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STUDIA UNIVERSITATIS BABEŞ-BOLYAI, OECONOMICA, L, 1, 2005

THE DEFICIT OF THE CURRENT ACCOUNT, PROPAGATED ECONOMIC CAUSES AND EFFECTS

IOAN L. NISTOR*, DIANA ZĂGAN-ZELTER*

ABSTRACT. **The Deficit of the Current Account, Propagated Economic Causes and Effects**. The deficit of the current account, main feature of the manifestation of the functioning of a national economy, presents a major interest in economic theory and practice. The study represents a research on the content of the current account, of the way and the factors which determine currency fluctuations and the apparition of the deficit. The forming of the current account deficit is researched in connection with the evolution of the national currency exchange rate and the appreciation degree of the currency compared with other currencies. The study emplasizes the positive and the negative effects of the current account deficit in the macrostabilization process and the role of macroeconomical policies in maintaining it at a desirable economic, financial, currency level.

The economic groth – obsessing idea of the general progress of society- is the result of the functioning way of the macrosystem through the continuity of input-output flows and through the influences generated by the the macroeconomic policies mix.

The history of society has demonstrated without doubt that the macrosystem hasn't functioned and it's not functioning perfectly. It is characteristic for its functioning how disequilibriums manifest themselves, as large or reduced, with different duration in time and in different periods of the economic and social evolution. The disequilibriums are the result of the lack of syncronisation between the interconnected activities in the macrosystem. Self-adjustment in its functioning is not perfect.

The degree of macrostabilisation is characterized by specific features, measured by relative measurements. Without doubt, the quintessence og macrostabilisation is represented by durable and sustainable economic growth, expressed in the rhythm or the rate of growth of the gross domestic product (GDP). The other features are: the general evolution of prices measured through the inflation rate; The degree of use of active population expressed through the unemployment rate; the budget deficit expressed through GDP amount; the deficit of the current account measured through its amount in GDP.

The economic theory and practice confirms without doubt the existence of connections, of direct and reversed links between the main features of macrostabilization. Also the econmic research demonstrates that these features do not manifest in the same way and with the same intensity in different periods of time.

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In developping national economies, where restructuring processes take place, determinig multiple propagated economic effects, the features of macrostabilization manifest more often in a contradictory way and in different degrees of disequilibrium.

Next we are going to see the characteristics, causes and effects of the disequilibrium of the current account.

The current account is part of the balance of payments where one can see the country's currency entries (cashings) and the outputs (payments), during a certain period of time (yearly, quaterly)for and from current operations, on formation sources. In the current methodology, in Romania the current account has the following content:

Current account (A+B+C) Credit Debit Balance

A. Goods and services:
- a). FOB goods (export-import)
- b). Services
  - transport;
  - tourism - travelling;
  - other services;

B. Incomes :
- from work;
- from direct investments;
- from portfolio investment;
- from other capital investments (interests);

C. Current transfers:
- public administration;
- other sectors.

So, the current account contains three sources of currency flow from the country. The most important source is the import and export of goods and services, practically in all countries. (in Romania in 2004 the export represented 75,57%, and the import 82,35% from the current account) (Source: the balance of payments BNR December 2004).

Services represent the second source, especially tourism, with big differences from country to country (in Romania services represented 11,58% from the credit of the current account and 10,58% from the debit of the current account, on 31 December 2004)

Transfers, from case to case, may represent an increasingly important flow of cashings and payments, especially for a country in which part of the workforce works abroad (in Romania in 2004 the cashings represented 11,54% in the credit of the current account and the payments 1,34% of the debit of the current account).

In a national economy with a low level of economic development, with major imperatives concerning economic and technologic modernisation, the foreign trade deficit, export-import, is inevitable. This deficit has objective causes which are complementary and subjective causes, generated by management practice and the inefficiency of certain macroeconomic policies.

The main cause is represented by the competitivity degree, regarding quality and quantity, of indigenal merchandises from the foreign market compared with that of developped countries. The attenuation of this economic disadvantage can be achieved by increasing managerial performance, which will ensure a superior utilization of national production potential and foreign trade potential. The increase of work productivity mainly through technical and scientifical progress, represents the sine qua non condition for reducing production costs, with effects propagated in the price and rentability of merchandises. At the same time the offer for the foreign market increases as well becoming more attractive and competitive with the export offer. However these are objectives to be achieved gradually, on medium and long term, that can and must determine a more rapid growth of exports.

In such a technical and economic environment the imports grow more rapidly than exports, determining the manifestation of foreign trade deficit.

The imports are the expression of aggregated demand – of capital goods, intermediary consumption goods and consumer goods – demand manifested on the home market. There are goods that are not manufactured in the country, or goods which are complementary and competitive in the home market mechanism, a demand which is stimulated by the globalization process of world market where tarrif barriers are reduced continously and rapidly.

From the evolution in different rhythms of the exports and imports results the foreign trade deficit of the country, which is identified with the currency disequilibrium of macroeconomy, a disequilibrium that determines profound propagated effects, both positive and negative. The appreciation of the foreign deficit is done not only through its absolute value (export-import) but also through the ratio between this difference and GDP, that is the amount that the foreign trade deficit has in GDP.

The foreign trade deficit can be diminishedor increased with other cashings and payments from current Incomes and Transfers. The deficit of the current account and its amount in GDP, in many cases (as in Romania) is more reduced than the trade deficit which results from import-export. If the Incomes position for developping countries is deficitary, the transfers position is in excess (the workforce exode to more developped countries is more argumented by financial gains, the salaries beinh higher than those from the native country as it is the case in Romania)

This is why the foreign deficit of the current account presents a great interest the state decisional bodies, which elaborate and promote macrostabilization policies. The dimension of the foreign deficit is also important for international financial bodies. Their interest is manifested practically when the respective country closes direct agreements for financing through loans and credits with these bodies, IMF, The World Bank etc.

Generally, a deficit of the current account of up to 5.5-6% from GDP is considered sustainable.For the state decisional bodies, especially under certain circumstances which are favourable to economic growth and to flat manifestation of other disequilibriums, the size of the current account deficit can reach and surpass even 7% from GDP without being considered alarming. The important things are the financing sources of the deficit, sources which are not subject to inflation such as: direct foreign investments, foreign privatisation of local capital, capital transfers etc. poate ajunge şi depăşi chiar 7% din PIB, fără a fi considerată ca fiind alarmantă.

In the macroeconomic policies promoted for the management of the current account it is very important the contribution of the two sectors, gouvernmental and non-gouvernmental at the emergence of the deficit. A reduced budget deficit, up to 1% from GDP, influences correspondingly the deficit of the current account up to 20-25%. Under these circumstances the deficit of the current account is determined by the non-governmental sector (that is the export-import disequilibrium of economic agencies) So the priority will be given to macroeconomic policies through which one can influence the dynamics of the foreign deficit in this sector. In these situations the fiscal-budgetary policies have a reduced effect in the foreign deficit. They remain however very important in other disequilibriums of national economy.

Strictly connected to the deficit of the current account is the evolution of **rate exchange** and the **purchasing power of national currency** compared with with the main foreign currencies.

Under the circumstances of the total conversion of the national currency, the exchange rate becomes completely free depending directly on the market game (which doesn't mean that the central bank won't interfere by buying and selling foreign currency). The exchange rate is the result of the ratio between currency offer and currency demand. So its evolution will be characterized by an obvious volatility, determined mainly by the evolution of foreign currency offer. If the foreign currency demand is conditioned, mainly by the import evolution, the offer is formed from several sources. While the cashings from imports have an ascending and relatively stable trend, the foreign currency entries from current transfers capital transfers, direct foreign portfolio investments, from privatisation, external loans and credits have a more oscilating evolution.

The evolution of the exchange rate influences the size of the current account deficit and directly the trade deficit (export-import). A more reduced exchange rate or a decreasing one will make imports cheaper. Their demand on the home market will increase. Making imports cheaper is a way of accelarating the technology-imoroving processes of production capacities. The same exchange rate won't stimulate the export, on the contrary it can influence it negatively, as slow growth or stagnation.

Exports shouldn't be corroborated and appreciated from the point of view of return only and directly with the rate exchange evolution. Exports should be regarded as an expression of competitivity oh the foreign market.

Competitivity on the foreign market is expressed directly through the selling price of exported merchandises. The price is the quintessence of competitivity (excepting circumstancial influnces)

It is also important to consider the internal export price. The influence of these two prices results from calculating the gross return rate for export = the complete price at export/the selling price in foreign currency on different markets. The lower this ration, the higher the return degree. The lower the GRR the more it means that one spends a quantity , a lower value of national work for a foreign currency unit. The same is for the transformation of the foreign currency cashed at export in national currency through the exchange rate manifested on the home market.

The evolution of the exchange rate influences the purchasing power of national currency. The exchange rate expresses with how many national currency units one sells and buys a foreign currency unit. A relatively stable exchange rate

expresses tha mantainance of the national currency purchasing power. A decrease of the exchange rate means an increase of the purchasing power of the national currency compared to foreign currencies.

The national currency appreciation represents a positive monetary, financial and economic phenomenon in the evolution of macroeconomy. It is positive because it influences the deflationary process, that is a slower evolution of prices, the decrease of interest rates, the stimulation of investments through the acceleration of the process of restructuring the national economy in non-performant sectors.

At the same time, the national assets increase their market value compared to the international market prices, including GDP value in foreign currency.

The volatility of the exchange rate is a signal of the strengthening of national currency for short and medium term and a reflection of more performant and effective monetary policy. The fluctuations of the exchange rate determine the increase of trust in the national currency and a decrease of foreign currencies. The positive effects will be propagated also in the way resources are allocated and in reducing the cost with external debt.

The appreciation of the national currency as a result of foreign currency offer in excess on the home market, which results from non-commercial operations (especially capital transfers, speculative transfers) also attracts negative economic effects. The excessive strengthening of the national currency, at least for a short period of time, influences negatively the export capacity of economic agents and stimulates the import, against indigenal production.

There is also the alternative of a more active interference of the central bank on the financial and currency market for sustaining the rate of exchange and the attenuation in excess of the appreciation of national currency, by buying foreign currency. However buying foreign currency means a monetary issue which has to be sterilized not to propagate in inflation. The monatary sterilization has obvously its costs. On one side an exaggerated growth of the national reserve, that is over the optimum standard, provokes other negative financial and economic effects.

Maintaining the exchange rate through repeted interference, which is weaker thab the one resulted from the market game, stimulates the foreign currency entries. The exchange rate would get continously appreciated, offering big incomes to speculants. We shouldn't also neglect the inflationary effect of sustaining the exchange rate in an administrative way, by stimulating the exports.

It results that according to economic theory and practice, we cannot combine harmoniously a fixed exchange rate, the free movement of the capital and a total independence of monetary policies. This is why the monetary policy has priority compared to the exchange rate that becomes free.

The free exchange rate, with a high degree of volatility and the appreciation of the national currency must be sustainable, and shouldn't manifest in a n area with large variations.

The current account deficit can become chronic, as a consequence of the excessive growth of domestic demand, which is sustained by the appreciation of the national currency and the descending trend of interests, which, on their turn, sustain the expension of the consumer and the investment credit. The flexibility of the demand is the convergent result of credit expension, the growth of direct and

indirect salary incomes and of other money incomes, of large capital entries in different ways on the home market.

The attenuation of the current account deficit is possible by promoting the macroeconomic policies mix: monetary, fiscal, for salaries, social and economic. The monetary and fiscal policies are prioritary because through them one can control the amount of liabilities and the general evolution of prices, the diminuation of quasifiscal deficits and the acceleration of the restructuring process. Through their effect we'll stimulate competitive xeports and attenuate imports, which will lead to a limited foreign deficit that will sustain a durable economic growth.

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LE RÔLE DU CONTRÔLE DANS L'EXÉCUTION DES STRATÉGIES

ANCA BORZA*, MIRELA POPA*

ABSTRACT. The Role of the Control in the Implementing Process of Strategy. As a final stage of strategic management proces, the control gives the certainty that " the things are going well" in the implementing process of strategy. The control activity has to be continous and sistematic and to consider the following elements: performance standards, measurement technics and action modalities. In this article the authors present the special role of the control in the strategy implementation process, through three different stages: objectives control, incomes control, strategy control. The particular selection of the strategic management system may lead to results that vary from the extrem of rapid succes to failures from consens sometimes hard to identify. At the end of the article the authors present the main mistakes made usually in the implementation of strategic management process and the role of the permanent and periodical control in the reduction of errors.

Pour obtenir un profit à travers le niveau moyen, les sociétés doivent s'adapter rapidement aux changements en ce qui concerne l'aspect concurrentiel. Cette adaptation nécessite une flexibilité stratégique. *La flexibilité stratégique* constitue un ensemble des compétences, utilisées pour répondre aux differentes demandes et opportunités existantes à côté d'une atmosphère concurrentielle dynamique et incertain. Alors, les sociétés doivent résister à l'incertitude et au risque [1, p. 21].

Constituant l'étape finale de la gestion stratégique, le contrôle nous assure que "les choses vont bien"pendant le procès d'exécution, nous assure de l'existence de la flexibilité stratégique au niveau de l'organisation. Il faut que l'activité de contrôle se déroule continuellement et systématiquement et il faut qu'on fasse référence à plusieurs éléments: les standards de performance (quantité et qualité), les techniques de mesure et évaluation, les mesures collectives qui s'imposent, les modifications nécessaires de la stratégie actuelle, l'élaboration des stratégies, etc.

Puisque la Gestion Stratégique est fortement orientée vers le futur et le future signifie des changements continus, on observe que les modifications stratégiques sont imminentes. Parfois, les progrès réalisés dans l'application de la stratégie sont, en ce qui concerne certains domaines, plus rapides que ceux anticipés à l'aide des plans stratégiques et des autres, plus lentes. Le contrôle stratégique suit l'emphase et l'application des mesures correctrices, quand existe un décalage entre les réalisations et les standards. Par l'évaluation de la stratégie, on suit l'appréciation globale des effets de la stratégie et le niveau d'efficacité pour le développement de la société.

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La priorité d'exécuter les stratégies concerne plusieurs aspects :

- des discussions régulières avec les subordonnées qui ont des responsabilités-clef dans le procès du changement stratégique ;
- des rapports écrits, périodiques, concernant l'exécution des changements stratégiques; des connexions indirectes avec les clients ;
- l'obtient des informations régulières en ce qui concerne les réactions des sociétés concurrentes ;
- les idées fournies par des employés faisant référence aux possibilités d'amélioration du procès de changement stratégique;des observations directes.

A cause de son rôle important, le contrôle doit être assuré constamment, faisant référence à plusieurs étapes:

(1) Le contrôle des objectifs;
(2) Le contrôle du profit;
(3) Le contrôle des stratégies;

1. Le contrôle des objectifs

Pour les objectifs quantitatifs, on peut utiliser trois techniques de contrôle :

a. L'analyse des variations (des différences)
b. L'analyse des corrélations (des proportions)
c. Les budgets

a. L'analyse des variations consiste en la comparaison des standards établis avec les résultats actuels obtenus et l'identification immédiate des différences. D'habitude, cette technique est utilisée en ce qui concerne les objectifs qui font référence à l'agrandissement du marché.

Par exemple, un objectif d'agrandissement du volume des ventes peut être analysé chaque mois, pour adopter des mesures correctives quand'on enregistre des valeurs négatives et l'accomplissement de l'objectif établi pour une année.

Les standards représentent des éléments de comparaison, utilisées pour évaluer les plans ou les performances. Les objectifs, les politiques, les procédures et les budgets peuvent constituer des standards auxquels on rapporte les performances réalisées ou celles préconisées. Les standards utilises dans l'activité pratique sont de plusieurs types [3, p.319]:

1. Des standards physiques – sont utilisés pour les opérations qui s'expriment à l'aide des unités quantitatives (des consommations matérielles, le nombre des employés, des unités énergétiques, les résultats obtenus, etc.). On remarque l'existence des situations quand les unités quantitatives peuvent refléter des aspects qualitatives : la durabilité d'une tissue, l'intensité d'un colorant, etc.)

2. Des standards des coûts – sont des unités monétaires indiquant la dimension de la valeur des consumations des ressources pour la réalisation de certains opérations (des coûts matériels, salariaux, des coûts unitaires, etc.)

3. Des standards du capital – montrant le capital investi et sont présentés comme des ratios de type: profit provenu des investissements, l'efficacité de l'utilisation des actifs immobilisés, des actifs courants rapportés aux passifs courants, la dimension et la circulation des stockages, etc.

4. Des standards de profits – résulte de la représentation de la valeur du volume des ventes : la valeur moyenne des ventes rapportés au nombre des clients ou des employés du département qui s'occupe des ventes, la valeur des reçus, etc.

5. Des standards concernant la réalisation des programmes - fait référence aux plafonds des dépenses qui peuvent être effectuées pour l'accomplissement de certains programmes amples et complexes d'adoption de nouveaux produits/services et technologies, de modernisation des équipements existants, de l'amélioration du niveau qualitatif des produits/services, etc.

6. Des standards intangibles – qui ne sont pas exprimés à l'aide des unités physiques ou monétaires, donc à l'aide des termes quantitatifs, d'ici résultant des difficultés appréciables d'expression et d'utilisation. On mentionne quelques standards de ce type : l'amélioration de l'image de la société en ce qui concerne le marché, l'agrandissement du degré de fidélité des acheteurs pour les produits/ services de la société, etc.

b. *L'analyse des correlations.* La réalisation de chaque objectif dépend d'une série d' autres réalisations. Les conditions qui influencent l'accomplissement d'un objectif sont, en général, calculées annuellement et elles peuvent être comparées avec les standards. Puis, il faut réaliser l'investigation des causes et l'adoption des actions correctives.

Des exemples de telles corrélations (proportions) peuvent être : le salaire moyen (le fond total des salaires/le nombre d'employés), la liquidité (des actifs courants/ des passifs courants), le niveau de stockages (stockages/ ventes), l'utilisation des actifs (le volume des ventes/ le totale des actifs), la profitabilité (la masse du profit/ les actifs totaux), etc.

Le contrôle stratégique doit permettre l'identification des problèmes générés des changements et la correction du cours des actions à l'aide des performances intermédiaires, qui s'enregistrent successivement en ce qui concerne le procès de l'application de la stratégie et, ultérieurement, dans le procès de fonctionnement intégral de la société, à l'aide de la nouvelle stratégie. Lorsque les décalages des performances dépassent certaines limites, on adopte des mesures correctives pour le rétablissement de la course des actions.

Le système de contrôle stratégique impose l'émission "des signaux d'avertissement», qui préviennent les changements qui seraient réalisés, donc qui permettent la détection des modifications signifiantes des variables. Pour accomplir cette tache, il est nécessaire d'établir quelques points intermédiaires de contrôle, d'une forme des termes d'exécution, de la réalisation de telles performances, etc., qui permettent la constatation des progrès faits et des difficultés rencontrées visant l'application de la nouvelle stratégie.

c. *Les budgets.* Le budget représente une définition de tous les plans ultérieurs de la société, en termes financiers. En ce qui concerne la comptabilité financière, le sens des budgets est celui de limiter les dépenses, lorsqu'on fait référence à la gestion stratégique, leur rôle est d'assurer les ressources nécessaires pour l'exécution de la stratégie, pouvant être utilisés comme technique de contrôle.

Dans la littérature de spécialité, on rencontre plusieurs types des budgets:

- des budgets de capital, utilisés pour la distribution des ressources financières selon les divisions ou unités stratégiques d'affaires (pour l'acquisition des machines,

des outillages, des installations, pour la formation de stockages, pour les réparations capitales, etc.) ;

- des budgets des ventes, utilisés pour la réalisation des prévisions liées du volume des ventes, faisant référence aux objectifs d'agrandissement;

- des budgets des dépenses, qui détaillent les coûts anticipés, impliqués dans l'exécution des stratégies opérationnelles;

- des budgets pour les ressources humaines, utilisés pour planifier les dépenses nécessaires pour la conscription, la sélection, la formation et la spécialisation du personnel et pour des différentes compensations accordées aux employés;

- des budgets cash, qui constituent une prévision des reçus en liquidites et des paiements cash;

- des budgets de balance, qui réunissent des prévisions d'actifs, des passifs et du compte de capital, pour une telle période.

A cote de ces types des budgets exprimés en termes financiers, on peut considérer l'existence de certains budgets en termes non financiers , c'est-à-dire des budgets de temps, de l'espace, des matériaux, de production, qui expriment des demandes de temps, de l'espace, etc.,pour une telle période.

D'habitude, un budget est établi pour un tel niveau des ventes et pour un tel niveau des dépenses de ressources. Puisque la flexibilité des prévisions budgétaires est une demande de l'agrandissement de l'efficacité et de la réalisation d'une bonne planification, on doit utiliser des budgets flexibles.

Le budget flexible est *celui qui définit les plafonds de dépenses ou du volume, d'une activité de la société, pour les niveaux variables des ventes ou d'autres résultats* [3, p.328]. L'utilisation des budgets flexibles offre les meilleurs résultats lorsque le volume des ventes ou des autres liquidations peut être anticipé avec une exactitude suffisante et à long terme, de façon qu'on ne doive pas opérer des changements fréquents du niveau des dépenses.

Nous proposons l'utilisation "des budgets de base zéro », qui peuvent être appliqués dans le domaine des activités de recherche-développement, finances, marketing, personnel.

Le budget de base zéro *consiste dans la division des plans et des programmes de la société en "paquets"des objectifs, activités et ressources spécifiques, et, puis, le calcul des coûts pour chaque paquet, commençant par zéro* [3, p.329]. L'avantage de l'utilisation de ce type de budget est qu'il oblige les directeurs qui établissent les nouveaux programmes et les coûts afférents , sans tenir compte des réalisations antérieures, mais en fonction des conditions anticipés, d'accomplissement des programmes respectifs.

Les budgets alternatifs représentent *un autre type de budget variable, qui consiste en la modification d'un budget variable, de manière qu'il soit valable pour un grand nombre d' alternatives et non pour un nombre réduit de situations* [3, p.330]. Par exemple, un budget variable peut être établi à l'aide des variantes pour le haut niveau d'intensité des opérations, pour un niveau moyen et pour l'un inférieur. Aux certaines périodes établies, on indique aux directeurs de différentes unités ou départements, quels budgets seraient utilisés pour les actions de planification stratégique et de contrôle.

