de la afirmatia ca cibernetica a produs o "revolutie stiintifica" cu impact asupra gandirii si actiunii in toate domeniile activitatii umane, lucrarea isi propune sa evidentieze principalele concepte, structuri si tipuri de modele care au fost incorporate in teoria si practica stiintelor naturii si societatii.

Stiintele economice au reactionat favorabil la provocarea de inoire a metodelor sale de cercetare si analiza imbogatindu-si patrimonial cu paradigme ce au fost validate in timp. Principalele preocupari ale contemparaneitatii: dinamica si stabilitatea economica, fluctuatiile si ciclurile economice, alocarea eficienta a resurselor, economia dezvoltarii, echilibrul general etc., au primit raspunsuri mai consistente prin utilizarea abordarii sistemice si a modelarii econometrice, a fundamentarii deciziilor de reglare si autoreglare pe baza studierii comportamentului uman, a teoriei controlului optimal si a economiei informatiei.

Sintetizand aceste demersuri intr-o conceptie unitara, lucrarea demonstreaza ca ideile ciberneticii exista si se manifesta creator in stiintele economice si sociale.

16.00-16.15   11. Some Economic Aspects of Bankruptcy Procedures
Professor **Andrei Ana Michaela,** PhD, Academy of Economic Studies
Mircea Grosaru, Romanian-Italian Association from Suceava District
Economist **Imperato Andrea,** Palermo University of Studies - Italy

Abstract

In the paper we start from the already proved failure of short run competitive equilibrium with bankruptcy and the possibility of gaining the long run one through elimination the inefficient firms.

Bankruptcy laws can contribute to the rise of social welfare permitting inefficient firms to drop out of the market, creating in this way a good instrument of efficient allocation of resources. In the real economic life it was evidenced the fact that firms entering bankruptcy procedures are not always economically inefficient and that inefficient firms do not always end up in bankruptcy (that is the problem of the bankruptcy law in many countries : U.S., Italy, France, Germany).

The recent concerns of the economists and jurists regarding bankruptcy reveal a series of complex problems. In the papers we present some important economic problems of bankruptcy and also the methods and mathematical models used in order to overwhelm them.

Keywords*:* Moral hazard, forecasting bankruptcy, game theory, liquidation decisions, liability, investment decisions, sovereign debt, restricted auction, transaction cost, structure bargaining, portfolio selection.
JEL Codes*: D33, C65, C78, C72, G22*

16.15-16.30   12. Consummer Behaviour for Labour Supply
Professor **Imperato Antonio**, Ph.D, Palermo University of Studies

Abstract

Labour supply is a complex phenomenos with many implications on macroeconomic level – beeing an essential factor of economic growth and , on the individual level beeing the source of labour incomes source.

On the long term, it plays an essential role in the phenomenos of econiomic cycles with many effects on unimployment rate. In this paper we will analyse the consumer behaviour regarding the supply of his own work, the aggregation of individual supply of labour , trying to identify the laws labour supply respons on some determining factors as: real expected wage, prices evolution

for consumption goods (the effect of inflation, the individual wealth, the variation of efficiency rate of financial actives).

Starting from the general model of labour supply without considering the wealth

$$\max_{C,N} U(C,N) \,\big|\, pC = R + sN \,\big\}, \text{ with } U(.) \text{ the utility function, } p \text{ the relative price of}$$

consumption **C, s** the real salary per hour, **N** labor hours and **R** nonsalary incomes, we analyze the effects on labor supply resulting from generalized Slutsky theorem.

We refine then the analyze by introducing households wealth

$$\max_{N,C,G} U(N,C,G), pA + s_n N = pC + \pi \overline{A}$$

In the last model, s_n represents nominal wage, **A** being the disposal wealth in present, $\overline{A}$ - expected wealth to the end of the period, $-\pi$ is the reverse ratio between future and actual real value of monetary unit.