Un dernier type, résulté de la flexibilisation du système des budgets utilisé par la société, est un ***budget-programme,*** *qui constitue un moyen qui offre des possibilités de distribution systématique et efficace des ressources, de sorte qu'on répond à l'objectif du programme* [3, p.331]. Faisant référence aux objectifs bien établis et aux programmes destinés pour assurer leur accomplissement, les budgets-programme ne présentent pas l'insuffisance commune de tous les budgets, d'être établi pour les périodes qui correspondent aux rapports comptables réalisés pour chaque mois, chaque semestre, chaque année, quand, en réalité, l'accomplissement des objectifs établis dure des périodes différentes de ceux mentionnées, pour lesquels ont été élaborés les programmes respectifs.

En chaque société existe la possibilité d'établir des objectifs qualitatifs, à côté de ceux quantitatifs, telles: la suprématie en ce qui concerne le marché, la qualité des services pour les clients, la responsabilité sociale, etc. On ne peut pas utiliser des chiffres en ce cas, le contrôle étant réalisé à l'aide de la perception et du jugement administratifs. C'est-à-dire, on réalise une comparaison "mentale"des résultats obtenus avec les standards anticipés par les objectifs. En ces cas, le degré de subjectivisme dans l'appréciation du succès, est agrandi.

2. Le contrôle du profit se réalise à l'aide des budgets ou d'analyse des corrélations.

Les budgets offrent une série de variables anticipés (des coûts fixes, des prévisions concernant les ventes, des projets qui visent les profits qui doivent être réalisés, etc.). Les profits obtenus seraient comparés avec ceux anticipés dans les budgets, on identifiera les causes et les différences existantes et on adoptera les mesures correctives appropriées.

Le contrôle peut être effectué s'il existe plusieurs budgets qui visent les niveaux de profit prévus pour les objectifs et les stratégies. Chaque division/unité stratégique d'affaires surveillera le profit ou le manque du profit, leur niveau pouvant être suivi en ce qui concerne un produit ou un segment du marché.

Pour que cette technique budgétaire soit efficace, il faut qu'il existe un système effectif de communication et intégration. Les influences détaillées concernant les ventes/ coûts doivent être comuniquées verticalement et horizontalement.

En cas de l'analyse des corrélations, on analysera les objectifs liés à la profitabilité. Les plus importantes proportions, concernant la profitabilité, sont : le revenu au capital embrayé (profit/ capital embrayé), le revenu en actifs ;

Une catégorie importante d'instruments utilisés dans le contrôle stratégique et dans l'évaluation stratégique représentent les ratios financiers, établis à l'aide des informations financières publiées, dans les limites permises de système de comptabilité existant.

Les principaux ratios financiers, fréquemment utilisés, sont:

- profit net/ actifs totalaux;
- gains/ actifs totalaux;
- valeur nette/le volume des ventes;
- le volume des ventes/le capital circulant;
- dettes/capital total;
- dettes/actifs totalaux.

Lorsqu'on compare les proportions, il faut qu'il existe la certitude qu'elles ont été déterminées à l'aide d'une base commune. Après l'identification des variables existantes entre les niveaux anticipés et ceux realisés, on adopte des actions correctives.

3. Le contrôle des stratégies.

Comme résultat du contrôle des objectifs, on peut élaborer des conclusions qui nécessitent la modification des stratégies. Le contrôle des stratégies est de nature qualitative, étant réalisé à l'aide du jugement administratif. Il apparait, donc, le problème de la subjectivité.

On peut suggérer plusieurs critères d'évaluation dans le contrôle des stratégies actuelles ou dans le contrôle de leur exécution:

- la compatibilité de la stratégie de différents niveaux organisationnels avec la mission et les objectifs établis;
- la compatibilité avec l'environnement;
- l'intégration dans les ressources disponibles;
- la minimalisation du risque impliqué;
- la concordance entre la stratégie et l'horizon de temps anticipé;
- l'applicabilité, la viabilité;

Dans le contrôle des stratégies, il faut qu'on fasse référence aux questions, telles: la stratégie correspond aux valeurs et attents administratives, assure la stimulation de l'effort/ engagement organisationnel, participe à l'exploitation des opportunités offertes par l'environnement des affaires, ceux impliqués dans le procès de la gestion stratégiques entendent l'impacte de la stratégie, etc.

Pour l'évaluation efficace des stratégies, un rôle très important a la motivation des directeurs dans le déroulement de ce procès de contrôle.

La principale technique de contrôle de la stratégie est le bilan stratégique de contrôle, le but principal de celui-ci étant l'évaluation anticipé du succès dans une telle période de temps. En essence, ce bilan consiste en une série des questions, telles:

a. Pour la mission:

- Est-elle satisfaisante la réalisation de la mission?
- Si la réponse est non, quelle correction doit être faite?
- Est-ce que la mission est appropriée pour la période suivante?
- Est-ce qu'elle doit être étendue ou restreinte?

b. Pour les objectifs:

- Quels objectifs organisationnels/ des affaires sont réalises correctement du point de vue qualitatif et quantitatif?
- Quels objectifs organisationnels/ des affaires correspondent aux conditions externes et internes?
- Quels sont les objectifs des affaires qui contribuent à la réalisation des objectifs organisationnels?

c. Pour les stratégies:

- Est-ce que les stratégies organisationnelles/ des affaires correspondent à la mission de la société?
- Est-ce que les stratégies sélectionnées ont du succès dans la réalisation des objectifs organisationnels ?

Quel que soit le niveau on exécute le contrôle, on peut enregistrer plusieurs problèmes : le mode déficitaire de collection des informations externes et internes, la communication insuffisante, la résistance quand on réalise le contrôle,l'autorité excessive de celui qui contrôle, des prévisions budgétaires non réalistes, un système incorrect des récompenses et punitions, le déplacement du but du contrôle de objectifs/ résultats vers la manière de déroulement du procès des contrôle.

L'évaluation stratégique est une opération qui peut être favorable ou dé favorable pour l'option de la stratégie effectuée antérieurement. L'évaluation stratégique peut se dérouler seulement quand la société la désire vraiment ça, étant préparée de combattre certaines conclusions dé favorables.

Nous accentuerions, de nouveau, le rôle important que joue l'existence d'un système informationnel approprié pour conduire, qui doit offrir aux directeurs des informations complètes, relevantes concernant les résultats de l'application de la stratégie.

La pratique du contrôle stratégique et de l'évaluation stratégique s'inscrit, donc, dans les coordonnés de l'administration, centrée sur l'établissement et l'identification des situations dans lesquelles les décalages des performances apparus, nécessitent l'intervention du directeur, situé à un tel niveau hiérarchique dans la société, lui restant inactif lorsque les décalages s'inscrivent dans les limites établis pour le niveau établi.

Pour la plupart des directeurs, l'évaluation stratégique signifie l'appréciation des performances enregistrées après l'achèvement de l'application de la stratégie (le niveau du profit, le rythme de développement de la société, etc.). Une telle vision simpliste est difficile parce qu'elle fait référence à un élément central de chaque stratégie: l'influence des facteurs-clef, qui déterminent les performances courants et les perspectives de la bonne fonctionnalité de l'aspect économique - financier de la société et de son développement. Alors, l'évaluation stratégique doit se finaliser avec des conclusions claires en ce qui concerne les éléments majeurs [2, p.359]:

- la nécessité des objectifs de l'affaire;
- le niveau d'appropriation des plans stratégiques et de la stratégie organisationnelle;
- le résultat enregistré après l'application de la stratégie s'ils confirment ou infirment les suppositions essentielles.

Un instrument utile pour l'évaluation stratégique a été proposé par la société internationale de consultance McKisney and Company [4, p.69]. La délimitation de ce cadre a été realisée considérant que la valeur d'une telle stratégie est donnée non seulement de son contenu, mais aussi de son degré d'applicabilité.

La culture de la société doit être analysée dépendant des variables suivantes:

- la stratégie de la société;
- la structure de la société;
- le style de gérer;
- le staff existant;
- les habilités du personnel de la société;
- les systèmes spécifiques de la société;
- les valeurs communes partagées sar le personnel de la société;

En ces conditions, une stratégie connaît le succès si les sept variables, qui définissent la culture de la société, s'harmonisent avec elle. La contribution majeure du cadre d'analyse proposée consiste dans l'accentuation de la dépendance d'une stratégie de variables qui définissent la culture de la société.

L'adoption du système de gestion stratégique peut conduire aux résultats qui s'étalent dans une gamme vaste qui augmente d'une extrême des succès à celle des échecs.

Nous considérons que les principales **erreurs** faites, sont:

1. *L'incapacité de raisonner stratégiquement* : la tendance de continuer de la même manière, l'acquis difficile de l'état d'esprit nécessaire pour le raisonnement stratégique, l'ignorance des informations utiles, le manque d'expérience pour effectuer des jugements prospectives,etc.

2. *L'insuffisante adaptation des mécanismes et procédures spécifiques pour la planification à long terme et du système informationnel de la société, les demandes spécifiques du système de la Gestion Stratégique*. La planification à long terme doit qu'on se concentre sur les problèmes majeurs, vraiment stratégiques, de l'activité ultérieure de la société et de ne pas être accablé des demandes excessives de rapporter et des projections ultérieures pour les éléments d'une signification mineure.

3. *L'entrainement inadapté des niveaux administratifs de la société à l'effort de la gestion stratégique.*

4. *L'utilisation non appropriée des ressources distribuées par la planification*, déterminée de ce que la plupart des directeurs ont une conception erronée et ils considèrent que, si la planification a été faite correctement, l'utilisation appropriée des ressources est réalisée d'une manière indépendante.

5. *La prépondérance accordée aux résultats enregistrés pour un terme court ou moyen, en rapport avec ceux réalisables à long terme.* On ajoute les incertitudes spécifiques du procès de gestion stratégique, déterminées par les changements imprévisibles.

6. *Les changements imprévisibles du cadre législatif, d'une incidence en ce qui concerne l'activité de la société*, qui l'obligent d'opérer des modifications, plus ou moins signifiantes, dans les mécanismes de son fonctionnement, dans la modalité de procurer et de distribuer les ressources ;

7. *Les changements produits en ce qui concerne les préférences des clients avec l'apparition d'une innovation d'ampleur ou d'apparition d'une nouvelle tendance*. La connaissance des acheteurs, de leur comportement, de leur nécessités, préférences sont des demandes complexes qui sollicitent des efforts considérables pour être accomplis. La prévision des changements qui seraient produits est extrêmement difficile.

8. *Le lancement de nouveaux produits/services des autres sociétés concurrentes.* La prévision de l'apparition des ces situations est difficile, sinon impossible, parce que chaque société garde strictement son succès.

9. *L'apparition de »nouveaux venus"ou la modification des domaines d'activité de certains concurrents importants*. Les nouveaux venus sont des petites sociétés, qui forcent l'entrée à l'aide d'une innovation d'ampleur ou des sociétés

grandes qui décident d'aborder de nouveaux domaines d'activité, leur avantage constituant la force financière redoutable.

10. *Les événements climatiques augmentés d'une période considérable* : sécheresse, inondations, des températures extrêmes, etc., peuvent affecter l'activité de la société quand se déroulent dans des conditions qui dépendent du climat (agriculture, transports, forages, extractions, etc.)

"L'écoute" attentive et permanente de l'atmosphère des affaires, qui constitue une composante primordiale de la gestion stratégique devient, donc, un moyen de corriger les imperfections de sa pratique.

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ACCOUNTING AND TREATMENTS WITH IMPACT ON THE DEVELOPMENT OF MOVABLE ASSETS ACCOUNTING SYSTEM

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ABSTRACT. Accounting and Treatments with Impact on the Development of Movable Assets Accounting System. This article presents the main accounting references regarding the initial recognition and evoluation of movable assets their forward recognation and the de-recognition of movable assets in financial situations. The accounting references treated here belong to some well-known accounting, systems, i.e. the Anglo-Saxon system with the presentation of the American accounting norms and the continental accounting system with the presentation of the French accounting norms.

In order to ensure a harmonization and/or a convergence regarding the evaluation and acknowledgement of investments on the international level, the norming activity directed its attention towards the accounting treatment of investments, between whose limits they underwent the activity of implementing the international and European laws.

The parameters or the limits of developping the accounting system of movable assets in the context of investment activities on the capital market consists in the following elements:

- *The initial acknowledgement and evaluation of investments in movable assets*
- *Forward evaluation of investments in movable assets*
- *The evaluation of movable assets at the moment of assignment and their de-acknowledgement*
- *Entering into accounts the investments in movable assets .*

The initial acknowledgement and evaluation of financial investments

The acknowledgement of movable assets represents the process of incorporating in the balance sheet or in the profit and loss account the movable assets that resulted from the investment.

The acknowledgement of investments in movable assets must be looked upon from two perspectives:

- *the acknowledgement itself*
- *the acknowledgement of the expenses related to the investment*

Regarded as asset accounting structures, the movable assets are acknowledged in the balance structures when the following conditions are fulfilled:

1. *it is possible to achieve a future economic benefit by the enterprises*
2. *the asset has a cost or a value that can be evaluated in a credible way*

According to International accounting standards, an enterprise must acknowledge a financial asset in the balance when and only when it becomes part of the contract stipulations of the financial instrument.

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"*Financial instruments are represented by any contract that generates a finacial asset for an enterprise and a financial debt or a capital instrument for another enterprise.*" [2,PAG.192].

The acknowledgement of movable assets takes into account the following aspects:

- the acknowledgement moment;

✓ *The initially acknowledged value respectively the evaluation terms at the moment when the movable assets entered the patrimony*

The structure of the balance where the investment is acknowledged

The acknowledgement moment

IAS 39 presents two alternatives regarding the acknowledgement of financial assets in the respective balance

- The date of transaction;

✓ *The date of settlement*

"*The acknowledgement of an acquisition or a normal selling (regular way)of financial assets must be done using either the principle of registration according to the date of transaction or the date of settlement »*" [2,PAG.192].

The market operator (the investor) can choose any of these moments with the specification that he must comply with the principle of the permanence of the ackenowledgement method.

The date of settlement as an acknowledgement principle presents additional arguments for acknowledgement at least from the following points of view :

- The cash/payment flows for the investments are certain

- all the transaction costs can be evaluated

- you can fulfil the property transfer respectively the control over the movable assets the date of transaction can be accepted as an acknowledgement date in the situation in which the investor has advanced the sum necessary for the transaction in the account of the investment services company which facilitates the transaction, without having any doubts regarding its fulfilment. In the case of the transactions fulfilled through public bids the acknowledgement is done at the date of settlement.

The initial evaluation of investments in movable assets

The initial evaluation of investments in movable assets is done at cost or at the right value of the consideration that is offered which includes also the transaction costs. The initial evaluation is associated with the evaluation which is made when the movable assets enter the patrimony.

The international accounting references treat differently the evaluation of movable assets, as follows:[1,PAG.272]:

✓ The anglo-Saxon accounting regulations, respectively the International Accounting Standards alborated by IASC and the American accounting norms elaborated by FASB register the movable assets at acquisition price ;

✓ According to these norms the date of registering is the date when the respective contract was registered.

✓ The American norms FAS (Financial Accounting Standard) do not present detailed information regarding the accounting of each type of security when entering the patrimony

✓ the accounting regulations from France which are representative for the continental accounting system, stipulate the registration of securities at the acquisition price, from which they deduce the expenses linked to their acquisition. The fiscal element is the factor with major influence on the evaluation terms. The incorporation of the expenses linked to acquisition are accepted only for group accounts.

✓ In Romanian accounting, the evaluation of movable assets when entering the patrimony is done like this:

✓ *The financial immobilizations acknowledged as assets are evaluated at the acquisition cost or the value determined by the acquisition contract.*

✓ *The additional expenses regarding the acquisition of financial immobilizations is registered directly in the exploitation expenses of the exercise. When entering the enterprise the placement titles/securities are evaluated at the acquisition price, by which we understand the buying price or the value established according to contracts.The additional expenses of placement titles, such as similar expenses, are registered directly in the exoenses of the exercise.*

✓ From the accounting treatment regarding the registration of movable assets in the patrimony in Romania we can formulate the following conclusions:

✓ The *evaluation and acknowledgement of movable assets through a strict interpretation is done at the acquisition price established on the basis of contracts*

✓ *The acknowledgement of the other components of the cost, respectively additional expenses, is done in the profit and loss account in the result of exploitation.*

✓ In the context of the movable assets accounting system, the terms of their acknowledgement is done in the frame of financial expenses and implicitly in the financial result associated to each category of financial investments

✓ The arguments for supporting this approach are the following:

✓ *The nature of the investment activity in movable assets is esentially a financial one;*

✓ *The necessity and the opportunity of calculating some indicators for calculating the cost of financial investments and their return*

✓ *Developping certain components of financial situations for three activities: exploitation, financing investments based on detailing each component.* **The balance structure for acknowledging the investment in movable assets**

✓ The terms of initial evaluation, as those of other moments as well, are influenced by the management of the portfolios of movable assets from the owning company.

✓ By the management of movable assets portfolios we understand stabilizing the investment horizon, the selection of movable assets from the market, establishing the proportions in which they are going to be integrated in the portfolio and then monitoring the evolution of the selected titles as well as the permanent adaptation of the portfolio.

✓ The investment horizon is the most influencing parameter upon the association of investments in movable assets to balance structures, separating them into two categories:

- *Financial immobilizations*
- *Placement titles*

In order to emphasize the structural models for approaching the investments on the capital market we must present the classifications associated to different systems of accounting norms.

IASC defines placement as being an asset owned by an enterprise which is meant to generate benefits because of:

Obtaining incomes (interests, rents, dividends)

The appreciation of capital or the apparition of other profits such as those from commercial relations

Placements can be divided into two categories:

1. short-term placements achievable in a year time

2. long-term placements according to IAS 39, the classification of financial instruments is made also according to the management model and the investment policy respectively according to the purpose for owning and using financial instruments (the movable assets are a particular category of these)

Thus we identify the movable assets, according to IASC classification in the following categories [2,PAG 95]:

- *Movable assets owned for the purpose of transactions, are those movable assets (shares, bondsand derived instruments) acquired for obtaining more value as a result of price changes or the commision policy of the facilitators The investments kept until maturity represent those movable assets with fixed or determined payments or fixed maturity, for which the owners have the intention to keep them until maturity*
- *In this category there classic bonds with fixed maturity without clauses of anticipated redemption*
- *The loans and debts created in the enterprise are financial assets created by the enterprise with the purpose of providing money, goods or services directly to a debtor, others than those initiated with the intention of being sold immediately or for short-term which must be classified as being retained for transactions. The movable assets are not in this category.*
- *The financial assets available for sale are those assets which are not*
- a) loans and debts generated by the enterprise
- *b) investments kept until maturity*
- *c) financial assets owned for transactions*
- In this category we can find treasury shares or hybrid bonds with redemption clauses.
- The american norm F.A.S 115 doesn't define explicitely the placement title/security. It defines however the following categories:

1. The debt titles/securities as being all the titles/securities which emphasize the existence of a debt right that the investor has upon the issuing firm. These are especially bonds, treasury vouchers, negotiable debt titles, different categories of shares

2. Titles/securities which are specific for own funds (capital titles) as being titles which give the right to:

- obtain devidends from owning part of the capital of an enterprise (shares, preferred shares and other types of capital)
- *cashing in a fixed sum established in advance (buying options)*

In the French accounting system, P.C.G. defines placements in the following way:

- immobile titles or financial immobilizations respectively the titles acquired with the intention of being kept until maturity or for a long time or which cannot be sold immediately

- placement movable assets respectively the titles acquired after selling them in short time

- In the Romanian accounting system, investments have been grouped after the French model in financial immobilizations and placement titles, their development following the development of the capital market, the law changes regarding the capital market and the approaches for accounting harmonization. The grouping criteria for these ones are still vague and insuffiviently explained in specialised literature from our country. We consider that grouping in the two categories must take into account two aspects:

- *1.The acknowledgement criteria in balance structures*
- *2.The date of acknowledgement;*

Further evaluation of investments in movable assets

In the further evaluation of movable assets we identify at least two moments respectively the evaluation at the patrimony inventory and at the moment when they are out of the firms'management.

The further evaluation is made under the incidence of two big categories of factors:

1. Factors deriving from the functioning mechanism of the capital markets

2.*Factors deriving from the accounting treatment of investments in movable assets*

The acknowledgemnt and further evaluation of financial instruments is conditioned by the existence of certain functional parameters of the capital market such as:

The existence of permanent quatations for movable assets

Continuous evaluation of rating agencies on the issuers

The further acknowledgement and evaluation is made in the terms of the right value which are determined by referring to the market price. "The norm IAS 39" stipulates that in the following cases the right value can be evaluated in a credible way:

- An instrument for which there is a price quotation published on an active market of the respective instrument

- *A debt instrument which was quoted by an independent rating agency and whose flows can be estimated in a reliable way*

- *A financial instrument for which there is a proper evaluation model and for which tha data from this model can be calculated in a reliable way.*[3,PAG 177]*;*

3. The accounting treatment of investments in movable assets takes into account their grouping in homogeneous categories according to duration, the intention of the leaders and the magement policy on the capital market, as well as the incorporation treatment of the different results at the moment of further evaluation compared to the value acknowledged initially.

The accounting treatment of financial investments in movable assets is made differently in the frame of accounting norming at international level:

1. In USA the accounting treatment of this investments is the object of the norm FAS 115 (Financial Accounting Standard).

The norm FAS 115, published in 1993, treats investments as having appeared as a result of granting credits or as an instrument of own funds. It is replaced yearly by FAS 12 which treats the different negotiable titles. The equivalent titles are treated in specific norms.

Concerning the classification of titles we have to specify that there isn't any norm which would treat participation titles in particular. Either they are consolidated, equivalated or they represent shares or other instruments of own funds, they are considered by FAS 15 as being part of the category "other placement titles" (hold for sale).

In the international accounting norming frame stipulated in IASC, the standard IAS 39 "financial instruments" groups the movable assets into two large categories:

- short-time placements, immediately achievable on the market, whose owning period shouldn't overpass a year

- long-term placements

In Romania, the classification of movable assets took over the french model according to owning duration, after the introduction of the new accounting system in 1994. In the development of the accounting harmonization process regulated by OMFP 94/2001 for these investments there were used classifications according to the interest and the owning perimeter of movable assets.

The further evaluation of the movable assets refers to the following moments:

- evaluation at inventory moment*;*

- evaluation at the end of the financial exercise

The evaluation at inventoryis presented as an independent moment which doesn't coincide with the moment of ending the financial exercise when it is achieved in the following moments

- on the occasion of events with major impact upon the capital market: mergers, splits, opening firms

- on the occasion of changing the board of the company

Further evaluation at inventory of movable assets is approached in accounting references in the following way: [3,PAG 261]:

The juridical frame IASC stipulates the evaluation of movable assets in a differentiated way.

Short-term placements are evaluated either at market value, or at the minimum between the acquisition cost and the market value. If the evaluation is made at market value, the difference between this value and the acquisition cost is incorporated in the result or registered in the position: "difference from re-evaluation" of own capitals. The loss, i.e. the difference between the higher acquisition price and the lower market value is covered from the balance of re-evaluation differences made before, the part that is not covered being placed at expenses.

Long-term placements are :

- either evaluated at acquisition cost, without being necessary to make a provision in case of temporary lowering of the value; when the lowering of the value of these placements is not temporary it will be necessary to make a provision

- or re-evaluated on the basis of the real value; the difference from re-evaluation is taken by the position "difference from re-evaluation" in the case of a decrease in value, this must be covered from the previous balance, and the sum left uncovered will be put at expenses.

In France the evaluation rules of movable assets are presented like this:

The immobile titles are evaluated at a pre-established negotiation value for the titles/securities which are not quoted on the stock exchange and at the medium rate from the last month for the titles/securities quoted on the stock exchange. The negative values resulting from the comparison between the pre-established negotiation value with the acquisition cost are the object of provisions. Plus-values are not registered. The quoted bonds classified as immobile titles are not the object of provisions if the enterprises engages to preserve them until maturity.

In Romania the inventory evaluation of movable assets is made like for any other patrimonial element, at current value called also inventory value, established according to market price.

The inventory value is established as a result of evaluation at actual value determined on the basis of the medium rate of the last month, for the quoted titles/securities and on the basis of a potential negotiation value for unqoted titles.

Another opinion regarding the evaluation of movable assets, broader as evaluation reference is expressed by one of the most pretigious personalities of accounting theory from Romania in the following way :

The value established at inventory is the actual value or the utility value of each category of movable assets.

Mainly, the actual value of the titles is determined: for the titles quoted on the stock exchange, the medium rate of the last month, and for unqoted titles the pre-established negotiation value (the value from recent transactions, the mathematical value). We notice that the evaluation reference can be the mathematical value. Often the inventory is made after ending a financial exercise, so we can say that the evaluation at the end of the financial exercise is made in the same terms as at the inventory.

In Romania at the end of the financial exercise, the owned movable assets as any basic element are evaluated and reflected in the balance sheet at the entry value, initially acknowledged respectively the accounting value established on the basis of the inventory.If the inventory value is higher than the accounting value, the plus difference is not registered, if the inventory value is under the accounting value and this is about a reversible depreciation they make a depreciation provision, the movable assets being registered at their entry value. In the evaluation of titles at the end of the financial exercise in the American system they take into account the market price, the evaluation being different according to the classification of titles.

The evaluation of the investments in movable assets at the assignment moment and the de-acknowledgement of movable assets. The evaluation of the movable assets after exiting the investors'management and their de-acknowledgement are two accounting approaches which are performed in the moment of their assignment by the investors.

The moment of the removal from financial situations of financial instruments are approached as follows:

1. The IAS and the Anglo-saxon norms especially the American GAAPs regulate the removal from administration on the date when :

- *the enterprise cashes in the rights stipulated in the contract*
- *the rights reach maturity*
- *the enterprise abandons or loses the control over the contractual rights* -The French norms (PCG) don't mention the transferof advantages and risks. Regarding the evaluation terms when exiting the patrimony, on the international level there are the following rules
- *in the International* accounting standards elaborated by IASC the evluation of financial assets (movable assets are part of it) when exiting the patrimony is made at real value. The exceptions are:
- *the financial instruments whose real value can not be determined for sure, these are evaluated at the updated value of the interest on the market regarding treasury flows*

In France for financial instruments they apply the rule of the historical cost.

In Romania, movable assets are evaluated on the date of patrimony exit at their entry value. The evaluation on the date of administration exit indicates the problem of the differences between the initial value and the selling value, which, being about a final assignment, will be reflected directly in the result. The evaluation of the movable assets from the assignment moment is accompanied by their de-acknowledgement from the structure of the financial situations, respectively the annulement of the initial acknowledgement.

An enterprise must de-acknowledge a financial asset when it loses the control of the contractual rights that comprise the financial asset. An enterprise loses this control in the case in the case in which it achieves the rights upon the benefits specified in the contract, the rights expire or the enterprise gives up the rights. At the moment of de-acknowledgement the difference between the initially known value of the asset and its assignment value must be included in the net profit or loss of that period.

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THE RISKINESS AND THE REINSURANCE IN LIFE PORTFOLIO WITH "DREAD-DISEASE" COVERAGE (*)

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ABSTRACT. The Riskiness and the Reinsurance in Life Portfolio With "Dread-Disease" Coverage. In this paper we present final results of a research on the riskiness of a life policies portfolio with "dread disease" (briefly: DD) coverage in additional or early form, referring to the insurer's point of view. By means of first and second moments of the random present value of gain on a single policy, portfolio ruin probability's estimates are derived under either Cebicev-Cantelli's inequality or normal distribution hypothesis, in presence of a low positive correlation among risks and also introducing optimal strategies referred to a *surplus* reinsurance treaty to face the correlation's effects.

By means of numerical applications based on insurance company's experiences we show the riskiness and the ruin probability considerably increase when a binary correlation exists and we demonstrate the inefficiency of the EEC minimum solvency margin rule, even in presence of optimal reinsurance strategies.

Keywords. Risk Theory. DD. Correlation. Reinsurance. Solvency Margin.

1. Introduction.

Let us consider portfolios of life insurance policies offering a Dread Disease complementary coverage (briefly: DD). In this paper we analyze a DD coverage in additional form to a term insurance with capital and annual constant premiums in advance and exemption from its remaining annual premiums after DD rise[1].

The hypothesis of independence between risks allows for a direct application of well known risk theory models to derive *ruin probability* bounds. However a point of special interest concerns the consequences of a positive correlation likely to issue from a concurrence of events acting simultaneously on risks insured.

We shall therefore consider those changes affecting ruin probability and strategies to counterbalance its increase due to such a correlation.

For this purpose, firstly it is necessary to determine the random present value (r.p.v.) at the moment of issuing the contract (taken as initial time) for the Company's obligations towards a policy holder aged x, as well as first and second moments, to get the company's ruin probability in a fixed time interval.

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[1] In previous papers (see [3], [4]) authors considered also a DD coverage in early form of endowment coverage payable in case of death, with capital and upgraded annual premiums in advance, with exemption of remaining annual premiums after DD rise.

Then we calculate the safety index and the ruin probability in correspondence to portfolios with different policies number and different correlation coefficient values. It will be observed that, in correspondence to small positive correlation increases between single policies' gains, solvency conditions quickly get worse having a remarkable increase of the ruin probability as higher as greater is the portfolio's size. As a consequence, the EEC rule for calculating the solvency margin is inadequate to counterbalance the riskiness increase due to the correlation.

To face this problem, we resort to "surplus" reinsurance's treaty, expanding well known formulations of risk theory concerning the ruin probability control. For the technical form analyzed, we get operational solutions of the classical problem of the *relative top* and the *absolute top* (following de Finetti), in relation to a fixed level of the ruin probability judged acceptable. The improvement in terms of safety is verified by examples.

2. An insurer's gain r.p.v model for life insurance policies with DD covers.

For each policy holder it can be defined three states: *H* (no-DD sick alive policy holder), *S* (DD sick alive policy holder), *D* (dead policy holder), being *H* the starting state at the policy's issue, excluding the transition from *S* to *H* and being *D* obviously absorbent. It can be asserted that:

- the main cover and the premiums annuity of the total cover are controlled by the bi-state process ($H \rightarrow D$);
- the DD cover is controlled by the three-state process ($H \rightarrow D$, $H \rightarrow S \rightarrow D$).

In these processes we assume transitions move halfway through a year and ($H \rightarrow S \rightarrow D$) transitions are admitted in a same year; in this case the second transition takes place in the second half of the year.

With reference to the *j-th* policy having maturity *n*, we define the following quantities:

- Ω, non-negative integer, is the starting time of the random death year;
- in case of a future DD rise, T , non-negative integer, is the starting time of the random DD rise year ($T = +\infty$ if DD don't arises);
- Y, non-negative integer, is the random number of years from DD rise time to death time, being $T+Y=\Omega$;
- in case of no-DD rise, U, non-negative integer, is the starting time of the random death year of a no-DD sick person ($U = +\infty$ if DD arises);
- $M = min(Y, n-T-1)$ is the random number of exempted premiums owing to DD rise;
- $L = 1 + min(\Omega, n-1)$ is the random number of premiums paid, due to the overall insurance;
- *i* is the technical discount rate.

T, Y, U and *M* concern the three-state process, whereas Ω, *L* the bi-state one.

Still referring to the *j-th* policy, it follows :

- ${}^{j}K$ =sum insured paid in case of death;
- ${}^{j}C$ = DD additional indemnity;

- ${}^{j}P$ = gross annual premium of the overall cover, exempted in case of either DD or death rise.
- In order to calculate the benefits r.p.v , we define:
- ${}^{j}B_{MAIN}$ = main cover's benefit present value,
- ${}^{j}B_{ADD}$ = DD cover's benefit present value,
- ${}^{j}B_{EXE}$ = premiums exemption's benefit present value.

It follows:

(2.1) $${}^{j}B_{MAIN} = {}^{j}K\left(1+i\right)^{-\Omega-0.5}, \text{ if } \Omega < n$$

(2.2) $${}^{j}B_{ADD} = {}^{j}C\left(1+i\right)^{-T-0.5}, \text{ if } T < n$$

(2.3) $${}^{j}B_{EXE} = {}^{j}P\left(1+i\right)^{-T} a_{\overline{M}|i}, \text{ if } T < n-1$$

with values equal zero in all other cases.

Let be ${}^{j}P^{*}$ the overall cover annual net premium safety loadings inclusive and ${}^{j}P^{*}\,\ddot{a}_{\overline{L}|i}$ the policy holder's obligation r.p.v., so that the random gain on the *j-th* policy holds:

(2.4) $${}^{j}X = {}^{j}P^{*}\,\ddot{a}_{\overline{L}|i} - {}^{j}B_{MAIN} - {}^{j}B_{ADD} - {}^{j}B_{EXE}$$

and summing over *j* it can be derived the whole portfolio's gain *X*.

By means of suitable technical bases it is possible to derive probabilities $p^{(s)}$ of persisting in the state *s* and $q^{(sk)}$ of transition from *s* to *k* in the three-state model (*H*,*S*,*D*). It results:

(2.5) $$Prob\left(T=h\right) = {}_{h/1}q_x^{(HS)} = {}_{h}p_x^{(H)}\, q_{x+h}^{(HS)}, \quad h=0,1,....,n-1 \;;$$

(2.6) $$Prob\left(Y=k \mid T=h\right) = \begin{cases} (q_{x+h}^{(SD)} + q_{x+h+1}^{(SD)})/4\,, & se \quad k=0 \\ {}_{k/1}q_{x+h}^{(SD)}\,, & se \quad k=1,...,n-h-1 \end{cases} \;;$$

(2.7) $$Prob(Y \geq n-h \mid T=h) = {}_{n-h}p_{x+h}^{(S)}\;.$$

In the bi-state model (*H*,*D*) the probabilities

(2.8) $$Prob\left(\Omega=h\right) = {}_{h/1}q_x \;;\; Prob\left(\Omega \geq n-1\right) = {}_{n-1}p_x = 1 - \sum_{h=1}^{n-1} {}_{h-1/1}q_x \;;$$

(2.9) $$Prob\left(L=h\right) = \begin{cases} {}_{h-1/1}q_x & , \; se \;\; h=1,...,n-1 \\ {}_{n-1}p_x & , \; se \;\; h=n \end{cases}\;.$$

are derived from (2.5), (2.6), (2.7), by using the formula below written for *h* = 0,1,…, *n*-1, consequent by well known theorems:

(2.10) $$Prob(\Omega = h) = \sum_{r=0}^{h} Prob(T = r) Prob(Y = h - r \mid T = r) + Prob(U = h)$$

or

(2.10') $$ {}_{h/1}q_x = \sum_{r=0}^{h-1} {}_{r/1}q_x^{(HS)} \; {}_{h-r-1/1}q_{x+r+1}^{(SD)} + {}_{h/1}q_x^{(HS)} \left(q_{x+h}^{(SD)} + q_{x+h+1}^{(SD)}\right)/4 + {}_{h/1}q_x^{(HD)} $$

By means of probabilities above, for each policy it can be calculated first and second moments of random obligations of contracting parties, so the values $E\left({}^{j}X\right) = E\left({}^{j}P^{*}\ \ddot{a}_{\lceil L \rceil i} - {}^{j}B_{MAIN} - {}^{j}B_{ADD} - {}^{j}B_{EXE}\right)$ and $\sigma^2({}^{j}X) = E({}^{j}X^2) - E({}^{j}X)^2$ are derived from formulas below:

$$E({}^{j}P^{*}\ \ddot{a}_{\lceil L \rceil i}) = {}^{j}P^{*}\left[\sum_{h=1}^{n-1} \ddot{a}_{\lceil h \rceil i}\left({}_{h-1/1}q_x^{(HS)} + {}_{h-1/1}q_x^{(HD)}\right) + \ddot{a}_{\lceil n \rceil i}\ {}_{n-1}p_x^{(H)}\right];$$

$$E\left({}^{j}B_{MAIN}\right) = {}^{j}K \sum_{h=0}^{n-1} v^{h+0.5}\ {}_{h/1}q_x\ ;$$

$$E\left({}^{j}B_{ADD}\right) = {}^{j}C \sum_{h=0}^{n-1} v^{h+0.5}\ {}_{h/1}q_x^{(HS)}\ ;$$

$$E({}^{j}B_{EXE}) = {}^{j}P \sum_{h=0}^{n-2} v^{h}\ {}_{h/1}q_x^{(HS)} \left\{\sum_{k=1}^{n-h-1} a_{\lceil k \rceil i}\ {}_{k-1/1}q_{x+h+1}^{(SD)} + a_{\lceil n-h-1 \rceil i}\ {}_{n-h-1}p_{x+h+1}^{(S)}\right\};$$

$$E\left[({}^{j}P^{*}\ \ddot{a}_{\lceil L \rceil i})^2\right] = ({}^{j}P^{*})^2 \left[\sum_{h=1}^{n-1} \left(\ddot{a}_{\lceil h \rceil i}\right)^2 \left({}_{h-1/1}q_x^{(HS)} + {}_{h-1/1}q_x^{(HD)}\right) + \left(\ddot{a}_{\lceil n \rceil i}\right)^2\ {}_{n-1}p_x^{(H)}\right];$$

$$E\left[\left({}^{j}B_{MAIN}\right)^2\right] = {}^{j}K^2 \sum_{h=0}^{n-1} v^{2h+1}\ {}_{h/1}q_x\ ;$$

$$E\left[\left({}^{j}B_{ADD}\right)^2\right] = {}^{j}C^2 \sum_{h=0}^{n-1} v^{2h+1}\ {}_{h/1}q_x^{(HS)}\ ;$$

$$\mathrm{E}\left[\left({}^{j}B_{EXE}\right)^2\right] = {}^{j}P^2 \sum_{h=0}^{n-2} v^{2h}\ {}_{h/1}q_x^{(HS)} \left(\sum_{k=1}^{n-h-2} \left(a_{\lceil k \rceil i}\right)^2\ {}_{k-1/1}q_{x+h+1}^{(SD)} + \left(a_{\lceil n-h-1 \rceil i}\right)^2\ {}_{n-h-2}p_{x+h+1}^{(S)}\right);$$

$$E({}^{j}P^{*}\ \ddot{a}_{\lceil L \rceil i}\ {}^{j}B_{MAIN}) = {}^{j}P^{*}\ {}^{j}K \sum_{h=0}^{n-1} \ddot{a}_{h+1 \rceil i}\ v^{h+0.5}\ {}_{h/1}q_x\ ;$$

$$E({}^{j}P^{*}\ \ddot{a}_{\lceil L \rceil i}\ {}^{j}B_{ADD}) = {}^{j}P^{*}\ {}^{j}C \sum_{h=0}^{n-1} \ddot{a}_{h+1 \rceil i}\ v^{h+0.5}\ {}_{h/1}q_x^{(HS)}\ ;$$

$$E({}^{j}P^{*}\ \ddot{a}_{\lceil L \rceil i}\ {}^{j}B_{EXE}) =$$

$$= {}^{j}P^{*}\ {}^{j}C \sum_{h=0}^{n-2} \ddot{a}_{h+1\rceil i}\, v^{h}\, {}_{h/1}q_{x}^{(HS)} \left(\sum_{k=1}^{n-h-2} a_{k\rceil i}\, {}_{k-1/1}q_{x+h+1}^{(SD)} + a_{n-h-1\rceil i}\ {}_{n-h-2}p_{x+h+1}^{(S)} \right);$$

$E({}^{j}B_{MAIN}\ {}^{j}B_{ADD}) = 0$, as in single years two benefits are incompatible, also in the case of more transitions in the same year;

$$E({}^{j}B_{MAIN}\ {}^{j}B_{EXE}) =$$

$$= {}^{j}P\ {}^{j}K \sum_{h=0}^{n-2} \ddot{a}_{h+1\rceil i}\, v^{h}\, {}_{h/1}q_{x}^{(HS)} \left(\sum_{k=1}^{n-h-2} a_{k\rceil i}\, {}_{k-1/1}q_{x+h+1}^{(SD)} + a_{n-h-1\rceil i}\ {}_{n-h-2}p_{x+h+1}^{(S)} \right);$$

$$E({}^{j}B_{ADD}\ {}^{j}B_{EXE}) =$$

$$= {}^{j}C\, {}^{j}P \sum_{h=0}^{n-2} v^{2h+0.5}\, {}_{h/1}q_{x}^{(HS)} \left(\sum_{k=1}^{n-h-2} a_{k\rceil i}\ {}_{k-1/1}q_{x+h+1}^{(SD)} + a_{n-h-1\rceil i}\ {}_{n-h-2}p_{x+h+1}^{(S)} \right).$$

A suitable linear combination of such moments gives :

(2.11) $E({}^{j}X^{2}) = E({}^{j}P^{*}\ \ddot{a}_{L\rceil i} - {}^{j}B_{MAIN} - {}^{j}B_{ADD} - {}^{j}B_{EXE})^{2}$

and summing over *j* it can calculate $E(X)$ and $\sigma^{2}(X)$, referred to the portfolio's gain, the portfolio's safety index $\lambda = \dfrac{g + E(X)}{\sigma(X)}$, given a solvency fund *g*. Moreover it can obtain information about both the ruin probability and suitable solvency margin levels to limit such a probability.

3. A reinsurance strategy for a portfolio with DD guarantees in presence of a positive low correlation.

To face the excess in riskiness it is usual to use the reinsurance of the portfolio, supposed homogeneous and large enough. Accepting such a tool and with reference to a surplus reinsurance treaty, it is necessary to solve the de Finetti's *top problem* (see [6]).

The solution of the *absolute top problem* involves the choice of an acceptable ruin probability's value *P*(λ) = $\hat{P}$, by which it can be derived values of suitable $\hat{\lambda}$ and the needed solvency fund $\hat{g}$. But it is necessary previously to solve the *relative top problem* since the solution of the *absolute top* one is equal to the *relative top,* filling in a fund to level $\hat{g}$. To work out this algorithm it needs, as it is well-known, to calculate the optimal retentions [a_j], *j*=1,…,*m*, over each policy, under $0 \le a_j \le 1$, here it will be done under hypothesis of a low binary correlation among risks, represented by the coefficient *r*>0.

We denote by $Z = \sum_{j=1}^{m} a_j\ {}^{j}X$ the r.p.v. of the insurer's total retained gain

with mean:

(3.1) $E(Z) = \sum_{j=1}^{m} a_j c_j$

when $c_j = E\left({}^{j}X\right)$ and variance

(3.2) $\sigma^2(Z) = (1-r)\sum_{j=1}^{m} a_j^2 \sigma_j^2 + r\left(\sum_{j=1}^{m} a_j \sigma_j\right)^2$

moreover by g_0 the starting solvency fund that becomes g = g_0+*E(Z)* after a reinsurance strategy. The calculus of the safety index and the ruin probability will regard such values of mean and variance.

An optimal reinsurance set $\mathbf{a} = \{a_1, a_2, ..., a_m\}$ over each policy is fixed by maximizing λ on the surfaces

(3.3) $g - g_0$ = constant

that is obtained solving the problem

(3.4) $$\begin{cases} min\ (1-r)\sum_{j=1}^{m} a_j^2 \sigma_j^2 + r\left(\sum_{j=1}^{m} a_j \sigma_j\right)^2 \\ sub: g - g_0 = \sum_{j=1}^{m} a_j c_j = b \end{cases}$$

Then it needs to consider bounds $0 \le a_j \le 1$, that is possible with an iteration process (see again [6]).

The solution of (3.4) can be calculated, with exception to a parameter χ on the basis of the bounds, applying the Lagrange multipliers method that brings to a solution of the linear equations system below:

(3.5) $\sum_{j=1}^{m}\left[\delta_{kj}\sigma_j^2 + (1-\delta_{kj})\, r\, \sigma_k \sigma_j\right] a_j = \chi c_k \quad ; \quad (k = 1,...,m)$.

The equation (3.5) generalizes the system $\sigma_k^2\ a_k = \chi c_k$, $(k = 1,...,m)$, valid in no-correlation hypothesis.

The resolution of equation (3.5) is obtained filling in values c_j and σ_j, which allows the resolution of reinsurance problem for this portfolio.