The study of exogenous variable effects (ds, $d\pi$, dA) could be done by diferentiating optimum conditions of first order, obtaining:

$$dN = - m_{11}ds - m_{13}d\pi - v_0(dA + Nds - Gd\pi)$$

with m_{11}, m_{12} defining substitution effects, and v_0 defining income effect obtained by generalized Slutsky theorem, $v_0 = -\dfrac{\partial N}{\partial A} < 0$.

The effects of rising salaries and inflation respectively obtained, are:

$$\frac{\partial N}{\partial s} = -m_{11} - v_0 N, \qquad\qquad \frac{\partial N}{\partial \pi} = -m_{13} + v_0 G \qquad (G = \overline{A}/p \text{ - real value of final wealth}).$$

Key words: intertemporal necessary optimum conditions for consumption, net actives, the savings-consumption account of household, disposal income, marginal rate of substitution

JEL Codes: C61, D11, D31, E21

16.30-16.45   **13. Some Macroeconomic Aspects of Romanian E.U. Adhere**
         Professor **Miron Dumitru**, Ph.D, Academy of Economic Studies

16.45-17.00   **14. Consumption – Savings Decision Sensitivity during Life Cycle**
         Professor **Oprescu Gheorghe** PhD- Academy of Economic Studies
         Professor **Andrei Anca** PhD – Academy of Economic Studies
         Professor **Imperato Antonio**, PhD – Palermo University of Studies

Abstract

The decision of saving-consumption regards two aspects: on the one part optimal arbitrage savings-consumption in the basic period, on the other hand, they anticipate the future consequences of these decisions, so, the degree of consumption and the savings in the future period, and also the net financial active to the end of the period 1, taking in account the evolution of prices and of the interest rate.

Starting from the mathematical model of consumption/savings intertemporal optimal arbitrage decision problem along whole life cycle, we have formulated the necessary optimum conditions in two cases: with and without considering the loans in order to pass then to the quantification of exogenous factors effect on the consumption and savings.

Using Slutsky equation for intertemporal arbitrage consumption-savings, we have deduced the effects of prices and life resources both consumption and savings in the two periods.

Keywords*:* intertemporal necessary optimum conditions for consumption, net actives, the savings-consumption account of household, disposal income, marginal rate of substitution
JEL Codes*: C61, D11, D31, E21*

17.00-17.15   **15. Financing the Deficit. Public Debt and Seigniorage**
         Tutor **Ovidiu Ioan Birsan** Ph.D, George Baritiu University of Brasov

Abstract

This paper brings to attention a very important problem of many industrialized countries, meaning the absence of the budget balance. The paper is centred on financing this deficit,

proving the fact that the process of accumulating the debt is an explosive one and that it requires a very careful management. For this reason, stabilizing the debt has become the main concern of fiscal policy. In order to support these statements, we have a series of data from several international organizations, data regarding the debt of the main industrialized countries. The ability to honour this debt depends obvoiusly on the size of the respective country. This is one of the main reasons for which all the data used in this paper were referred to GDP.

Keywords: budget, budget balance, budget deficit, budget excess, public debt, financing, seigniorage, monetary base, management, fiscal policy.

17.15-17.30 **16. Analysis Of Value**
Pârv Luminita, Ungureanu Mirela, Bîrca Adriana, "George Baritiu" University of Braşov
Abstract
The value of use is a specific notion but of a great generality that makes the product to be regarded as a complex system that transforms itself in time, thus being in evolution. Therefore, the product is important not in itself, but for the requirements it satisfies and for the functions it provides. In the analysis of value there are connections of a technical nature that implicitly lead to connections of an economic nature. Thus, the method of the"analysis of value" will actually examine the cost of product functions, the aim of the method being the balance of functions costs on the basis of their importance for the product.
Identifying the functions represents one of the important stages of the analysis of value. The difficulty in fixing the functions derives from the fact that there are not any rules clear enough for this activity, but only principles.