4. Some empirical results.

The quantitative analysis has been faced on a portfolio whose policies are concentrated on some characteristic ages. We have focused attention on the ruin probability's measures due to presence of a weak correlation between risks and fixed g_0 in correspondence to the minimum solvency margin level, provided for the EEC

insurers[2]. We have distinguished both cases with reinsurance and no-reinsurance.

Applications have been carried out with reference to:

i) the insurance form described in § 1 and formulas of moments derived in § 2;

ii) the ruin probability's measures, evaluated by the Cebicev-Cantelli's inequality

$$(4.1) \qquad Prob\left(X + g_0 < 0\right) \leq \frac{1}{1+\lambda^2}$$

and by standardized normal distribution

$$(4.2) \qquad Prob\left(X + g_0 < 0\right) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{-\lambda} e^{-x^2/2}\, dx \quad < \quad \frac{1}{2}$$

offering us the operating conditions described in [6];

iii) the variability measure

$$(4.3) \qquad \sigma = +\left(\sum_j {}^j\sigma^2 + r\sum_i\sum_{j\neq i} {}^i\sigma^j\sigma\right)^{0.5},$$

considering the case $r>0$;

iv) the technical demographic bases provided by ANIA[3], concerning 10-years term contracts, having as sum insured € 1000,00 in case of death and an insured male population aged 35, 40, 45, 50, whereas the technical discount rate is fixed at level i=0,04, that is coherent with the ISVAP's instructions for a term insurance.

4.1 *No-reinsurance case results.*

Table 1 presents values of mean and the standard deviation of ${}^jX$, values of the minimum solvency margin (*s.m.*) and the safety index λ calculated in reference to the hypothesis g_0 = s.m., all referred to some assumptions of the implicit insurer's safety loading (safety loading levels: 10%, 15% and 20%). Values indicated for each contract show a very low safety index as a result of reduced margins for the Company due to a high variability of benefits.

Table.1

First and second moments of ${}^jX$ and values of λ.

Age	***E(${}^jX$)*** *€*			***σ(${}^jX$)*** *€*			***s.m.*** *€*	λ		
	10%	**15%**	**20%**	**10%**	**15%**	**20%**		**10%**	**15%**	**20%**
35	11.69	14.33	16.90	250.24	240.65	230.98	6.45	0.07253	0.08636	0.10111
40	10.26	15.25	20.12	341.62	328.26	314.78	7.00	0.05055	0.06781	0.08615
45	2.37	11.04	19.46	454.24	436.41	418.38	7.86	0.02252	0.04330	0.06530
50	1.25	9.49	22.27	569.08	547.40	525.43	8.82	0.00903	0.03345	0.05918

[2] In particolar the EEC solvency margin rule determines the minimum capital requirements for a life insurer as a proportion of mathematical reserves:—— s.m.= 0,04*mathematical reserves + 0,003*under risk insured sums.

[3] See [1].

As evidenced in the following Table 2, a significant improvement of the safety index is achieved in case of a 10000-policy portfolio, assuming an uniform distribution in the four age groups considered. The ruin probability, calculated with reference to either Cebicev-Cantelli's upper bound or the standardized normal distribution, shows untenable levels in correspondence to portfolios with size **N**<= 2500 policies and considering that the estimate is made in case of no-correlation.

Table.2

Ruin probability and λ index in function of **N** *and r=0.*

N	λ			**Prob (X + g_0 < 0)**					
	10%	**15%**	**20%**	**Cebicev-Cantelli's upper bound**			**Normal distribution**		
				10%	**15%**	**20%**	**10%**	**15%**	**20%**
10	0.09533	0.15669	0.22161	0.99099	0.97604	0.95319	0.46203	0.43775	0.41231
100	0.30146	0.49548	0.70080	0.91669	0.80289	0.67063	0.38153	0.31013	0.24171
400	0.60291	0.99097	1.40161	0.73340	0.50454	0.33732	0.27328	0.16085	0.08052
1000	0.95329	1.56686	2.21614	0.52390	0.28943	0.16917	0.17022	0.05857	0.01334
2500	1.50729	2.47742	3.50402	0.30563	0.14010	0.07531	0.06587	0.00662	0.00023
5000	2.13162	3.50360	4.95543	0.18038	0.07533	0.03913	0.01652	0.00023	0.00000
8000	2.69631	4.43174	6.26818	0.12092	0.04845	0.02482	0.00351	0.00000	0.00000
10000	3.30692	4.95496	7.00808	0.08378	0.03914	0.01995	0.00047	0.00000	0.00000

Dropping out the hypothesis of independence and considering a weak positive correlation between contracts in portfolio, safety conditions rapidly get worse with a significant increase in the ruin probability, also in relation to low correlation levels (r<0.005). Anyway an increase of portfolio's size does not allow significant improvements of the safety index, also in presence of a safety loading not low (15%-20%).

In detail, Table 3 contains, with respect to a 10.000-policy portfolio, λ and ruin probabilities values in correspondence to the correlation coefficient varying from a minimum of 0.001 to a maximum of 0.25.

Table 4 shows results of a subset of evaluations carried out for portfolios with size **N**∈ [10,100,400,1000,2500,5000, 8000,10000] and in correspondence to hypotheses on the safety loading.

In particular, referring to a 15% safety loading and a 10000-policy portfolio, the minimum solvency margin, calculated on the basis of E.E.C. rules, is widely inadequate to satisfy the minimum capital needs in presence of a low positive correlation between risks.

Table 3

Ruin probability and λ index in function of the correlation level:
N = 10000, *s.m.*. = € 75,349.91.

r	λ			Prob (X + g_0 < 0)					
	10%	15%	20%	Cebicev-Cantelli's upper bound			Normal distribution		
				10%	15%	20%	10%	15%	20%
0.000	3.30692	4.95496	7.00808	0.08378	0.03914	0.01995	0.00047	0.00000	0.00000
0.001	1.03588	1.55220	2.19543	0.48238	0.29331	0.17182	0.15013	0.06031	0.01407
0.005	0.48259	0.72313	1.02280	0.81110	0.65664	0.48873	0.31469	0.23480	0.15320
0.010	0.34307	0.51407	0.72711	0.89470	0.79097	0.65416	0.36577	0.30360	0.23358
0.015	0.28062	0.42049	0.59475	0.92700	0.84975	0.73870	0.38950	0.33706	0.27600
0.020	0.24324	0.36449	0.51553	0.94414	0.88273	0.79003	0.40391	0.35775	0.30309
0.030	0.19879	0.29787	0.42131	0.96199	0.91850	0.84925	0.42121	0.38290	0.33676
0.050	0.15409	0.23090	0.32658	0.97681	0.94939	0.90362	0.43877	0.40870	0.37199
0.100	0.10902	0.16336	0.23105	0.98825	0.97401	0.94932	0.45659	0.43512	0.40864
0.150	0.08903	0.13341	0.18869	0.99214	0.98251	0.96562	0.46453	0.44694	0.42517
0.200	0.07711	0.11554	0.16342	0.99409	0.98683	0.97399	0.46927	0.45401	0.43509
0.250	0.06897	0.10335	0.14618	0.99527	0.98943	0.97908	0.47251	0.45884	0.44189

Denoting by F the capital need to stabilize the ruin probability corresponding to the correlation level of r=0, the ratio $\frac{F}{s.m.}$ shows the insufficiency of minimum solvency margin rule.

In particular Table 4 shows the capital needs trend in relation to an increase of r while maintaining a ruin probability level of about 0.0391 for a 10000-size portfolio; the ratio $\frac{F}{s.m.}$ moves from a minimum of 7 (r =0.001) to a maximum of 125 (r =0.25), appearing quite ineffective a ruin probability control strategy built up on the basis of *central limit theorem* principles.

Table 4

Inadequacy of s.m .in function of r *and* **N**=*10000.*

r	N=10000 $prob_{r=0}$=0.039	s.m.= 75,349.91€
	F €	F/s.m.
0.000	75,349.91	1.00
0.001	515,164.49	6.84
0.005	1,249,429.43	16.58
0.010	1,808,471.16	24.00
0.015	2,238,818.09	29.71

r	**N=10000** **prob$_{r=0}$=0.039**	**s.m.= 75,349.91€**
	F **€**	**F/s.m.**
0.020	2,602,086.00	34.53
0.030	3,212,032.58	42.63
0.050	4,180,055.37	55.48
0.100	5,960,075.34	79.10
0.150	7,326,376.36	97.23
0.200	8,478,371.16	112.52
0.250	9,493,370.77	125.99

4.2 *Reinsurance case results*.

In reference to the 4 ages groups of policies whose first and second moment of the r.p.v. of gain have been described in Table 1, a calculus has been developed to resolve de Finetti's problem (3.4) and (3.5), specified for defined correlation levels r^* and run on different portfolios with size **N** ∈ [10,100,400, 1000,2500,5000,8000,10000], uniformely distributed among 4 ages groups:

$$(4.4)\qquad \begin{cases} min\ (1-r^*)\, n \sum_{j=1}^{4} a_j^2 \sigma_j^2 + r^*\, n \left(\sum_{j=1}^{4} a_j \sigma_j \right)^2 \\ sub: \quad g - g_0 = n \sum_{j=1}^{4} a_j c_j = b \\ 0 \le a_j \le 1, \quad j = 1,2,3,4 \end{cases}$$

with n=**N**/4 and $b \in (0,1)$ the gain's reduction coefficient due to the reinsurance strategy.

With reference to a coordinated system (r,b), we derived regions of:

- optimal solutions $\mathbf{a}(r,b)$, independent from *r* as objective functions derived from a family of linear dependent functions in relation to variations of *r*;

- variance $\sigma(\mathbf{a}(r,b))$ and therefore of safety index $\lambda(\mathbf{a}(r,b))$;

- Cebicev-Cantelli's and standardized normal distribution ruin probabilities.

Table 5 shows an optimal set of retentions and its average values $\bar{a} = \frac{1}{n}\sum_{1}^{n} a_j(r,b)$, calculated for defined levels of the ratio $\frac{E(^j X(\mathbf{a}))}{E(^j X)}$, representing the expected portfolio retained gain in correspondence to a reinsurance strategy [**a]** and a safety loading of 15% in the net premium calculus.

In the case of no-correlation among risks, ruin probabilities analysis conducted in relation to the two parameters $\bar{a}$ and **N** shows a non increasing monotone trend, concave in increasing the two parameters.

With reference to a 15% safety loading and in correspondence to the coordinates (N=2500, $\bar{a}$ =0.596), the ruin probability drops respectively below 10%, under Cebicev-Cantelli's limitation and by 0.8%° in the case of normal distribution; a loading safety augmentation produces a reduction in the ruin probability: for example a 20% safety loading reduces the ruin probability by 50%.

Table 5

Retention optimal set - safety loading case:15%.

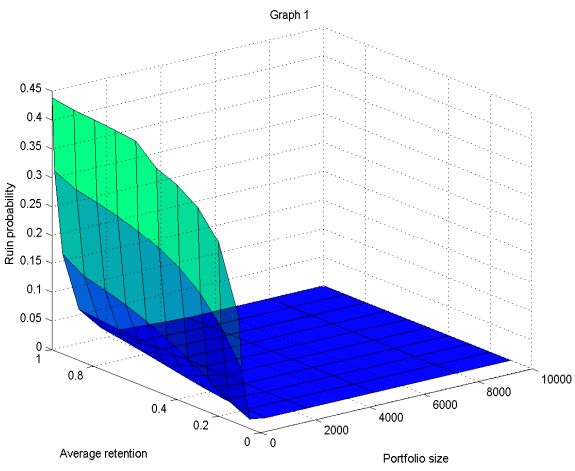
	$\frac{E\left({}^{j}X(\mathbf{a})\right)}{E\left({}^{j}X\right)}x100$									
	100%	**90%**	**80%**	**70%**	**60%**	**50%**	**40%**	**30%**	**20%**	**10%**
a_1	1.0000	0.9420	0.8315	0.7210	0.6105	0.5000	0.3895	0.2790	0.1685	0.0580
a_2	1.0000	0.9704	0.8528	0.7352	0.6176	0.5000	0.3824	0.2648	0.1472	0.0296
a_3	1.0000	0.8405	0.7554	0.6703	0.5851	0.5000	0.4149	0.3297	0.2446	0.1595
a_4	1.0000	0.7927	0.7195	0.6464	0.5732	0.5000	0.4268	0.3536	0.2805	0.2073
$\overline{a}$	**1.0000**	**0.8864**	**0.7898**	**0.6932**	**0.5966**	**0.5000**	**0.4034**	**0.3068**	**0.2102**	**0.1136**

Table 6

Ruin probability (Cebicev-Cantelli's upper bound) in function of **N** *and r=0.*

	$\overline{a}$									
N	**1.0000**	**0.8864**	**0.7898**	**0.6932**	**0.5966**	**0.5000**	**0.4034**	**0.3068**	**0.2102**	**0.1136**
10	0.97604	0.97111	0.96875	0.96567	0.96150	0.92540	0.90569	0.86957	0.78941	0.55024
100	0.80288	0.77071	0.75609	0.73773	0.71409	0.68280	0.63996	0.57930	0.49131	0.36830
400	0.50452	0.45662	0.43661	0.41287	0.38439	0.34986	0.30766	0.25609	0.19450	0.12721
1000	0.28942	0.25157	0.23663	0.21953	0.19985	0.17713	0.15092	0.12103	0.08808	0.05509
2500	0.14010	0.11852	0.11032	0.10114	0.09083	0.07928	0.06638	0.05221	0.03720	0.02279
5000	0.07533	0.06299	0.05838	0.05326	0.04758	0.04127	0.03433	0.02680	0.01895	0.01153
8000	0.04845	0.04032	0.03730	0.03397	0.03028	0.02620	0.02174	0.01692	0.01193	0.00724
10000	0.03914	0.03252	0.03007	0.02736	0.02437	0.02107	0.01746	0.01358	0.00957	0.00580

Graph 1 shows the ruin probability's behaviour calculated under standardized normal distribution of X and varying **N**.



An introduction of a weak positive correlation between risks rapidly decreases the portfolio safety index, even in presence of optimal reinsurance strategies. The λ's trend in relation to an increase of two variables $(r, \bar{a})$ for a portfolio of size **N**=10000 shows that:

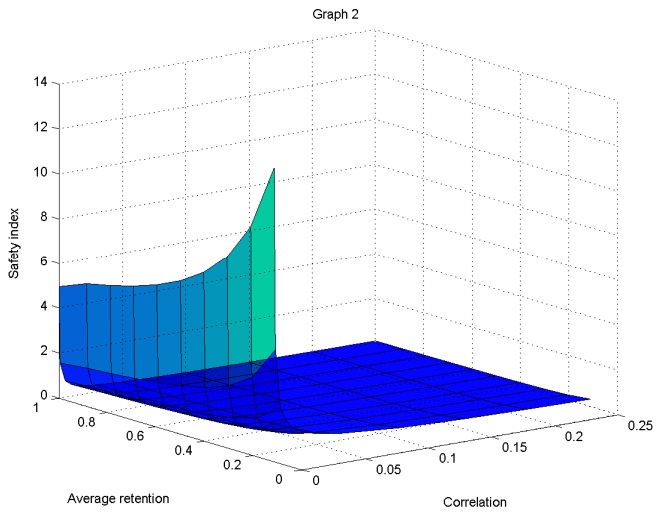
- the target $\lambda_{r=0} \cong 4.9550$ is exclusively realized in correspondence to two coordinates $(r = 0.001, \bar{a} = 0.1136)$,

- the reinsurance strategy is not efficient in maintaining values of λ>1, in presence of values of r>0.02.

Table 7

Graph 2 λ *index trend in correspondence to two variables* $(r, \bar{a})$.

	$\bar{a}$									
r	**1.0000**	**0.8864**	**0.7898**	**0.6932**	**0.5966**	**0.5000**	**0.4034**	**0.3068**	**0.2102**	**0.1136**
0.000	4.9550	5.4544	5.6797	5.9625	6.3275	6.8159	7.5006	8.5218	10.1753	13.0966
0.001	1.5522	1.6817	1.7550	1.8479	1.9694	2.1352	2.3746	2.7507	3.4253	4.9738
0.005	0.7231	0.7824	0.8167	0.8601	0.9170	0.9947	1.1073	1.2848	1.6064	2.3650
0.010	0.5141	0.5561	0.5805	0.6114	0.6518	0.7071	0.7873	0.9137	1.1430	1.6861
0.015	0.4205	0.4549	0.4748	0.5001	0.5332	0.5784	0.6440	0.7475	0.9353	1.3805
0.020	0.3645	0.3943	0.4115	0.4334	0.4622	0.5014	0.5582	0.6480	0.8108	1.1972
0.030	0.2979	0.3222	0.3363	0.3542	0.3777	0.4097	0.4562	0.5296	0.6627	0.9789
0.050	0.2309	0.2497	0.2607	0.2746	0.2928	0.3176	0.3536	0.4105	0.5138	0.7591
0.100	0.1634	0.1767	0.1844	0.1943	0.2071	0.2247	0.2502	0.2905	0.3635	0.5372
0.150	0.1334	0.1443	0.1506	0.1586	0.1691	0.1835	0.2043	0.2372	0.2969	0.4388
0.200	0.1155	0.1250	0.1304	0.1374	0.1465	0.1589	0.1770	0.2054	0.2571	0.3800
0.250	0.1034	0.1118	0.1167	0.1229	0.1310	0.1422	0.1583	0.1838	0.2300	0.3399



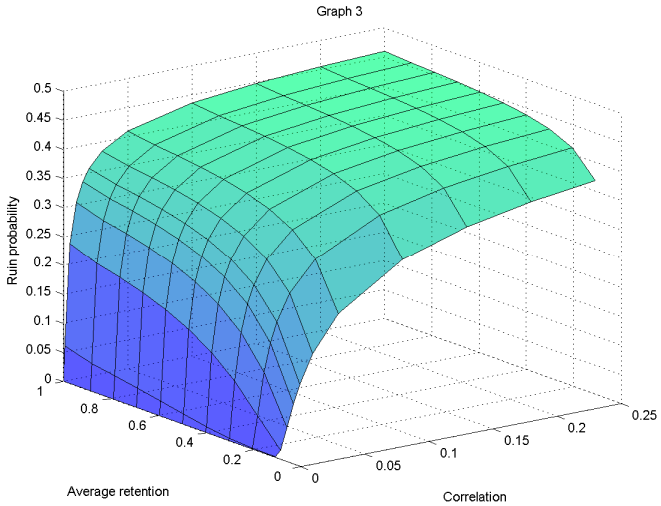
Results of λ are confirmed by the ruin probability's behaviour calculated in reference to two approaches. In particular the ruin probability's graph, conducted in relation to two parameters $(r, \overline{a})$ and for a portfolio of size **N**=10000, shows an increasing monotone trend, convex in increasing the two parameters.

Table 8

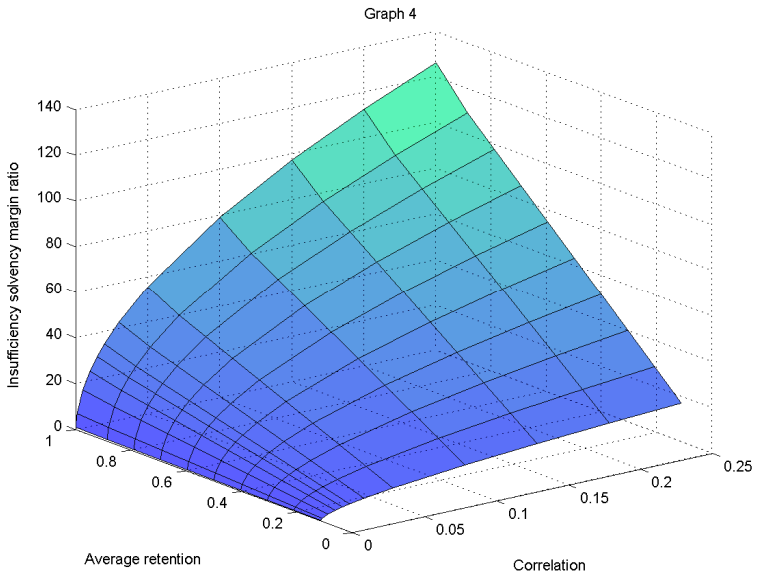
Ruin probability (Cebicev-Cantelli's upper bound) in correspondence to two variables $(r, \overline{a})$ - 10000-policy portfolio.

	$\overline{a}$									
r	**1.0000**	**0.8864**	**0.7898**	**0.6932**	**0.5966**	**0.5000**	**0.4034**	**0.3068**	**0.2102**	**0.1136**
0.000	0.0391	0.0325	0.0301	0.0274	0.0244	0.0211	0.0175	0.0136	0.0096	0.0058
0.001	0.2933	0.2612	0.2451	0.2265	0.2050	0.1799	0.1506	0.1167	0.0785	0.0389
0.005	0.6566	0.6203	0.5999	0.5748	0.5432	0.5026	0.4492	0.3772	0.2793	0.1517
0.010	0.7910	0.7638	0.7480	0.7279	0.7018	0.6666	0.6174	0.5450	0.4335	0.2602
0.015	0.8498	0.8286	0.8160	0.8000	0.7787	0.7493	0.7069	0.6415	0.5334	0.3441
0.020	0.8827	0.8655	0.8552	0.8418	0.8240	0.7991	0.7624	0.7043	0.6033	0.4110
0.030	0.9185	0.9060	0.8984	0.8885	0.8752	0.8562	0.8277	0.7810	0.6948	0.5107
0.050	0.9494	0.9413	0.9364	0.9299	0.9211	0.9084	0.8888	0.8558	0.7912	0.6344
0.100	0.9740	0.9697	0.9671	0.9636	0.9589	0.9519	0.9411	0.9222	0.8833	0.7760
0.150	0.9825	0.9796	0.9778	0.9755	0.9722	0.9674	0.9599	0.9467	0.9190	0.8386
0.200	0.9868	0.9846	0.9833	0.9815	0.9790	0.9754	0.9696	0.9595	0.9380	0.8738
0.250	0.9894	0.9877	0.9866	0.9851	0.9831	0.9802	0.9756	0.9673	0.9498	0.8964

Graph 3 shows the ruin probability behaviour calculated under standardized normal distribution of X in correspondence to a 10000-policy portfolio.



The EEC solvency margin rule inadequacy remains confirmed even in the presence of optimal reinsurance strategies. Considering the ratio $\frac{F}{s.m.}$, the insufficiency is confirmed at high levels as demonstrated in graph 4, when the objective is to stabilize the ruin probability corresponding to the level of r=0 (in reference to a 10000-policy portfolio, probability=0.0391).



From the table 9 representing values of $\frac{F}{s.m.}$ of a 10000-policy portfolio, we derive that:

- the insufficiency ratio presents a range from a maximum value of 125.99 corresponding to coordinates (r=0.25; $\vec{a}$ =100%) to a minimum of 0.27 corresponding to coordinates (r=0; $\vec{a}$ =0.114);

-the insufficiency ratio achieves the value 1 exclusively in correspondence to coordinates (r=0.001, $\vec{a}$ =0.114);

- the reinsurance strategy produces a strong reduction of capital needs, even though it does not give an efficient solution to limit the ruin probability.

The EEC solvency margin rule inefficiency has been demonstrated by the analysis of the first and second moments of the gain r.p.v. of a term insurance policies portfolio with DD covers, when a weak correlation between risks is present and reinsurance strategies do not reach the objective of a ruin probability limitation.

Table 9

Inadequacy of s.m.- values of ratio $\frac{F}{s.m.}$ *- 10000 - policy portfolio.*

	$\bar{a}$									
r	**1.0000**	**0.8864**	**0.7898**	**0.6932**	**0.5966**	**0.5000**	**0.4034**	**0.3068**	**0.2102**	**0.1136**
0.000	1.00	0.77	0.70	0.63	0.57	0.50	0.43	0.37	0.32	0.27
0.001	6.84	5.86	5.25	4.64	4.03	3.42	2.81	2.20	1.60	1.00
0.005	16.58	14.31	12.81	11.30	9.80	8.29	6.79	5.28	3.78	2.28
0.010	24.00	20.75	18.56	16.37	14.19	12.00	9.81	7.63	5.44	3.26
0.015	29.71	25.70	22.99	20.28	17.57	14.86	12.15	9.44	6.73	4.02
0.020	34.53	29.88	26.72	23.57	20.42	17.27	14.11	10.96	7.81	4.66
0.030	42.63	36.89	33.00	29.10	25.21	21.31	17.42	13.52	9.63	5.74
0.050	55.48	48.03	42.96	37.88	32.81	27.74	22.66	17.59	12.52	7.45
0.100	79.10	68.51	61.27	54.03	46.79	39.55	32.31	25.07	17.83	10.59
0.150	97.23	84.23	75.33	66.42	57.52	48.62	39.71	30.81	21.91	13.00
0.200	112.52	97.48	87.18	76.87	66.57	56.26	45.95	35.65	25.34	15.04
0.250	125.99	109.16	97.62	86.08	74.54	63.00	51.45	39.91	28.37	16.83

That result urges a rule modification for calculating minimum capital needs in use in European countries, introducing among calculus parameters correlation coefficients, following the banking sector approach.

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THE IMPACT OF EUROPEAN FUNDS ON THE ROMANIAN ECONOMY: THE CASE OF THE 'NORTH-WEST DEVELOPMENT REGION'

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ABSTRACT. The Impact of European Funds on the Romanian Economy: The Case of the 'North-West Development Region'. This paper presents results of the static analysis of the possible impact of the European Funds on the economy of the North-West region. The analysis is based on the regional Input-Output table derived from the national Input-Output table with the usage of the GRIT methodology.

INTRODUCTION

The present analysis study contains relevant results concerning the impact of the European Funds on the output, income and employment for each sector of the North-West Development Region before and after accession.

AVAILABLE EUROPEAN FUNDS AND REGIONAL DISTRIBUTION

In the current *pre-accession* period, Romania has been granted non-refundable assistance through three financial instruments: the PHARE, SAPARD and ISPA programmes. All these tools have been established on basis of the Accession Partnerships and the 'National Programmes for the Adoption of the Acquis'. While ISPA and PHARE have an annual programme that is approved by the European Commission following the detailed proposals of the candidate countries, SAPARD operates on basis of a multi-annual programme covering the period 2000-2006.

These funds are granted on basis of the Economic Pre-accession Programme and the National Development Plan, documents elaborated by the Romanian Government and comprising the most important information regarding the measures and objectives set out for Romania in the above-mentioned period.

Two of the three scenarios analysed in this paper focus on European funds that Romania will receive *after accession*: Direct Payments, the Rural Development Fund under the Common Agricultural Policy, the Structural Funds and the Cohesion Fund.

To analyse the regional distribution of EU funds for Romania, we have followed the criterion proposed in the 'National Development Plan for 2004-2006' for allocating resources among the regions [8].

The criterion is based on a complex index comprising three parts:

a) a combination of per capita income and population, reflecting the basic criteria for 'structural underdevelopment';

b) a combination of unemployment rate and population, highlighting peculiar problems regarding employment;

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c) a combination of basic transport and utilities infrastructure highlighting the problems regarding the structural endowment. The transport infrastructure index includes: density of public roads per 100 km^2 of territory, density of railways per 1000 km^2 of territory; utilities infrastructure index includes: the number of localities provided with natural gas, the number of localities supplied with drinking water installations, the number of localities with sewerage installations, and the total number of localities.

The geo-demographic indicators have been normalised as a ratio between regional values and the national value (in 2001 or in every year from 1998 to 2000) in order to show the disparities among regions according to their dimensions.

Economic development indicators have been normalised as a ratio between regional values and the regional average (in 2001 or in every year from 1998 to 2000) to reflect the differences among regions.

Furthermore, we multiplied the specific geo-demographical index and the economic development index for each year, region and economic development indicator. We also calculated, when needed, the arithmetical mean of the above-mentioned results of multiplication using the 1998-2000 data.

Each index we obtained was multiplied by a weighting coefficient, as it follows: GDP per capita (weighting coefficient 0.5), unemployment rate (0.25), density of roads (0.0625), density of railways (0.0625), number of localities supplied with natural gas and total number of localities (0.0250), number of localities with drinking water installations and total number of localities (0.05), number of localities with sewerage installations and total number of localities (0.05).

The share of regional funds allocated to region 'r' is: $SRF_r = 100 * I_r / \sum_{r=1}^{8} I_r$,

where: SRF_r – share of regional funds allocated to region 'r'; I_r – development index of region 'r';

Development index of region 'r' is calculated according to the following formula:

$$I_r = C^{GDPc} * I_r^{GDPc} + C^{UR} * I_r^{UR} + C^{DR} * I_r^{DR} + C^{DRW} * I_r^{DRW} + \quad + C^{NG} * I_r^{NG} + C^{W} * I_r^{W} + C^{S} * I_r^{S}$$

where:

- C^{GDPc} / C^{UR} / C^{DR} / C^{DRW} / C^{NG} / C^{W} / C^{S} – weighting coefficients for GDP per capita / unemployment rate / density of public roads / density of railways / number of localities supplied with natural gas / number of localities with drinking water installations / number of localities with sewerage installations;
- I_r^{GDPc} / I_r^{UR} / I_r^{DR} / I_r^{DRW} / I_r^{NG} / I_r^{W} / I_r^{S} – development index for GDP per capita/ unemployment rate / density of public roads / density of railways / number of localities supplied with natural gas / number of localities with drinking water installations / number of localities with sewerage installations - for region 'r'.

The share of the total European funds for the North-West development region is estimated to be 11.9%. This is the share we used in our calculations for the 2004-2006 and 2007-2009 periods. The amount of funds at regional level:

Table 1

European Funds available at the NW regional level (million Euro)

	2004	2005	2006	2007	2008	2009	Total	Yearly average
SAPARD	20	21	20	X	X	X	61	20
IISPA	37	37	37	X	X	X	111	37
Rural Development Fund	X	X	X	60	105	123	288	96
Cohesion Fund	X	X	X	55	78	103	237	79
Structural Funds	X	X	X	111	156	206	474	158
Direct Payment	X	X	X	22	38	45	105	35

Source: Own calculations based on the National Development Plan for 2004-2006, Ministry of Integration, 2003;

SEC (2004) 160 final, Communication from the Commission: A financial package for the accession negotiations with Bulgaria and Romania, 10th of February 2004, Brussels;

THE SECTORAL DISTRIBUTION OF EU FINANCIAL ASSISTANCE

The distribution of Pre-accession funds amongst the various sectors was resolved in 2 steps:

Step 1. Identification of the yearly average financial contribution by measures on regional level;

Step 2. Identification of the sectors which are directly influenced by the amounts allocated for different measures and distribution of the amounts allocated for each measure among the various sectors.

On basis of the indicators used in our impact analysis, we have to take into consideration the following types of EU transfers for the North-West region:

SAPARD and ISPA

The Pre-Accession financial resources were distributed among sectors in the period 2004-2006 directly influenced by the amounts allocated on basis of the share of Gross Value Added.

- In the 2007-2009 period:

Direct Payments

In the case of Direct Payments we have to distinguish between 'decoupled' and 'coupled' direct payments, simulating with the two types of direct payments with two theoretical considerations.

The fully 'decoupled' Direct Payments assume that farmers will spend direct payments on buying goods and services for household consumption. In this case they were considered as household income supplements. The belief is that 'decoupled' direct payments will increase consumption and, thus demand, although this would only be equal to the part of the total household income used for total household consumption. The distribution among sectors is done on basis of the weight of each sector in terms of household consumption.

In the case of fully 'coupled' Direct Payments it is expected that all direct payments will be invested in Agriculture.

1. Rural Development Funds

We considered that the Rural Development Funds distributed to the North-West development region will have the same structure by sectors as the SAPARD funds had.

2. Structural Funds and Cohesion Funds

The paper SEC (2004) 160 final: 'Communication of the Commission: A financial package for the accession negotiations with Bulgaria and Romania', presents the commitment appropriations of Structural Actions for the 2007-2009 period. One third of these funds will go to the Cohesion Funds. As for the distribution of the Structural Funds the formula we used was the share of investments for the principal economic activities for 1999. We used the same structure as in the case of ISPA funds for the distribution by sectors of the Cohesion Funds.

RELEVANT REGIONAL SCENARIOS

We analysed the impact of pre- and post accession funds in the North-West region on output, income and employment. We examined three alternative scenarios.

1. *Baseline scenario:* This represents the existing situation in North-West development region and it is described in the regional Input-Output Tables (IOT).

2. *Alternative scenarios.* The conception of these four alternative scenarios is based on two presumptions:

- the simulation for the 2004-2006 period will be presumed by estimating the inflow effect of the yearly average pre-accession funds on the regional economy (Scenario 1.);
- the simulation for the 2007-2009 period will be resumed to the after-accession Funds impacts.

According to the presumptions mentioned above, the three scenarios were built up as follows:

- *Scenario 1* –This scenario takes into consideration the transfer of funds from the pre-accession programmes (SAPARD and ISPA) to the NW region between 2004 and 2006;
- *Scenario 2* – Direct Payments funds are considered to complete household incomes in agriculture, so they will be used for consumption. The rate of total household income and total household consumption are taken into consideration as a share of direct payments possibly absorbed by regional economy (fully 'decoupled');
- *Scenario 3* – All Direct Payments go to investments in agriculture, so the Direct Payments increase in this way the final demand in agriculture (fully 'coupled');

DATA SOURCE AND METHODOLOGY USED FOR IMPACT ANALYSIS

Following the methodological approach recommended by Bonfiglio et el [4], static impact analysis assumes that the structure and technological state of the economy, as described by input coefficients, remain the same throughout the analysed period.

The changes in total output, income and employment caused by EU fund entries were calculated by multiplying the Rasmussen and Hirschmann [4] output, income and employment linkages matrix with the Final Demand matrix, which leads to the final demand changes caused by the EU fund inflows.

The monetary unit used is bn. lei, 1999 prices.

We used the Input-Output Table for the North West region as a basis for the static impact analysis. In order to derive the IOT for the North-West region we used the national IOT for 1999 [7] and on basis of the GRIT methodology (Jensen et al, 1979). The regional Input-Output Table was derived on basis of the methodology

recommended by Mattas et al. [2, 3]. The regional employment data was obtained from the Romanian National Statistical Institute.

MAIN RESULTS

The results of the simulation for Scenario 1 are presented in Tab. 2.

Tabel 2

Changes in the relative and the absolute values of the total output, household income and employment at the level of the North-West region in Scenario 1 (Impact of pre-accession funds).

	Output		Income		Employment	
Sectors	**%**	**bn. lei**	**%**	**bn. Lei**	**%**	**1000 pers.**
Agriculture	0.54	109.72	0.58	8.43	0.49	2.57
Mining	0	0	0	0	0	0
Food Industry	0.36	56.74	0.46	3.34	0.64	0.42
Textiles and Leather Goods	0	0	0	0	0	0
Wood Products, Furniture and Paper	1.2	115.64	1.21	14.33	1.26	0.59
Chemical and Plastic Products	0.72	22.69	0.83	2.14	0.74	0.08
Building Materials	2.1	103.49	2.09	15.68	2.01	0.52
Metal Products	0.51	24.82	0.59	3.22	0.69	0.07
Machinery, Electronic Products and Cars	1.41	90.49	1.4	12.47	1.27	0.41
Electricity, Water and Gas	0.86	60.15	0.9	7.48	0.94	0.18
Construction	4.19	254.23	3.87	42.46	3.71	1.45
Trade	0.19	19.55	0.17	3.83	0.17	0.16
Hotels and Catering	0.13	3.92	0.12	0.44	0.15	0.02
Transports and Communication	3.59	365.91	3.45	61.03	3.54	1.71
Banking and Real Estate	0.33	27.42	0.34	3.72	0.36	0.11
Public Administration and Defence	0.54	12.48	0.4	6.21	0.5	0.08
Community, Social and Personal Services	0.86	88.32	0.71	27.98	0.73	0.83
TOTAL	**0.95**	**1355.59**	**0.98**	**212.77**	**0.8**	**9.18**

Source: Own calculations on basis of Konstatinos Mattas, Stratos Loizou, Vangelis Tzouvelekas, Tsakiri Meropi (2003): 'Regional Input-Output Tables',

Konstatinos Mattas, Stratos Loizou, Vangelis Tzouvelekas, Tsakiri Meropi (2003): Multipliers' Analysis: 'Sectoral Regional Linkage Coefficients'

and Alistair Bailey, Andrea Bonfiglio, Sophia Davidova, Roberto Esposti, Eniel Ninka and Alberto Zanni (2004): 'Relevant regional scenarios', part A: 'Scenario definition and methodology for impact analysis'

The analysis indicates that the highest relative increase of the output, income and employment in the Scenario 1 is expected in Construction, Transports and Communication and Building Materials sectors. In absolute terms, the increase

of the output is highest in Transport and Communication, Construction, Wood Products, Furniture and Paper, Agriculture and Building Material sectors.

The results for Scenario 2 and 3 can be followed in Table 3.

Regarding the output changes in the Scenario 2 it can be emphasized that the effect of the yearly average inflows of 'decoupled' Direct Payments, Rural Development Funds, Structural and Cohesion Funds, - in the forthcoming period 2007-2009 could have a more significant effect on the regional economy than pre-accession funds. In this case the yearly increase in the total output of the region will be 6.03% on the average. The main difference between the Scenario 2 and the Scenario 1 is the amount of the European funds. In this scenario it was presumed that all Direct Payments are 'decoupled', namely they would be used for consumption. The highest relative changes in the total output are estimated in the sectors linked with the infrastructural development, Transports and Communication, Construction, Electricity, Water and Gas sectors. The impact is also high on the sectors which should provide technological base for the development of other sectors, the Machinery, Electronic Products and Cars sectors. In absolute terms, the highest impact on the output of the sector is expected to be in Transport and Communication, Agriculture, Construction, Electricity, Water and Gas and Trade sectors.

According to our analysis for the Scenario 3 the effect of the average 'coupled' Direct Payments, Rural Development Funds and Structural and Cohesion Funds inflows in the 2007-2009 period will present small differences in comparison with the situation shown in the Scenario 2. The highest relative change in the total output will be similar in Transports and Communication, Construction, Electricity, Water and Gas and Machinery, Electronic Products and Cars sectors, as a result of the new regional infrastructure developments and of the increasing final demand for technology.

The most important difference between the Scenario 2 and the Scenario 3 regarding the output change is that the increase of the output of the Agriculture sector is estimated to be higher for 'coupled' direct payments (being considered as investments made in agriculture).

Regarding the changes in the household income of the regional economy it can be observed that these changes are similar to those for the total output.

Evidently, in the Scenario 2 the effect of the average 'decoupled' Direct Payments, Rural Development Funds, Structural and Cohesion Fund inflows in the 2007-2009 period will have a more significant effect on the household income of the regional economy than the Pre-accession funds.

Taking into consideration the change of household income in absolute and relative terms, the most important difference between the Scenario 2 and the Scenario 3 is the higher increase in the case of 'coupled' Direct Payments (being considered as investments made in agriculture) in the household incomes of the Agriculture sector.

The average yearly inflow of the European funds will generate an increase of 5.36% in the employment of the regional economy in case of the Scenario 2. The relative increase of the regional employment is the highest in the Scenario 3 being estimated at 6.36%. The biggest difference between the two scenarios will be the higher increase of employment both in relative and absolute terms in the Scenario 3.

Tab.3.

Changes in the relative and the absolute values of the total output, household income and employment at the level of the North-West region in Scenario 2 and 3 (Impact of European funds received after accession)

	Output				Income				Employment			
	Scenario2		Scenario 3		Scenario2		Scenario 3		Scenario2		Scenario 3	
Sectors	**%**	**bn. lei**	**%**	**bn. lei**	**%**	**bn. lei**	**%**	**bn. Lei**	**%**	**1000 pers.**	**%**	**1000 pers.**
Agriculture	4.37	888.39	7.3	1484.41	4.72	68.28	7.89	114.09	4.00	20.78	6.69	34.72
Mining	3.82	183.99	3.81	183.4	3.66	32.67	3.65	32.56	3.77	0.8	3.76	0.8
Food Industry	4.02	638.42	3.66	581.1	5.19	37.55	4.72	34.18	7.22	4.7	6.57	4.28
Textiles and Leather Goods	1.65	246.42	1.17	173.89	1.63	34.44	1.15	24.3	1.93	0.8	1.36	0.56
Wood Products	5.47	526.38	5.07	487.26	5.53	65.22	5.12	60.37	5.72	2.68	5.3	2.48
Chemical and Plastic Products	8.05	254.7	7.71	243.95	9.29	24.04	8.9	23.02	8.27	0.87	7.92	0.84
Building Materials	7.56	372.46	7.36	362.87	7.51	56.44	7.32	54.98	7.24	1.87	7.05	1.82
Metal Products	5.98	288.36	5.92	285.61	6.84	37.46	6.78	37.1	7.97	0.83	7.89	0.82
Machinery, Electronic Products and Cars	8.99	575.77	8.47	542.62	8.88	79.38	8.37	74.81	8.1	2.59	7.64	2.44
Electricity, Water and Gas	11.03	774.95	10.6	745.36	11.58	96.38	11.14	92.7	12.14	2.29	11.68	2.21
Construction	12.83	779.41	12.67	769.56	11.86	130.18	11.71	128.53	11.39	4.43	11.24	4.37
Trade	6.68	699.44	6.66	697.89	6.02	137.06	6.01	136.76	6.13	5.89	6.11	5.87
Hotels and Catering	4.45	136.37	2.31	70.96	4.27	15.27	2.22	7.95	5.37	0.62	2.79	0.32
Transports and Communic.	14.23	1448.82	13.6	1384.38	13.65	241.64	13.04	230.89	14.01	6.77	13.38	6.46
Banking and Real Estate	3.35	277.39	1.98	163.53	3.47	37.6	2.05	22.16	3.59	1.1	2.12	0.65
Public Administration&Defense	3.73	85.46	2.63	60.27	2.76	42.54	1.95	30	3.45	0.54	2.44	0.38
Community, Social and Personal Services	4.12	422.52	4.05	415.19	3.38	133.83	3.32	131.51	3.47	3.99	3.41	3.92
TOTAL	**6.03**	**8599.26**	**6.07**	**8652.23**	**5.84**	**1269.97**	**5.69**	**1235.92**	**5.36**	**61.55**	**6.36**	**72.96**

Source: Own calculations on basis of Konstatinos Mattas, Stratos Loizou, Vangelis Tzouvelekas, Tsakiri Meropi (2003): 'Regional Input-Output Tables', Konstatinos Mattas, Stratos Loizou, Vangelis Tzouvelekas, Tsakiri Meropi (2003): Multipliers' Analysis: 'Sectoral Regional Linkage Coefficients'

In the case of the 'coupled' direct payments important increases can be estimated in the Agriculture sector in comparison with the 'decoupled' direct payments. The modernization of Romanian agriculture, the new infrastructure and the new investments will increase market possibilities after the accession.

The study underlines the fact that investments in Agriculture, in the North-West region of Romania have to be done in accordance with the investments in the infrastructure and in the new, productive technology producer sectors. The over-employment in Agriculture is a serious obstacle of the increase of efficiency and market-orientation of the farms. The investments in Agriculture have to be correlated with creation of new jobs in services and in the industrial sectors in the rural areas.

Our study emphasizes that the new inflows of the European Funds in the North-West region could produce important benefits in the development of the infrastructure, as well as in the increase of the output, the household incomes and employment.

The accession of Romania to the European Union and the share from the European Funds represent a necessity and an opportunity for the Romanian economy.

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STUDIA UNIVERSITATIS BABEŞ-BOLYAI, OECONOMICA, L, 1, 2005

STRATEGIC CHOICES FOR EFFECTIVE PERFORMANCE APPRAISAL

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ABSTRACT. Strategic Choices for Effective Performance Appraisal. Managers have a lot o strategic choices regarding effective performance appraisal, as they follow: they have to decide about the performance appraisal objectives, can make a choice between formal and informal performance appraisal; also, the appraisal methods can emphasize more obiectivity versus subjectivity and, not last, managers have to decide regarding the frequency of performance appraisals.

Work performance is translated in the degree of tasks, attributions and responsabilities accomplishment that define the employee's position, the contribution he brings to the the achievement of the organisational goals.

The individual performance of each employee depends on his personal effort, on his capacity to do what he is asked to (skills, abilities, training and professional improvement) as well as his own perception regarding his place and role in the organisation.