Friday, April 23, 2004

14.30-14.45 **17. The Economical Social Efficiency and the Health Condition of the Population**
Teacher *Mihai Alexandru Stroescu,* Ph.D, The National College Mihai Viteazul
Abstract
The present paper had in view the integration of the researches made by tens of staffs which, in the last decades, have succeeded to reveal the importance of maintaining the population as long as possible in an active condition. It has been seen the necessity to correlate the knowledge from more disciplines, joining the economical perspective with the mathematical patterns and statistical methods of research, building on a cybernetic perspective and in concordance with it, appealing to the education and medical sciences, in order to create a general image.
A transition from the investigation only of the economical efficiency to the pursuit of an multiple efficiency was seen as being necessary, having in view also the social efficiency (with a special attention given to the education, investigation, health care, ethical, cultural and art values…) and ecological (if we can understand by this to maintain the equilibrium of the natural ambient in which the human being can provide for herself the optimal condition of life).

14.45-15.00 **18. The Education Investment – Factor of the Economical Social Development**
Teacher *Mihai Alexandru Stroescu,* Ph.D, The National College Mihai Viteazul
Abstract
For the investigation of the influence of these qualitative factors upon the economical progress, we have drawn our attention especially to the education. In order to achieve the objectives of this paper, we would like to present some results form the scientific literature and also to perform our own analyses and synthesis.
The opinion we assert is that the investment in the human capital for the education appears as one of the solutions with great efficiency both for the economical progress and the rising of the personal well-being of each member of the society. In order to underline these truths, it was intended that this research to emphasize the importance of the qualities of the human resources for the economical and social reconstruction, in this period of transition through which our country passes.

15.00-15.15 **19. Human resources management in the Romanian Air Force**
Tache Jurubescu, Ph.D student, Ministry of National Defence, Bucharest, Romania

Abstract

The main objective of the Air Force staff in the field of human resources is to provide high proficiency personnel for the Alliance's needs while national structures are manned at the same standard. In this respect, the evaluation methods, and education improving programs are intensively used in order to have the designated personnel ready by the moment of accession, this coming spring.

What does it mean for the Air Force? Nothing else than what they already did for a couple of years now: selections, training, evaluation, feed back, lessons learned, scenarios, live exercises, simulations. All the words I have written down here have their own weight. All are hiding behind them hours and hours of work and study, changing concepts and philosophy, cutting down obsolete structures and tailoring others to fulfill the requirements of a NATO country member, as our country is going to be soon.

Working with people, and making them understand new strategies, procedures, tactics and techniques they never touched before, or never heard about is a long term process. We started ten years ago through the Partnership for Peace program. The program has been launched and proved itself as a very inspired NATO initiative of enlarging the Alliance, and confidence building among the states that belonged to two different systems for decades. Our contribution to the success of this offer consisted of making it as efficient as the program and the resources allowed. We considered ourselves as potential member of the Alliance. Sooner or later we are going to be confirmed as a full member. That was a matter of time problem. Our human resources proficiency level is to be once again proved when a number of officers and non-commissioned officers will be part of NATO headquarters' staffs as national contribution to the Alliance. Moreover, back in country, highly qualified personnel is ready to produce security at the eastern border of the Alliance. Being part of a system, every minute, 24 hours a day, seven days a week, we have to keep all the equipment and people fully functional in order to make the system a working, and a peace, stability and confidence generating one.

The Air Force's staff priority is to make the people sent to represent the country, the most important value we could make available for the Alliance. Therefore we continue to improve training methods, and evaluation of our people. My personal goal in this process is to define and implement modern methods to measure the efficiency of human component of the security system.

15.15-15.30 **20. East Extension Of E.U. Effects Estimation**
Lecturer **Ioana Voicescu,** Ph.D student, Ecologic University – Bucharest

Abstract

The present essay debates the macroeconomics and microeconomics integration in European Union as well as the effects of Romanian partnership to European Union. Likewise, the effects of the protectionism applied by the member countries are presented.