Staff appraisal or the appraisal of professional performance is an activity which is widely spred today. Statistics mention that the penetration rhythm in the organisational life of staff appraisal practices has known a dynamism that few would have foreseen. In fact, the need to appraise the staff of an organisation is imposed by the accelerated rhythm of scientifical and technical development, by the implementation of new technologies, and of course, by the internationalization of the competitive market.

Human resources performance appraisal process is encountered in specialized literature and in the practise of national and international organisations under different names, such as: "staff appraisal", "individual efficiency appraisal", "employees'appraisal", results appraisal" etc.

No matter the name that is used, it is clear that performance appraisal is a fundamental activity in human resources management, absolutely necessary for the efficiency and efficacity of the activities in an organisations.

We can assert that human resources performance appraisal represents the process of appraising and analysing the results obtained by an employee in a certain position, respectively the way and degree in which he accomplishes his tasks, attributions and responsibilities reported to determined standards.

Specialists consider that managers have a series of strategic choices regarding the performance appraisal system such as:

Managers must decide upon the objectives of performance appraisal. These appraisals are meant to correct a series of problems, to establish the rewards or

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should they be oriented towards other purposes? Regarding these purposes, should they be individual or group appraisals?

Managers can choose formal and informal performance appraisal procedures. Should the appraisals be structured and take place at a certain moment (formal) or should the manager and the employee discuss different problems or difficulties and the way they can be corrected when they appear (informal)?

The performance appraisal methods can emphasize more objectivity versus subjectivity. Should the managers use their own judgements when they appraise their subordinates should they use more concrete indicators such the number of produced units or the absenteism when appraising an employee?

Managers must decide upon the frequency of appraisals. They use more often annual appraisal. However, given the new appraisal procedures regarding certain positions where performance feed-back is provided monthly, daily or even each hour, it is possible to reduce the frequency of these formal appraisals.

The objectives of performance appraisal

According to practise and specialized literature in the field, the most important objectives of human resources performance appraisal are the following:

- *Appropriate development of certain human resources activities and the justification of administrative decisions,* such as: promotions, transfers, demotions, firings or redundancies etc; human resources performance appraisal allows the elaboration of correct and objective managerial decisions and objectives linked to the corresponding activities.
- *The improvement of reward system and salary settlement* Rewarding the employees should be perceived as being fair because performance appraisal should lead to the recognition of performance.
- *Determining the staff'needs for training and development* Performance appraisal can determine the employees'individual needs for training and improvement, emphasizing the weak points or the employees'potential; consequently, they can attend different training or improvement programmes in the field. Moreover, these opportunities can be used as a reward for the individuals whose appraisal was positive;
- *Providing information about the way the employees do their jobs, about the exact nature of their tasks.* Performance feed-back is very important, the employees feel the need to get information about the way and the degree in which they achieved their work tasks, in order to improve future performance;
- *Planning employees'professional career* Even if the employees are mainly responsible for their own professional careers, they can't achieve their objectives without the support of the organisation. Performance appraisal allows the hierarchical superior to offer to the subordinate some suggestions and steps to follow for supporting the achievement of career objectives.
- *Increasing employees'work motivation* Performance appraisal should have a motivational effect by encouraging positive behaviour initiative, the sense of responsibility, competition and the stimulation of effort for higher work performance. The effort usually increases when the employee, as a consequence of appraisal, is given a recognition of his work.

- *The facilitation of the process of human resources planning, recruitment and selection.* The data resulted from periodical professional performance appraisal processes create the necessary data base regarding the qualities and the abilities that exist at a certain momet in the organisation.
- *Improving the relationship between manager and employees* in the performance appraisal process they discuss together the work problems, the employee finds out what what exactly he is expected to do and he understands his role and place in the organisation asa it is seen by his superiors. Moreover through thses discussions they get to know each other better, improving communication and collaboration, with benefic effects on the organisation in general.
- *Discovering certain competences, skills, abilities unknown so far* Indeed, as a result of performance appraisal a series of competences, skills and abilities unknown so far can be discovered, which will allow the promotion of the employee in a higher position, offering special projects and tasks or including the employee in a professional development programme.
- *Encouraging team-work.* By applying an appropriate performance appraisal system, team-work can be encouraged if this is an organisational objective.
- *Applying the equal opportunities principle* , Because in elaborating some human resources decisions, as well as in many stages of the appraisal process, there is the potential tendency for bias or incorrect appraisal. [3, p. 398].

As it can be noticed, the objectives of performance appraisal can be oriented either towards the individual or towards the organisation, the importance given to each objective depending on the perspective and the purpose for which they are elaborated. For example, if the main objective of performane appraisal is the improvement of the reward system and the settlemet of salaries, the respective appraisal should be based on effective work performance and represents a part of the respective system. If the main objective of performance appraisal is encouraging team-work the organisation must cope with several challenges for creating a system corresponding to that purpose. Applying an appraisal system based on independent work results could discourage the efforts of collaborating in a team. In exchange, group pressure, colleagues'pressure could be enough for motivating the team members to work together; in this case it is suitable to make a reciprocal appraisal for all the members of the group (team).

Even if some objectives of performance appraisal are more important for certain HRM decisions and others are more important for the individual and his future development, it is essential to finally have a reciprocal conditioning and a feed-back relation between organisational objectives, performance appraisal objectives and personal objectives.

It is as important that, once established, the appraisal objectives should be SMART, that is:

- Specific;
- Measurable;
- Adeaquated temporally;
- Relevant;
- Tangible.

Informal and formal performance appraisal

Staff appraisal activity can be performed formally (officially) and informally (unofficially)

Informal performance appraisal

Managers or superiors usually make ad-hoc appraisals of their subordinates' activity, having many occasions for creating an impression about their behaviour, results and merits; these are done whenever it si necessary through observations, conversations or different examinations gathered in time but without discussing in detail the basic criteria used for giving a mark.

The informal appraisal through managers'comments regarding employees'work results can appear whenever the boss or the manager feels there is a need for communication. G.A.Cole asserts that informal appraisal is a secondary product of the daily relationship between the manager and his subordinate. [3, p. 393].

This type of appraisalhas the advantage of not being time-consumming and it can be applied without interrupting the activity of the appraised persons. Moreover, employees need clues from the management which will show them that their results are appreciated, that their achievements are recognized; these clues usually lead to the improvement of the employees'work, being a source of motivation and trust in their own forces.

For example, if an employee accomplished or overpassed the performance standards, the informal appraisal can be used in order to appreciate and recognize this thing.

The main disadvantage of informal appraisal is the the high degree of subjectivity from the appraisers, especially when there aren't other criteria and formal performance standards which should be known both by the appraisers and the appraised.

The informal appraisal takes place in all types of organisations, no matter their size, but it's more frequent and more easily to be applied in small organisations, where superiors appreciate subordinates on the basis of the observations and impressions gathered during a certain period of time.

Formal performance appraisal

Formal performance appraisal is an absolutely necessary activity in every organisation, especially medium and big-sized ones. This type of appraisal is applied systematically and in a planned way, periodically and homogeneously in all cases. The employees must know that they are being appraised, they must know the performance criteria and standards. It has a formal character, supposing an official contact between manager and employee and the registering of the performance and of the necessary observations is made in writing. Usually, the manager, or the direct hierarchical boss, assisted by a human resources specialist appraises the employees from time to time (once or twice a year) on the basis of the methods established in the human resources department.

Some authors such as Drucker, P., consider that "Staff and performance appraisal is part of each manager's tasks. The reality is that, when this appraisal is not made, he can't fulfill his responsibility of directing and teaching the employee" [2, p.330].

Formal performance appraisal implies the existence of a clear methodology, with several stages, requiring careful and thorough preparation concerning the appraisal method, the standards and the performance criteria that are used.

Severlal court decisions have required that the administration of formal performance appraisal programmes should be done in such a way as not to allow any discriminations regarding minority employees or to avoid promotion discriminations. [3, p.394].

Many organisations encourage a combination of formal and informal appraisals. Formal appraisal is absolutely necessary but informal appraisal is also very useful for a good and more frequent feed-back regarding the performance of each employee. The two typesof appraisal must take place in parallel and complete each other and one shouldn't take the other's place under no circumstances.

Objectivity versus subjectivity in performance appraisal

Organisations must establish the degree in which human resources performance appraisal is objective (the appraisal is made according to specific standards and criteria) versus subjective (appraising "how well" an employee works in general).

Although at a first sight it seems that objective appraisals are the best strategic choice for an organisation, the subjective ones can be useful when they identify a series of desirable charcteristics, which are difficult to quantify such as behaviour or some employees'traits. For example, the objective measurement and appraisal of communication skills or management potential represents a very difficult task.

Some authors consider that formal performance appraisal should contain both objective and subjective performance criteria. [1, p.371].

Performance standards should be based on documentation and thorough analysis of the job in order to be based clearly on the demands of the work place. Startegically speaking, any organisation should encourage objectivity in the performance appraisal process (that is the employee should be appraised according to behaviour and not to attitude) This approach helps eliminate misunderstandings both for employees and managers, secondly the objective appraisals of performance are more easily to be justified. Unfortunately the objective performance appraisals are time consumming and costly. However, the organisations must establish an efficient balance between the costs and the benefitsof developping such an appraisal system.

The frequency of performance appraisal

Another problem for organisations is how often they should make such human resources performance appraisals. Traditionally, most organisations recommend that performance appraisal should be made every 6-12 months.

Obviously, the frequency and the type of appraisal depend on the specificity of the organisation's activities and its size, as well as on the costs of such an appraisal.It's important that managers should be encouraged (possibly through training courses) to make performance appraisals with a certain regularity and to see this process as an opportunity to communicate from time to time with their employees as well as a means for improving performance and develop their employees.

Resarch has demonstrated the fact that many employees believe that performance feed-back should be offered more often than once or twice a year. iN fact, over 80% of the employees requested a performance feed-back (this being one of their top five priorities) while only 45% are content with the feed-back they get considering it adequate. I's also interesting that employees prefer informal

appraisals to formal ones, justifying this option through the fact that the informal ones reduce the anxiety caused by the formal appraisal by minimizing “surprises” regarding the behaviour already identified in fact a long time before the appraisal interview but not mentioned.[1, p. 371].

Thus, a strategy that can be used by organisations could be the encouragement of frequent and informal appraisal “meetings” between managers and employees, limiting formal appraisal, in an analytical and detailed form at one or two per year. In this approach, the employee meets his direct superiorat the beginning of the year in order to establish together te main objectives for the following year. During the year they meet frequently in order to make sure that the employee is “on the right track” and to solve potential difficulties. The final appraisal (formal) at the end of the year is, in this case, less stressful for both parties taking into account the continous feed-back that has taken place throughout the year.

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LE RÔLE DES INFORMATIONS ET DES CONNAISANCES DANS LA GESTION MODERNE

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ABSTRACT. The Role of Information and Knowledge in Modern Management. Modern management considers information like having a strategic role for a succesful business. The implementation of information function in any organisation has to follow six stages and has to be base on an efficient informational department. At the end of the article are presented some considerations regarding the application areas and the limits of expert system.

La coordination efficace des organismes modernes appartenant au début du 3 millénaire est impossible sans la connaissance des éléments principaux des systèmes internationaux, sans la familiarisation des facteurs de décision avec le vocabulaire informatique, avec environnement informatique. En plus, est unanime accepté le fait que l'information et l'accès aux informations sont devenus les facteurs du progrès dans tous les secteurs.

Dans les conditions de l'intensification de la concurrence, ***l'information*** est devenu une source de la richesse des organisations, une base pour la création d'un bien-être, tenant le rôle stratégique pour le succès des affaires. L'économie est devenue une économie des informations, chaque décision adoptée (quel que soit le domaine), en dépendant totalement. L'information est devenue, par conséquent, un pieu important pour les sociétés développées.

Les dernières décennies du XX - éme siècle ont été marquées par des changements importants, spectaculaires, la révolution informationnelle excède la révolution industrielle. Dans la période courante, l'information, la manière de diffusion et les instruments sophistiqués pour rassembler, élaborer et transmettre ont enregistré une évolution exceptionnelle, d'une vaste applicabilité dans tous les domaines d'activité, inclusivement dans la gestion.

Quelques auteurs confondent, parfois, les premiers deux termes, des données et des informations, qui comportent, encore, des différentiations principales. Pour mieux comprendre les deux notions distinctes, nous présentons quelques définitions prises de la litterature de spécialité.

Les données sont "des faits, des statistiques, des opinions ou des prédictions classifiées d'une certaine base pour être stockées, raffinées ou retrouvées quand on a besoin d'elles"[1, p.12].

Une autre définition, qui complète la première, (sans éluder les différences d'ordre notionnel d'entre les données et les informations) indique que "les données sont des symboles qui caractérisent l'état d'un phénomène, procès ou elles peuvent définir un objet, étant perçues des gens comme des équipements pour les transformer en informations" [2, p.27].

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De notre point de vue, les données peuvent être considérées les matières pour les informations (des informations potentielles). Les données sont, donc, des caractères, des symboles, (des chiffres, des mots, des graphiques, des codes, des sons, des signes), quelques représentations de certains faits, processus, phénomènes, actions, états, événements existants, sans aucune signification ou sans aucune connexion avec des autres éléments de la nature, si elles ne sont pas interprétées ou jugées.

Pour gagner une valeur (utilité), pour être signifiantes, les données doivent être reportées aux autres éléments, doivent être jugées, analysées, modifiées, actualisées et transformées pour obtenir une forme utilisable, elles doivent être transformées en informations. La donnée est, donc, une composante élémentaire du système informationnel. La donnée est une ”entité informationnelle atomique, la plus petite forme d'information” [3, p. 13].

On n'obtiente pas des informations avec chaque élaboration des données. Une élaboration de données peut générer des informations, seulement s'il existe un récepteur qui considère ce résultat intelligible et utile (L'information = la donnée + le signification) [4, p.78]. Pour générer des informations signifiantes et relevantes, les données sont soumises aux opérations spécifiques:

- la saisie des données: l'observation de l'atmosphère génératrice de données (constatation, mensuration, etc.) et la registration des données;
- la préparation pur l'élaboration: classification, structuration, vérification, assortiment, transmission, transcription, dénomination, etc.;
- l'élaboration des données: la comparaison, l'analyse, la sintérisation, la filtration, la restauration, le mesurement cardinal des valeurs, le classement, la validation; la subsistance: le compte, l'actualisation, l'indexation, la protection et la sécurité des données introduites, etc.;
- l'obtention des informations finales: des documents, des rapports, des réponses aux questions, etc.

Il n'est pas nécessaire de parcourir toutes ces étapes. Quelques données peuvent être collectées, élaborées et comptées simultanément, sans parcourir d'autres opérations de préparation. Du point de vue étymologique, le mot “information” provient du mot d'origine latine “informare”, qui signifie donner une forme.

Les informations sont, donc, des données organisées, systématisées, interprétées, élaborées, qui reçoivent une signification distincte par rapport à certains éléments existants et elles apportent au bénéficiaire un grand nombre de connaissances en ce qui concerne les phénomènes, les procès, les événements.

Selon l'opinion de Peter Drucker, l'information est la donnée enrichie avec pertinence et but, et la conversion des données en informations réclame un certain niveau de connaissances.

L'information peut être définie comme ”une somme de plusieurs données congénères, qui ont une signification plus riche et encore unitaire (son statut supérieur dérive de l'organisation des données et elles ont un caractère contextuel)” [3, p. 13].

Selon The Oxford English Dictionary, l'information fait référence à “l'action d'informer, de communiquer les connaissances ou les nouveautés d'un fait ou une apparition; l'action de dire ou la connaissance communiquée en ce qui concerne un certain fait, un certain sujet ou événement; nouveauté”[4, p.64].

L'information ne peut pas être conçue sans connaissance, parce que sans connaissance nous ne pouvions pas être conscients que les données, les messages perçus sont de l'information. Alors, entre connaissances et informations existe un feed-back” [5, p. 88].

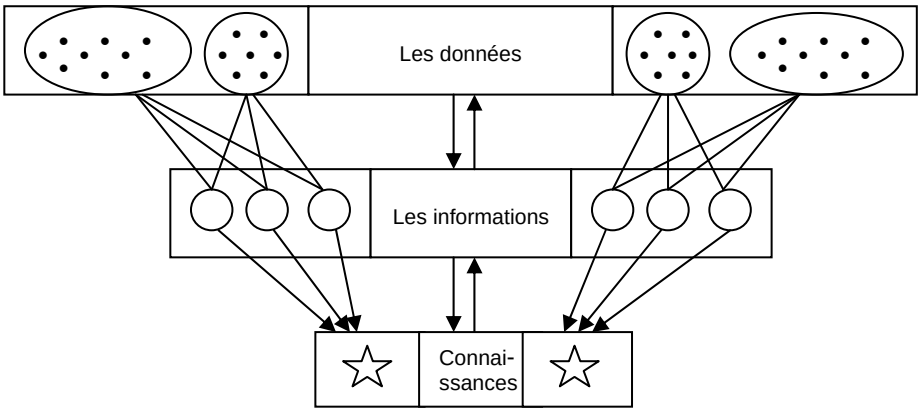

Fig.1.2. Les données - Les informations - Les connaissances

Les connaissances sont considérées: une unité évoluée des ensembles des informations (contenu textuel, attributs, caractéristiques, règles, relations, logiques) utilisés dans des activités spécifiques et fréquemment démontrées abstraitement (comme modèles d'action, de décision, de comportement) [3, p.13].

Selon notre avis, ***les connaissances*** sont des multitudes d'informations utiles (le fig.1.2.), une somme d'éléments informationnels, collectées et retenues delibérément. Les connaissances sont influencées non seulement du volume et de la qualité des informations utilisées, mais d'autres facteurs, telles: l'éducation, culture, âge, expériences vécues, valeurs, croyances, mœurs, appartenances politiques, etc. Pour être utiles, les connaissances doivent être apprises sans cesse. Nous ne pouvons pas achever cette démarche sans reconnaître que: "Les connaissances signifient pouvoir».

La saisie, l'élaboration et la diffusion des informations peuvent être réalisées utilisant deux ***modalités***:

1. L'établissement et le fonctionnement de l'opération d'un comportement spécialisé, pour documentation – information, utile en conséquence (service/ département informatique).

2. On peut faire appel à une organisation externe, spécialisée en ce qui concerne l'offre des services informatiques. En ce cas, l'organisation doit employer au moins une personne pour saisir, élaborer, analyser les données internes et pour garder constamment les relations avec ces organisations.

La fonction d'informer fait référence à la totalité des activités et actions adoptés pour saisir, transmettre et élaborer les données, pour la sélection, la valorisation, la diffusion et le stockage d'informations nécessaires, n'importe quelle est leur nature, leur rôle ou leur destination. La fonction d'informer fait appel aux spécialistes bien préparés et s'impose comme une infrastructure dans l'organisation: des ordinateurs, imprimantes, scanners, dispositifs pour stocker/archiver l'information, serveurs de communication, d'autres équipements informatiques, distribués partout dans l'organisation.

L'exécution de la fonction d'informer dans l'organisation demande le parcours des étapes suivantes [5, p.124]:

1. La formulation de la solution idéale:

- la détermination d'objectivfs de l'organisation et des nécessités informationnelles des diffèrents utilisateurs de l'organisation;
- l'identification de priorités en ce qui concerne les informations;
- la sélection des sources des informations;
- le choix des meilleures modalités pour diffuser l'information, adaptées aux demandes des utilisateurs;la sélection des meilleurs fournisseurs;
- le choix des méthodes de travail et des moyens nécessaires (personnel, espace, équipements, etc.)

2. L'élaboration de la solution réaliste:

- la revue des ressources disponibles (budget, personnel, espaces, équipements)
- le règlement des éléments principaux du système informationnel: les documents externes utilisés, les fournisseurs des informations, les modalités de diffusion d'information et des documents, les méthodes de travail, les résultats obtenus avec le personnel disponible, l'attribution des taches, l'énumération d'équipements qui seraient achètes,etc.
- la planification des étapes de développement de la fonction d'information;

3. La réalisation de la structure d'organisation et l'emplacement spatial:

- la définition de la structure d'organisation: le règlement des responsabilités de chaque participant; la désignation d'un spécialiste qui s'occupera de la fonction d'information;
- la description des taches et la rédaction des codes des responsabilités pour chaque membre qui s'occupe de la fonction d'information;
- le choix approprié de l'espace pour l'emplacement;
- la préparation technique pour exécution: la préparation des espaces, l'acquisition et l'installation des équipements, la conscription du personnel specialisé, la formation et le perfectionnement du personnel existant;

4. La rédaction du cahier des charges (document de référence pour la fonction d'information) qui doit contenir:

- les objectivfs proposés pour la fonction d'information de l'organisation;
- la structure d'organisation nécessaire pour accomplir les objectifs;
- les produits/services informationnelles qui doivent être réalisés;
- les ressources disponibles;
- les méthodes de travail qui seraient utilisées;
- les détails spécifiques pour l'opération du système informationnel;
- les moyens de contrôle de réalisation de la fonction d'information;

5. L'opération:

- l'emphase de l'utilité de la fonction d'information, du système exécuté pour tous les bénéficiaires de l'organisation;
- la constitution d'un conseil des utilisateurs, accepté par l'unité directrice de l'organisation; la promotion systématique de l'utilité du système informationnel;

6. Le contrôle quantitatif et qualitatif de l'opération, pour éviter les risques liés à une opération déficitaire:

- le contrôle en ce qui concerne le volume du travail réalisé: l'indication du volume de travail;

- le contrôle à l'aide du budget: l'évidence de chaque mois des dépenses effectuées et leur comparaison d'eux avec le budget préliminaire;

- l'évaluation de l'opération par rapport aux objectifs établis: l'évaluation du niveau d'accomplissement des nécessités des utilisateurs et, s'il est possible, des résultats obtenus; la comparaison des résultats obtenus auix les objectifs établis dans le cahier des charges, etc.

L'exécution de la fonction d'information fait référence à l'intégration de cela aux autres fonctions de l'organisation, la concordance des investissements dans le système informationnel et les objectifs stratégiques de l'organisation, l'assurance d'une gestion efficace et utile du système informationnel, l'enregistrement des avantages concurrentielles, etc.

L'exécution en connaissance de cause de la fonction d'information impose, parmi autres aspects, l'établissement et l'opération efficace d'un service, d'un département d'informatique. Les plus fréquentes dénominations pour ce service, sont: centre de calcul, bureau d'informatique, office de calcul, service d'élaboration automate des données, département de la technologie de l'information (département TI), etc. A l'heure actuelle, les personnes employées sont nommées: analyste-programmeur, informaticien, ingenieur de système, utilisateur, etc.

En ce qui concerne le Système Informatique du Gestion (SIM), les données peuvent être élaborées manuellement, mécanisé ou automatisé. Lorsque le SIM est automatisé (totalement ou partiellement), il est nommé système informatique. **Le système informatique** représente "l'ensemble des équipements liées, qui travaillent ensemble, utilisant des techniques et des modalités spécifiques pour la saisie, l'élaboration, le stockage et la diffusion des informations, pour soutenir les processus d'adoption des décisions, les processus de coordination, contrôle,analyse et surveillance des activités organisationnelles" [1, p.13].

Dans la littérature américaine, on n'utilise pas le terme "système informatique". Les plus fréquents notions utilisées, sont: système informationnel pour la gestion (MIS – Management Information System) ou la technologie de l'information (IT – Information Technology).

En ce contexte, on peut affirmer que ***la technologie de l'information (TI)*** est la technologie principale de l'époque informationnelle. L'origine du terme TI coïncide avec l'apparition des premiers ordinateurs dans les organisations (le septième décennie). Comme source de l'avantage concurrentiel, TI est un instrument indispensable pour la gestion de chaque organisation. TI est une technique qui permet la saisie, le stockage, l'élaboration et la diffusion de l'information.

Certains auteurs considèrent que, jusqu'à l'apparition des ordinateurs, la technologie d'information n'existait pas. Mais,jusqu' à l'apparition de cette technique, la gestion utilisait d' autres modalités, telles: des fiches, des téléphones, des radios, des rapports, des bibliothèques,etc., les données étant élaborées manuellement et intellectuellement, ce qui n'exclut pas le fait que le directeur utilisait les informations. Alors, ces auteurs définissent la technologie de l'information comme ***une technologie informatique***, qui suppose la saisie, le stockage, l'élaboration et la diffusion de l'information à l'aide des moyens électroniques, à l'aide des réseaux des ordinateurs.

Pendant les années '60-'70 on remplace les technologies traditionnelles d'élaboration des données (manuels, mécanographiques), avec les technologies

informatiques. En ce qui concerne l'aspect technique, en cette période ont apparu les ordinateurs de la troisième génération, les langages de programmation évolués.

Dans les derniers décennies du XX- ème siècle, TI est devenu de plus en plus proche de ce qu'on appelle aujourd'hui ***la technologie des systèmes informatiques*** qui fait référence à une imposante saisie d'éléments qui se trouvent dans une continuel changement, d'une vaste applicabilité. La technique continue l'évolution, la miniaturisation progresse de plus en plus, les prix de l'informatisation sont diminués, le groupe des informaticiens spécialisés s'élargissent et l'informatique continue à conquérir de nouveaux domaines.

Les principaux avantages (des transformations positives, des utilités) qu'une organisation peut obtenir à l'aide de l'informatisation, à l'aide des systèmes informatiques les plus performants, sont:

- la réduction du nombre des employés et du nombre des niveaux hiérarchiques, des relations administratives, etc.;
- l'agrandissement de l'efficacité de la plupart des activités, des processus;
- l'augmentation de la transparence en ce qui concerne la relation des employés avec le conseil directeur;
- l'organisation flexible des activités, des actions, des taches;
- la diminution des difficultés de diffusion des informations, surtout en cas de dispersion géographique, l'échangeabilite rapide des informations;
- l'agrandissement de la flexibilité des organisations (une réaction rapide aux changements apparus, la considération de nouvelles opportunités,des menaces)
- la réorganisation efficace du flux des documents: des réductions, des éliminations, de nouvelles conceptions;
- la répétabilité immesurable des documents produits;
- la structuration efficace des informations, leur circulation fluante;
- la réaction efficace à l'agrandissement exponentiel des données/informations utiles et la possibilité d'être consultées;
- la possibilité de réaliser une opération difficile ou impossible d'être exécutée manuellement; exactitude élevée en ce qui concerne l'élaboration;
- la possibilité de consulter simultanément des informations (bases de données) de plusieurs utilisateurs;
- le stockage des quantités de plus en plus grandes d'informations, dans un espace restreint; l'identification rapide des sources des données/informations;
- l'automatisation des flux des informations à l'aide du développement du commerce électronique;
- la possibilité de connexion aux moyens modernes de communication.

Pendant les années 1950-1970 "l'information" était considérée "une mauvais chose nécessaire", une demande bureaucratique. Pour les calculs financiers – comptables, on utilisait des méthodes manuels ou des appareils mécaniques.

Pendant les années 1960-1970 "l'information" est devenu un appui réel pour la gestion de l'organisation, aidant au soutien des objectifs généralux. Il est apparu, donc, le système MPR (Material Resource Planning: La Planification des Ressources Matérielées) qui comportait seulement un mécanisme de calcul du nécessaire des matériaux.

Pendant la période 1970-1980 "l'information" a amélioré son rôle, son utilité, à l'aide de son la participation effective à l'amélioration de l'adoption des décisions. Apres 1980, on utilisait la planification faite à l'aide du système MRP II. En plus,

sont apparus d'autres systèmes informatiques pour la gestion: MIS-Management Information Systems: des Systèmes Informatiques pour la Gestion; DSS-Decizion Support Systems: des Systèmes pour l'Assistance des Décisions; EIS: Executive Information Systems: des Systèmes Informatiques pour les Directeurs; ESS: Executive Support Systems: Systèmes d'Appui pour les Directeurs.

Apres 1990, les systèmes informatiques sont devenus "des ressources stratégiques" pour l'acquis des avantages concurrentiels, des bases solides pour l'adoption des décisions stratégiques. Ont été élaborés de divers systèmes informatiques pour aider au développement des organisations et à l'acquis de la concurrence. Le système MRP a subi plusieurs changements à travers le temps, évoluant au système ERP d'aujourd'hui (Enterprise Resource Planning: des Systèmes de Planification des Ressources Organisationnels).

Le système ERP est conçu pour planifier et surveiller d'une manière intelligente toutes les activités d'une organisation, par l'utilisation optime des ressources. Même si l'abréviation ERP suggère qu'on fait référence à tous les aspects de l'organisation, en réalité, nous la rencontrerions traitant l'aspect économique des activités.

ERP représente l'ensemble des applications software qui assurent l'administration automatique du processus de business dans l'organisation, offrant les modèles suivants: financiers comptables, la gestion des ressources humaines, la gestion des projets, la gestion de la production, la gestion des dotations (moyens fixes), la gestion des canaux de distribution, vente, la planification des budgets, la gestion logistique, la prévision analytique, etc. [3, p.175].

Les systèmes ERP, développés des systèmes de contrôle de la production, sont utilisés d'un grand nombre des organisations, inclusivement du domaine tertiaire, des universités ou du secteur public. ERP offre un noyau informatique à l'aide duquel on peut réaliser d'autres applications, telles: le commerce électronique, les services pour le client, la gestion de l'offre.

Les solutions ERP représentent au moins les ***avantages*** suivants:

- meilleur accès aux informations, étant, dans le même temps, sécurisé;
- rythmicité en ce qui concerne les activités de saisie, introduction, élaboration et diffusion des informations;
- la structuration des informations et des connaissances;
- l'échangeabilité des données entre les départements;
- la récupération sure et signifiante de l'investissement fait pour les équipements informatiques;
- l'accentuation des responsabilités du personnel impliqué dans l'exploitation des applications;l'agrandissement de la productivité des utilisateurs;
- impose un style de travail évolué, moderne, ordonné, correct;
- un système centralise de stockage des informations;
- la définition facile des flux des documents;
- il permet le logement et la réorganisation de l'affaire, l'inclusion de nouveaux options (paquets, modèles) automatisés, à côté de ceux existants, sans être nécessaire la restructuration de tout le système.

Le système expert est "un produit informatique qui fait appel à l'intelligence artificielle (les ordinateurs qui imitent l'intelligence naturelle humaine), pour résoudre les problèmes d'un domaine d'activité, utilisant les connaissances et l'expertise des spécialistes humains d'un tel domaine, enregistrées et retenues à l'aide d'un porteur ethnique des informations"[2, p.104].

Les bases des connaissances sont des multitudes ordonnées des connaissances (en général, du même domaine d'activité), avec les liaisons existantes entre eux, qui assurent l'accès rapide aux connaissances appelables par leur contenu.

Les bases des connaissances sont des éléments principaux des systemes-experts. Un systeme-expert est destiné à simuler la raison humaine à l'aide des paquets des programmes capables de consulter une base des connaissances ou une base des faits. Le contenu de la base des connaissances doit être entendu comme un système constitué de toutes les connaissances d'un expert humain.

Les systemes-experts, multi expert et d'assistance de la décision ne doivent être conçus comme des éléments tout–puissants qui remplaceraient le directeur, mais, au contraire, on doit les considérer des éléments d'assistance de la décision, des outils nécessaires pour le directeur. De ce point de vue, ces systèmes se situent en rapport de dépendance d'une rationalité réduite, en service du même personnage créatif – appelé directeur – capable d'assumer toutes les responsabilités pour ses décisions, qui lui appartient. Nous considérons que "le rêve des uns" de remplacer le directeur avec un tel système, se réalisera seulement si l'entreprise, entièrement, deviendra un piano mécanique [6, p.60].

Enfin, nous considérons qu'il est nécessaire qu'on fasse quelques remarques qui peuvent être utiles à chaque organisation:

- un rôle de plus en plus important aura l'informatique distribué (les ordinateurs doivent être là où existe la source des données ou, surtout, là où sont nécessaires les informations);
- la saisie et le stockage des données en bases des données deviennent de plus en plus importants, au contraire des programmes informatiques, qui devient désuèts;
- la subsistance (la modification) des programmes nécessitera une attention agrandie et la demande d'un temps supplementaire;
- on impose, de plus en plus, l'évolution de la rédaction des programmes à l'assurance d'assistance spécialisée pour l'utilisation des programmes.

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FIRM MANAGEMENT BETWEEN CONFLICT AND DIALOGUE

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ABSTRACT. Firm Management between Conflict and Dialogue. This paper treats the problems of the management of the firm concerning the dialogue with the professional organizations. The interests of the capital owner, that the management of the firm represents are different from those of the employees, but they can be correlated with the latter.

The paper insists on the common interest as a basis for a dialogue favourable for the development of the firm and the satisfaction of the employees' interests.

The advantages of a negotiation strategy which aims at the satisfaction of the interests of both partners - manager and trade union - are also emphasized.

A service activity that would ensure the satisfaction of the consumer's needs at a high quality level presupposes the existence of a collaboration on the professional level of the employees of the firm, as well as of an attitude that would reflect attachment and loyalty towards the organisation.

The management of the firm must keep a permanent dialogue with the employees and with the professional organizations, prevent conflicts and do everything to solve them when they are impossible to avoid. From the multitude of aspects which contribute to the managers – trade unions relationship, we have proposed ourselves to dwell upon some ideas, concerning **the negotiation strategies**. We have regarded the strategies from the viewpoint of the interest and the attitude of the manager on the one hand, and on the other hand from the point of view of the trade unions and of the actions undertaken by them.

Therefore, the proposed objective consists in finding the most appropriate negotiation methods, which calls for a discussion of some elements that constitute the premises of an efficient negotiation: 1) the clarification of the trade unions' position and especially that of the leaders; 2) the argumentation of the attitude of the firm's management, its position and the embraced behaviour.

1. Objectives and interests of the trade union

Trade unions pressure managers and personnel specialists, subjecting them to supplementary requirements to the basic service of the firm, through: a) **an internal force** of the firm, the trade union organization of its employees and b) **an external force**, the trade union structures from the level superior to the organization, to which it is affiliated, the professional unions of branch or territory.

The basic objectives of this pressure force must be established on the basic interests of the trade union members:

1) the sizing of the payment in accordance with the work done by the workers and with a normal life standard;

2) the creation of work conditions at the level of modern techniques;

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3) the creation and stability of a number of workplaces determined by the satisfaction of the population's needs and by the offer on the labour market;

4) the establishing of an average number of daily working hours, in balance with the necessary rest duration;

5) labour protection, social protection and assistance.

The attainment of these objectives is possible only if the trade unions are constituted as equal partners to the employers and the managers, in negotiations concerning: a) the improvement of the legislation in these domains and b) the unfolding of the actual activity at the level of the firm, of the branch, at a territorial and national level.

Within the framework of a well-balanced competitive economy, which is not the case in Romania, trade union leaders, representing the interests of the wage-earners who chose them, must keep in view **two categories of interests:**

I. Common interests with the employers and the managers;

II. Divergent employers – trade unions interests.

I. The common interests with the employers and the managers are determined by at least the following aspects:

Employers and managers		**Trade Unions**
Reduced expenses with the work force	**Interests**	Wages as high as possible
Minimal costs		Optimal work conditions
The control of the changes		Security of the workplace
The avoidance of the interruption of work		Protest under all shapes

The wise attitude of the manager can lead to the harmonisation of the employees' interests with the basic objectives of the firm, using motivation and stimulation with the purpose of improving quality, efficiency and profits.

2. The position of the management of the firm in relation to the employees

The prophylaxis of disagreements and work conflicts is a very important preoccupation of a manager who wants to ensure a performant activity of the firm, based on internal balance, consolidation and development in all respects.

This explains the fact that the importance of trade unions decreases in the countries with a serious development and with a tradition in market economy. The effervescence of trade union activity is characteristic for the national economies with a precarious balance, a changing legislation (with gaps and equivocal formulations), for periods of economic recession and social turbulence.

The contradiction between wages and profit, between the increase of the wages and that of the profit has proved, in the economically developed countries, to be a real contradiction not only in the short run but also in the conditions when the added value increases very slowly. In the long run, the two parts of the added value, the salary and the profit do not increase on account of each other, but they can increase at the same pace and with pleasing advantages for their consignees.

The condition is for the management of the firm to understand correctly the theory of organizational behaviour, of interpersonal relationships and of social systems.

1) **The existence** of an enterprise is a source of profit for the entrepreneur, but it means, at the same time, a number of workplaces and a wage fund.

2) **The efficient activity** of a firm means increased profits for the employer, development and expansion possibilities, continuity in services, a good reputation and stable customers; but all these lie at the basis of a stable market economy, and provide the security of workplaces, resources for the improvement of work conditions, for the increase of the wages, for professional promotion, the improvement of the activity and the development of the employees' career.

3) **Technical progress** contributes to the saving of the material resources of the firm, to the quality of the product offered, to the attraction of customers and to the increase of the labour productivity. It also impels professional improvement and promotion on the professional level of the workers, ensures the improvement of work conditions, increases the resources for the increase of the salaries.

4) **Discipline in work**, the good organization of the activity and the quality of the services, efficiency in all respects and, especially, the high productivity of work serve for the increase of the profit, but also of the quality of the work force and of its favourable place on the labour market, the increase of salaries and the stability of the work places.

This being the situation, trade unions must analyze very attentively and wisely **the causes for the disagreements** with the employers and with the management of the firm, the modalities of **manifestation** and of **solving** the disagreement. The pressure that can be exercised by the organizations of the employees of a firm must help the workers obtain social and professional advantages as important as possible, in the conditions of the stability and development of the enterprise and not by destroying it or by threatening with bankruptcy. Trade unions do not have the right to discuss the professional competence of the specialists of the firm, in any domain, and even less, do they have the right to request the keeping or the destitution of any managers or specialists.

II. The divergent interests can be emphasized if we look at problems from the two different positions: employers and trade unions.

Essentially, the algorithm goes like this:

1) The manager, whether he is hired or he himself is the entrepreneur, has as an objective maximum profit for the longest possible term, the highest possible profitability and at the lowest possible costs.

2) The employee of the firm, **the worker**, from any field of activity, wants wages as high as possible, a secure workplace, the possibility to utilize the aptitudes acquired in school and conditions for **professional promotion and career development**.

3) The skilful manager is interested in the utilization of the workforce according to the knowledge and aptitudes acquired, so that the productivity and **the quality of the service** will be achieved at their best.

4) The length of service and **the stability** of the employees in a firm bring advantages, due to the specialization of the workers and to the professional improvement, according to the principle of “learning by doing”.

5) The motivation and the stimulation of the employees lead to the improvement of the firm's activity, the stability of the customers, the saving of material resources, the

possibility of development of the activity, and to the increase of the profits and profitability of the firm.

The practical application of the algorithm requires, first of all, **an adequate training of the managers**, a mentality specific to competitional economy and a suitable sense of business.

Second of all, though, the economic and social conditions must allow the performing of the managerial activity, in the sense of forestalling work conflicts. **The economic and juridical framework** must allow the performing of a profitable production activity; the structure in divisions and subdivisions of the economy must correlate with the needs of the local population and with the possibilities of penetration of other markets; the production profile of enterprises must lie at the basis of the offer on the labour market; the financial resources must correlate with the need for the capital for investments, etc.

In the developed countries, the state and the government bodies have experience and resources for the prevention and the solving of social conflicts, which is not the case in Romania.

The management of Romanian firms must thus face some factors **of pressure** from the inside and the outside of the firm, some which have to do with the trade unions and others which don't depend on them. In addition, the manager of a Romanian firm must deal with **real conflicts** or **conflicts invented** by trade unions without experience and without a clearly established position, as well as with the trade union leaders who don't have a clear attitude, a well-established program and even with some who don't know exactly or who don't consider the interests of the employees they represent to be important.

3. Work conflict and negotiation

Negotiation is a process always taking place between partners who depend on each other in order to satisfy their interests. Without this dependence there is no negotiation, which leads to the fact that the solution obtained is always a compromise. In the literature of the field, there are numerous definitions of the negotiation process:

For example:

Negotiation is the process through which we succeed in obtaining what we want from those who want something from us.

Negotiation is synonymous with “conducting negotiations” in order to obtain things we want, in exchange for other things that we have and that our partners want.

Negotiation is a process of adjustment of the partners’ opinions in order to reach from an ideal to a real solution for solving a problem.

Negotiation presupposes the following attitude: “Give me something of what I want and I will give you something of what you want”.

Compromise can equally advantage the negotiating parties, but it can also be established so as to be more to the advantage of one of the partners. It all depends on the problem, on the alternatives of solution found and on each party’s ability to identify the obtained result (the compromise) with the variant that favours him the most.

In some works in the field one can encounter a concept named the B.A.T.N.A (The Best Alternative to a Negotiated Agreement). This B.A.T.N.A. or C.M.B.A.N. (Cea Mai Bună Alternativă la Negociere, in Romanian) is a very important reference point for every negotiator: before starting the negotiation, one must establish the possibilities of solving the problem **without negotiating** with the given partner (for example: we give up the negotiation of a contract and we buy from another company

or the X trade union will not negotiate with the management of the firm but will ask for the government's support etc.).

The compromise obtained through negotiation can be accepted only if it is more favourable than the B.A.T.N.A.; according to the conflict type and to the problem that needs to be solved, there are two types of negotiation to be adopted:

I. The positional strategy or

II. The problematised strategy

I. This is the graphical representation of the **positional negotiation:**

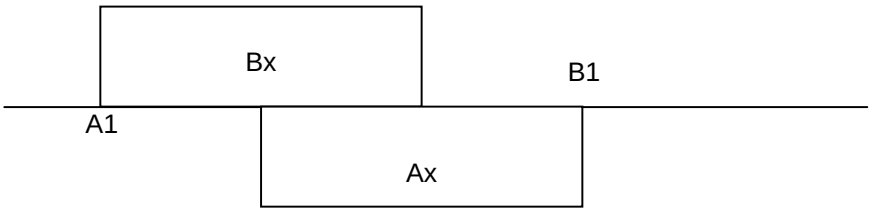

Figure 9.4. The Positional Strategy.

Source: Justyna Olsanska, Rafael Stefansky, (Publishers), *The Art of Negotiation*, 2000 Consensus Publishing House, Warsaw University, Center of Negotiation and Conflict Solving, 1993, volume. I

Legend:

The interrupted line from the drawing represents the "auction line" – the plastic illustration of the possible results of the negotiations.

A1, B1 – the initial suggestions (the opening positions) of part A and B respectively;

Ax, Bx – the limits of the concessions (the so-called "lower lines" of part A and B respectively.

The segment between A1 and Ax and the segment between B1 and Bx – the compartments of part A and B respectively, the space within which the party can move during the negotiations;

The interval between the "lower lines" of the parties, that is the segment between Ax and Bx – the compartment of "the agreement", the space of compromise within the limits of which the parties can reach a satisfactory agreement for each of them in a sufficient degree (sometimes minimal).

The above scheme explains the denomination of the positional strategy: during the negotiations, each party occupies successive positions (makes other offers, presents real solving suggestions and fights for them) [reproduced after 5-26].

II. The problematised strategy or the strategy based on interests.

The negotiations based on this strategy consist therefore, in solving a problem in which parties are involved, through common efforts. Solving a problem requires more complicated procedures than the auction of the positions, namely: the definition in common of the problem, the analysis of the interests, the creation of new solutions and their appreciation, bearing in mind the viewpoints of all parties involved.

Negotiations **based on interests** constitute a strategy which foresees that the advantages of one party must not be obtained by causing losses to the other.

This is the graphic representation of the idea of the strategy described here:

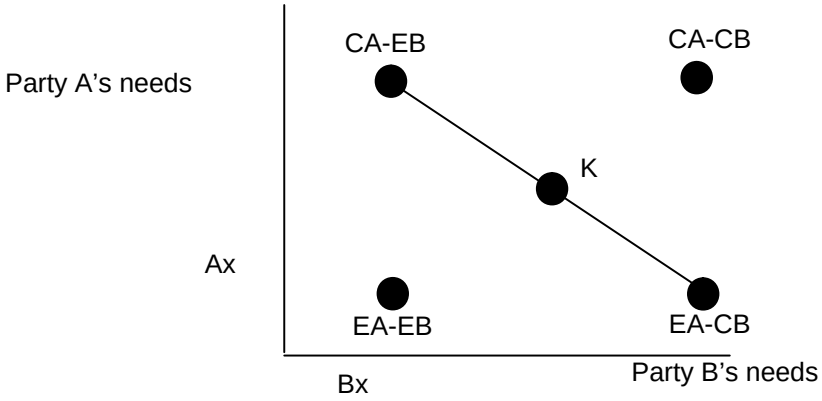

Figure 9.5. The Problematised Strategy (based on interests)

Source: Justyna Olsanska, Rafael Stefansky (Publishers),
The Art of Negotiation, 2000 Consensus Publishing House,
Warsow University, Centre of Negotiation and Conflict Solving, 1993, volume. I

Legend:

Ax, Bx – the minimum level of satisfaction of party A's and respectively B's needs, that they consider satisfactory.