15.30-15.45 **21. Spaţiul Cibernetic (CYBERSPACE) – O Expresie a Orientării Ciberneticii Actuale.**
Senior Lecturer **Gheorghe ILIE,** Ph. D

Abstract

Se defineşte spaţiul cibernetic şi se prezintă elementele structurale şi de utilitate. Se prezintă relaţionalitatea spaţiu cibernetic – cibernetică socială şi se argumentează evoluţiile pozitive.

15.45-16.00 **22. Interactivitatea Procesului de Evaluare a Sistemelor de Producţie**
Senior Lecturer **Gheorghe ILIE**, *Ph. D*
Lecturer **Roxana STEFĂNESCU**, Ph. D

Abstract

Se prezintă obiectivele evaluării corecte şi eficiente a sistemelor de producţie şi se defineşte procesul de evaluare. Se asociază procesului de evaluare a sistemelor de producţie o schemă logică şi se descriu etapele. Se stabilesc principalii parametri pentru evaluarea calităţii şi operaţionalităţii proceselor de producţie.

16.00-16.15 **23. Cibernetica Operaţionalităţii Managementului Sistemelor de Producţie**
Senior Lecturer **Gheorghe ILIE**, Ph. D
Lecturer **Roxana STEFĂNESCU**, Ph. D
Assistant **Adriana VIDRAŞCU**

Abstract

Se defineşte operaţionalitatea sistemelor complexe prin manifestarea calitativă, răspunsul calificat, adaptabilitatea oportună şi siguranţa în funcţionare.
Se structurează conceptul de management operaţional al producţiei şi se stabilesc parametrii fundamentali ai acestuia.
Se defineşte mecanismul de reglaj al eficienţei managementului operaţional al producţiei.

16.15-16.30 **24. Policy Reform and Growth Recovery in Transition Economies**
Assistant **Călin Rechea,** Ph.D student, Academy of Economic Studies

Abstract

The paper attempts to explain the evolution of output in transition economies using macroeconomic variables and different measures of structural transformations. To assess the importance of structural reforms for these countries we use liberalization indices that are based on reform measures from EBRD. The effect of economic policies, reflected mostly by some measures of liberalization, is studied on a sample of 25 transition countries during the growth period that started after 1994. The empirical model used in the paper attempts to explain the main factors of growth and why the outcome is so different among the countries in the sample. An average relationship estimated through a static panel data regression show the importance of external liberalization and privatization as determinants of growth rate. The strong effects of these two variables and the pace of their change affect growth after a two year lag on average. The size of the private sector share controls the overall effects of inflation and fiscal balance on growth. The study of the main determinants of growth is extended with the investigation of GDP levels among transition countries in a dynamic panel framework. The results show again the importance of external liberalization and private sector conditions as the driving forces of recovery. Internal liberalization as an important measure of structural reform does not appear to be a key factor for growth during the recovery period. These results do not agree with previous studies that include the early years of transition.
Keywords: transition economies, growth, structural reforms
JEL Classification Numbers: P24, P27, O57

17.00-17.15 **25. The Development of the Romanian Agriculture – Main Condition for Accession in Europe**
Lecturer ***EDUARD IONESCU***, PhD student, Faculty of Marketing and International Trade, "Spiru Haret" University, Bucharest, ROMANIA

Abstract

It is generally accepted throughout the market economies of the world that economic growth and development are the best secured through the promotion of international trade and the application of competitiveness in that trade. This view was the basis of the Uruguay Round Agreement which has confirmed WTO commitment to greater market orientation.
Romania has been traditionally an exporter of agricultural products, owning significant agricultural potential and relative comparative natural advantage in this field.
The analysis of the Romanian agricultural trade during 1990-2002 reveals a considerable change of Romania's position on the international agricultural markets, from net-exporter before 1990 to net-importer after, with a deficit worth over USD 4.6 billion in the last twelve years. This trends is due to dramatically decrease of agricultural production in the circumstances of ownership structural reform and increase of internal demand for high quality and diversified foods, which contributed to a low level of agricultural export and increase of agricultural import.

17.15-17.30 **26. The Conflict between Fiscal Control and Tax Policy**
Lecturer **Lăcrămioara Rodica Haiduc**, PhD, "Spiru Haret" University, Bucharest, Romania

Abstract
Every tax system mixes revenue and budget policy. Some provisions are in the tax system to implement traditional tax policy and should be judged according to criteria of taxation, while others provide preferences that intend to favor certain economic activities or to relieve personal hardships.

There are two views of tax expenditure measurement and preparation of expenditure budgets. The first might be considered the conventional view, the tax expenditure budgets contribute to fiscal transparency. According to this view, measuring tax preferences improves openness about government fiscal operation and gives the public a better chance of understanding the action of lawmakers.

17.30-17.45 **27. International Asset Pricing and Portofolio Diversification with Time-Varing Risk**
Professor **Dobre Ion**, Ph.D, ASE Bucharest
Professor **Badescu Adrian**, Ph.D, ASE Bucharest
Senior Lecturer **Chirita Mihail**, Ph.D, ASE Bucharest

Abstract
In this paper, we test a conditional version of the capital asset pricing model (CAPM) in an international setting, and analyze its implications for international portofolio diversification. First, we investigate both the cross-sectional and time-series restrictions of the model. Then we take the perspective pf an investor and use the estimated model to examine how the ex ante benefits of international diversification have changed in response to changing conditions in the international securities markets.

The methodology presented can be applied simultaneously to many assets and, at the same time, accommodate general dynamics of the conditional moments. The evidence supports most of the pricing restrictions of the model, but some of the variation in risk adjusted excess returns remains predictable during periods of high interest rates.

17.45-18.00 **28. The Role of Macroeconomic Politics Within Economic Globalization**
Assistant **Boghean Carmen** – Universitatea "Ştefan cel Mare" Suceava
Assistant **Boghean Florin** – Universitatea "Ştefan cel Mare "Suceava

Abstract
Macroeconomic politics emphasize the sum of measures taken by the state in order to influence and lead economic and social life, using proper means and techniques in a certain period as part of a national economy.

The administration of macroeconomic politics, from elaboration to their execution and then to the surveillance of their effects, cannot be conceived without taking into consideration the existence of a macroeconomic anticipation and coordination. The coordination of these politics on a medium or long term, the encouragement of the process of structural development, the remedies of some drawbacks and the constant lack of balance which were present on macroeconomic level, the necessity of having an entire vision, all these determined the appearance of those ideas, techniques and institutions that form the basis of macroeconomic plans and programmes.

The choice and application of different measures for macroeconomic politics should be very carefully taken, never forgetting the politics interference and the difficulty of their impact quantification.

18.00-18.15 **29. The Effects Setting off of the Monetary Policy Shocks on the Economic Aggregates**
Students **Milodin Daniel, Ramniceanu Ioana**, ASE Bucharest
Abstract

The importance of the monetary policy is reflected by the great interest in developing quantitative, monetary general equilibrium models of the business cycle.

The objective of this paper is to determine what it happens after an exogenous shock to the monetary policy.

We present possible interpretations of monetary policy shocks. After that, we will discuss inference about the effect of a monetary shock using the recursiveness assumption.

The main statistical tool used in the analysis is the Vector Autoregression (VAR).

For the case study we see what have happened with the Romanian monetary policy after the 1989, the year when it have passed from the planned economy to the market economy.

Keywords: Monetary Policy Shocks, Exchange Rates, Vector Autoregression, Recursiveness Assumption

JEL codes: E47, E52, C32, C51