CA-EB – party A's gain, party B's loss (the complete satisfaction of party A's needs and the total lack of accomplishment of party B's needs);

EA-CB – party A's gain, party B's loss;

EA-EB – party A's loss, party B's loss (the deadlock, none of the parties accomplishes his / her needs);

K - compromise (both parties accomplish their needs in a satisfactory, though incomplete way);

CA - CB – party A's gain, party B's gain [5 - (44 - 45)]

Most of the times, the problems that cause the conflict situation can be reformulated so that a situation that seems to need a procedure after the first type of strategy (the positional one) can end up to be solved in a much more favourable way for two or more partners after the second strategy type (the problematised one).

For example:

Negotiating a sales-purchase contract may seem to be a problem of price more than anything else and the seller and the buyer are in the following situation: "your gain is my loss and vice-versa". When thoroughly examining the situation, one can realize that more partners interested in the transaction might be involved (a carrier, an insurance company, a member of the stock exchange as an intermediary of the transaction), and the terms of the problem that constitute the reason for negotiating may get complicated and might include the aspects regarding the product's quality level, the delivery time, the payment time, the deferring of shipping and payment, the currency used for the payment, a system of transactions in compensation etc.

In the case of the relationship between management and trade unions, especially in Romania in the last few years, most of the times, the "bone of contention" is represented by the level of the wages and probably by the stability (or instability)

of the work places. Almost always there are more complicated problems and the elements that assign complexity to the conflict situations can be stressed if there is patience and interest: profitability problems of the firm in question, orders (or the lack of orders) from within the country or from abroad, providers or investors that have or cause problems, the lack of capital, the low technical level etc.

Motivation, stimulation and all interests are very complex aspects, as we have already shown in the first paragraph of the paper.

In the case of work conflicts, there are several elements that do not depend on the management of a firm, but cases when the trade union wants to negotiate with the Ministry, with head of the government or even with the president are quite frequent, even though the problem could be discussed and solved within the organization or at the local level.

The prevention of the conflict or the fast negotiation and solving are very important especially for certain branches of activity. At the same time, the more people are affected by the protest manifested at the trade union's suggestion, the more it paralyses important activities, brings about losses and stress etc., and the greater the responsibility of both trade unions and managers or the responsibility of the top management is.

4. The steps and the importance of negotiation

There are numerous variants of steps of the negotiation process, but a good manager must understand the fact that the **conflict** itself is also the result of a process that implies several **steps** of an unwanted state or situation, before reaching the crisis, the critical state, generating the protest. The Oriental wisdom says: „the best general is the one who manages to avoid the war and not the one that fills the country with the heroes' tombs".

It is possible that, after the start of the protest, those who have initiated it will be the ones to suffer the most (and a wise trade union leader must understand this); but revenge does not usually compensate for the moral and material losses, nor for the parties involved in the conflict, nor for the persons, firms and institutions that are not to blame for the conflict situation and consequently can do nothing to please the protesters.

Still, if conflict has been reached, the legislation must be very categorical and very severe in this respect: the protest developed by ceasing work, blocking some important social and economic areas, strikes of any kind can start only if the negotiations with the employers did not lead to the solving of the crisis.

Any negotiator, no matter whom he represents, must be aware of the **responsibility** he has concerning both the parties involved in the conflict and the parties affected by the starting of the protests. The negotiator should have considered all the time the fact that the negotiation process implies four mandatory steps:

I. The preparation, that is "what do you yourself want?"

II. The debate, that is "what do they want?" (the negotiation partners)

III. The proposal, that is "what could you negotiate?"

IV. The negotiation proper, that is "what could you exchange something for?" [see 3].

For every step there are appropriate techniques and methods, as well as interdictions or non-recommendation to use some methods, customs etc.

The space of this study does not allow us such a presentation, not even a summarized one of the techniques and methods used in the negotiating process. We would like to underline some of the **objectives** that the negotiators must follow, considering the system of interests and the importance of negotiation for the solving of work conflicts.

1) It does not matter which of the partners gives **the most convenient variant of solution**, what matters is for every negotiator to accomplish his or her own interests. Thus, one must think patiently, and with understanding, both for him- or herself and for the opponent.

2) It is not about winning, but about finding the **win-win** solution (for all parties involved).

3) Considering the common interests and the dimensions of the responsibility for the implications of the crisis, it is essential that **rivals turn into collaborators.**

4) Each partner has to discuss with the opponent about his or her own B.A.T.N.A. and about the opponent's one and maintain a clear, open communication for a complete and complex understanding of the situation and of the consequences of not solving the crisis.

5) During the negotiations, the negotiator must always make **syntheses, rephrasing**, must **ask questions** and reach **conclusions.**

6) The durability of the accomplished compromise and the defusing of the conflict situation depend on the mutual respect between the partners, the rational, emotional and moral involvement, the leading of negotiations with authority, loyalty and wisdom.

The opponent who is tricked to accept a compromise that does not favour him, not only will he not respect the signed contract, but he will not trust his partner again, even if the former opponent has changed his attitude.

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MANAGEMENT INTERCULTUREL ET LE SPÉCIFIQUE DE LA CULTURE D'UNE ENTREPRISE EN SYSTÈME DE *LOHN*

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RÉSUMÉ. Management interculturel et le spécifique de la culture d'une entreprise en système de *lohn*. Cet article se propose d'envisager comment l'internationalisation de l'activité des entreprises, soit-elles larges ou des PME, est devenue une constante de l'environnement économique actuel. Dans ce contexte, le management interculturel gagne une importance accrûe tant pour la théorie que pour la pratique des entreprises qui se confrontent avec le défi de la gestion de la différence culturelle. L'analyse de la culture organisationnelle d'une PME avec capital italien, qui opère en système de *lohn* en Roumanie, montre comment celle-ci n'est pas le résultat d'un style de management national (italien ou roumain), mais le construit processuel d'interaction de tous les acteurs impliqués.

"Les affaires et le management dépassent les frontières nationales depuis des siècles; mais, pendant la dernière moitié du XX^{e} siècle, l'importance et la complexité des affaires internationales ont crû énormément et les firmes internationales représentent maintenant une force majeure dans le monde." [17, p. 5]

Nous devons mentionner que, dans la littérature de spécialité (N.-J. Adler, C. Nême, R.-J. Mockler, M.-E. Porter etc.), on fait distinction entre les entreprises internationales, plurinationales, multinationales, transnationales, globales (pour en mentionner seulement quelques-unes). Mais, l'approfondissement de ce sujet est au-delà de l'intérêt de notre article. Ce qui nous intéresse c'est la présence des entreprises, soit-elles larges ou PME (Petites et Moyennes Entreprises), sur d'autres marchés que ceux nationaux, présence qui est devenue un phénomène habituel du monde économique actuel, entraînant une série de changements importants dans leur activité et structure et aussi dans leur milieu d'action.

De plus en plus, les entreprises, de n'importe quelle dimension, cherchent de nouvelles opportunités d'affaires au dehors de leur périmètre national [21, pp. 14-15]. Les raisons qui les déterminent à opter pour l'internationalisation de leur activité et les modalités de le faire sont multiples. Ainsi, parmi les raisons mentionnées dans la riche littérature sur l'internationalisation de l'activité des entreprises on peut trouver: la survie, la croissance des ventes, l'obtention des ressources et de l'expertise, la réduction des coûts, la diversification dans un domaine d'affaires significatif ou en développement, l'application de l'expertise sur de nouveaux marchés, le service et l'extension de la base des clients, la vente des produits déjà existants sur de nouveaux marchés [19, p.114]; ou, selon les termes de Henri F. Henner [12, pp. 296-297], des raisons de marché (une meilleure adaptation aux demandes spécifiques d'un marché, le dépassement des barrières protectionnistes, tarifaires et non tarifaires etc.) et/ou

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des raisons de production (des coûts de production les plus réduits possibles, matières premières à des prix faibles, des salaires bas pour la main-d'œuvre qualifiée). Aujourd'hui, l'accès à des matières premières et à une main-d'oeuvre aux prix faibles ne constitue plus le principal facteur d'attractivité pour les investisseurs étrangers (même s'il est encore pris en calcul), car ils ne peuvent plus en tirer l'avantage compétitif. Maintenant, les grands investissements s'orientent vers des produits complexes qui permettent, vu leur complexité, une séparation de la production des différentes composantes [3, p. 21].

Dans sa démarche d'internationalisation, une entreprise peut choisir la forme qui correspond mieux à ses intérêts et objectifs: export, unité stratégique de production/distribution, franchise, *joint-venture*, alliance stratégique, fusions, acquisition etc. [9, pp. 46-53]. La démarche d'internationalisation influence différemment la gestion des différences culturelles, en fonction de la forme/phase d'internationalisation [5, p. 285]. Par exemple, dans une activité d'exportation, le contact avec la culture du pays cible est plus réduit que dans le cas de l'implantation d'une unité de production.

Aujourd'hui, on manifeste un intérêt accrû pour les investissements directs étrangers (IDE), qui représentent une des formes de l'internationalisation de l'activité d'une entreprise [22, p. 91]. Mais, ceux-ci ne sont pas un phénomène récent. Depuis la seconde Guerre Mondiale, on a pu identifier trois grandes vagues d'investissement [12, p. 294]: la première vague, entre 1950 et 1965 environ, correspond aux flux d'investissements des firmes américaines en Europe de l'Ouest; la deuxième vague placée de 1965 (environ) à 1975, au cours de laquelle les firmes américaines et européennes tendent à créer des unités de production dans les "pays à bas salaires" d'Asie du Sud-est; et la troisième vague qui débute en 1978 jusqu'à présent – celle-ci est composée de deux éléments: un réinvestissement aux États-Unis, marqué par la fermeture de filiales américaines en Europe, l'investissement des firmes européennes et japonaises dans des filiales aux États-Unis ou au Canada et l'émergence des firmes multinationales du Tiers Monde: certaines firmes des Nouveaux Pays Industrialisés commencent à investir dans les pays industrialisés pour mieux pénétrer le marché américain et contourner les obstacles non tarifaires.

On doit nécessairement ajouter à cette classification l'apparition des pays Est européens sur la carte des IDE, ce qui explique la réssurection de l'intérêt pour les IDE, tant de la part des investisseurs étrangers, que de la part de ces pays, surtout de ceux qui sont candidats à l'accès à l'Union Européenne. Car, "[...] dans une économie globale, tous les pays, n'importe leur niveau de développement et leur passé historique, doivent accepter des IDE (*inward-FDI*) pour rester compétitifs [...] Même si la causalité entre les IDE et la croissance n'est pas unanimement reconnue, dans le cas des pays candidats, les IDE peuvent jouer un rôle important. Par l'importation de la technologie étrangère, les IDE peuvent faciliter à ces pays l'accès à la modernisation et à l'amélioration, à la diffusion des connaissances et des meilleures pratiques occidentales par le développement du commerce étranger et l'obtention d'un aide externe et d'une assistance financière.» [10, p. 141].

Pour attirer des IDE, un pays doit accomplir plusieurs pré conditions concernant la stabilité macroéconomique et politique, l'administration, l'environnement légal, les infrastructures, l'équipement social (écoles, la qualité de la vie etc.) et plusieurs conditions qui doivent être présentes simultanément au niveau macro et micro. Dans cette dernière catégorie sont inclus: des facteurs orientés sur la demande

(*demand-oriented factors*) – la dimension et la croissance du marché, l'accès sur des marchés locaux et régionaux, les besoins et les préférences spécifiques des consommateurs etc.; des facteurs orientés sur l'approvisionnement (*supply-oriented factors*) – le niveau de la compétition sur le marché local, les matières premières et la disponibilité des ressources, la qualification, les habilités, l'expérience et la productivité de la main d'oeuvre, le marché du travail local etc.; la recherche de l'efficience – le coût des ressources, la productivité des facteurs, l'opportunité de créer des réseaux par intégration régionale et les associations de libre échange [10, p. 143].

Dans sa décision, donc, d'investir dans un pays, une entreprise est menée par plusieurs raisons. Dans les pays candidats, les IDE peuvent être plus orientés sur l'approvisionnement que sur la demande, les entreprises cherchant des avantages de coûts et de qualification de la main-d'œuvre, mais c'est une situation à moyen terme qui n'est pas compatible avec l'intégration dans l'Union Européenne [10, p. 145]. Par exemple, le système de travail en *lohn* qui cherche en principal des avantages de coûts est très sensible aux facteurs qui peuvent diminuer ces avantages. Ainsi, à présent, en Roumanie, l'appréciation de la monnaie nationale (*leul*) diminue la rentabilité du *lohn*, les entreprises de ce domaine délocalisant (ou ayant l'intention de la faire) leurs opérations en d'autres pays de l'Est qui sont plus attractifs (l'indice GEA – Le Groupe d'Economie Appliquée – de confiance industrielle indiquait la diminution de celle-ci de +25,7% à -14%, en 2005, pour l'industrie des confections, les unités en système de *lohn* étant les plus affectées) [20]. Dans une interview que nous avons prise en avril 2005 à un manager italien d'une unité de production en *lohn,* celui-ci nous indiquait comme nouveaux pays de destination pour la production en *lohn* la Chine et l'Ukraine, la principale raison invoquée par le patron italien étant les salaires plus bas pratiqués dans ces pays; ce qui le fait rester encore en Roumanie sont les coûts de transport plus bas, ce qui équilibre les coûts avec la main-d'oeuvre.

L'Agence Roumaine pour Investissements Etrangers (l'institution de spécialité du Gouvernement roumain sur les IDE en Roumanie) présente comme facteurs d'attractivité pour les investisseurs étrangers en Roumanie: la dimension du marché; le statut d'économie de marché fonctionnelle; sa position commerciale stratégique, le réseau bien développé de télécommunications mobiles en système GSM, la richesse de ressources naturelles, une infrastructure industrielle bien développée, la législation d'investissement, basée sur l'accès libre, non discriminatoire aux marchés et aux secteurs économiques, l'accès à l'UE; des coûts compétitifs, la main-d'œuvre bien qualifiée, avec des connaissances solides dans les domaines de la technologie, IT et engineering etc. [14] On peut y retrouver, donc, aussi de facteurs d'attractivité *demand-oriented* que *supply-oriented*. En plus, le quota unique de l'impôt sur le profit (qui a été réduit de 25% à 16% pour le 2005) a été conçu comme un stimulant pour attirer les investisseurs étrangers. Pourtant, en janvier 2005, les IDE se situaient à 89 millions €, donc moins de 48% que le janvier 2004. Le directeur exécutif du Conseil des Investisseurs Etrangers en Roumanie appréciait, dans une interview prise en mai 2005, que les investisseurs étrangers ne sont pas attirés tant par l'impôt sur le profit que par la stabilité et la prédictibilité du système des taxes et des impôts, qui, à côté de la corruption, des barrières administratives et des changements législatifs fréquents représentent d'anciens points faibles de la Roumanie [6].

Dans les statistiques offertes par l'Office National Roumain du Commerce relatives à la classification des entreprises avec participation étrangère, en fonction de pays d'origine (le top des premières 10 entreprises, pendant les années 1991-2003), on peut identifier (dans l'ordre du montant du capital souscris): la Hollande, la France, l'Allemagne, les Etats-Unis, l'Italie (avec le plus grand nombre d'entreprises – 14.157), les Antilles hollandaises, l'Autriche, le Chypre, la Turquie et la Grande Bretagne [1].

Au-delà des chiffres, l'internationalisation des affaires cache une réalité plus complexe qui est le résultat de la rencontre des cultures nationales différentes. C'est dans ce contexte que le management interculturel a connu la grande popularité dont il jouit aujourd'hui.

Simplement dit, le management interculturel explique le comportement des gens dans différentes organisations et montre comment on doit travailler avec les employés et les clients qui proviennent de cultures variées. Une définition plus complexe est celle proposée par Nancy Adler [25, p. 39]: "Le management interculturel étudie les comportements des gens dans les organisations de tout le monde et les préparent pour travailler dans des organisations dans lesquelles les employés et les clients appartiennent aux cultures différentes. Ce genre de management décrit le comportement organisationnel dans différents pays et cultures et, peut-être le plus important, essaie de comprendre et d'améliorer les interactions entre collègues, clients, fournisseurs et partenaires de différents pays et cultures. Ainsi, le management interculturel élargit la sphère du management national et inclue l'international et le multiculturel." L'aspect le plus important, donc, est celui que le management interculturel prend en considération la diversité culturelle dans le but de l'instrumentaliser au bénéfice de l'organisation, par sa connaissance et compréhension.

L'intérêt en croissance pour le management interculturel est le résultat des facteurs multiples. Un premier facteur est l'intérêt, en croissance aussi – qui a débuté dans les années 1980 – pour la culture organisationnelle (ou culture d'entreprise), en posant, parmi les autres, la question de l'entreprise comme créatrice de culture et d'identité [23, p. 345]. On ne peut pas parler de management interculturel sans parler de culture organisationnelle, car les interactions entre individus qui proviennent de cultures différentes se produisent dans le cadre défini d'une organisation, cadre générateur d'une culture spécifique. Un autre facteur, étroitement lié au premier, est le changement dans les théories sur les entreprises, fait qui reflète les évolutions de celles-ci – ainsi, pendant le temps, elles ont évolué de l'entreprise rationnelle et *homo oeconomicus* à l'entreprise comme un construit par des acteurs, puis à l'entreprise comme système de liens sociaux et jusqu'à l'entreprise comme lieu d'apprentissage et de la coopération [4] – et des études qui ont démontré l'impact des différences culturelles nationales sur l'activité des entreprises multinationales (Geert Hofstede, en dépit de certaines limites de sa recherche sur IBM, reste le pionnier dans ce domaine). En plus, un facteur pas du tout négligeable est la tendance générale, au niveau du discours officiel au moins – surtout dans l'UE et les Etats-Unis –, de reconnaissance et de préservation de la diversité culturelle. Aussi, les entreprises accordent une importance accrue à la ressource humaine, vue comme facteur d'avantage compétitif, surtout dans les conditions où l'on parle d'une "société basée sur la connaissance" (*knowledge-based society*) [8, p. 3], pour laquelle le capital intellectuel est une ressource essentielle. En plus, l'expérience pratique des entreprises

internationales a montré que, souvent, il est plus simple d'offrir un produit adapté aux besoins spécifiques d'un consommateur local que déterminer le personnel du pays respectif à le produire et que l'exportation des modèles nationaux de management (nous ne traitons pas ici le problème de l'existence ou l'inexistence de modèles nationaux de management) est destinée plutôt à l'échec qu'à la réussite.

Comme nous l'avons déjà dit, on ne peut pas parler de management interculturel sans parler de culture organisationnelle.

La culture organisationnelle (culture d'entreprise) connait plusieurs acceptions. Une des définitions la plus souvent citée est celle de Schein: "[...] un modèle des prémisses (*assumptions*) de base partagées, que le groupe a appris à mesure de la résolution des problèmes d'adaptation externe et intégration interne, un modèle qui a fonctionné suffisamment bien pour être transmis aux nouveaux membres comme la modalité correcte de percevoir, penser et sentir par rapport à ceux problèmes [...]" [2, p. 3]. Cette définition résume bien les points forts de la culture organisationnelle au sens où elle est d'habitude perçue dans les entreprises, mais elle a certaines limites: le fonctionnalisme de l'adaptation à l'environnement et une certaine normativité universelle [4, p. 191]. Nous considérons qu'une meilleure définition est celle de Bernoux qui définit la culture d'entreprise comme une capacité [4, p. 192], sans négliger les éléments de permanence qu'elle explique (le concept de culture est enraciné dans le monde des symboles et des mythes) [4, p. 192], mais en la considérant nécessairement, pour rejeter tout déterminisme, comme un *construit* [4, p. 201]. Car, un individu qui devient membre d'une entreprise apporte avec soi plusieurs niveaux de la culture: national, régional et/ou ethnique et/ou religieux et/ou d'affiliation linguistique, un niveau de genre, un niveau de génération, un niveau de classe sociale, auxquels on ajoute un niveau d'organisation ou de corporation [13, pp. 26-27], mais il n'est pas un "produit fini" de celles-ci, car l'identité sociale n'est pas donné une fois pour toutes, elle est le résultat d'un processus continu de définition et de redéfinition interne et externe [16, p. 25]

Mais, ça ne signifie pas que l'influence de la culture nationale sur les individus et sur la culture organisationnelle n'existe pas [4, p. 192]. Elle existe et doit être nécessairement prise en considération, surtout quand on approche le problématique du management interculturel, mais, comme dans le cas de la culture organisationnelle, en le considérant comme *construit*, pour éviter aussi le déterminisme. Déterminisme qui fait sentir sa présence, par exemple, dans le cas des stéréotypes nationaux, soient-ils négatifs ou positifs. Sylvie Chevrier [7, p. 174, p. 179] a montré comment, dans le cas des équipes multiculturelles, la culture nationale peut être instrumentalisée, les acteurs mettant sur le compte de la culture des conflits qui, en fait, ont d'autres causes et comment les stéréotypes nationaux négatifs émergent surtout par des conflits de pouvoir ou d'intérêts entre représentants de cultures différentes, quand ces conflits d'intérêt coïncident avec des frontières culturelles. L'enjeu de cette constatation est celui que, dans les entreprises à une personnel pluriculturel, c'est le devoir du management interculturel de résoudre les problèmes apparus, même si ceux-ci ne sont pas nécessairement des problèmes spécifiques pour les entreprises confrontées à la problématique des différences culturelles [18; 7, p. 179].

Étude de cas

Notre étude de cas vise une PME italienne qui fonctionne en Roumanie en système de *lohn*. Nous avons choisi le cas de cette entreprise, car le *lohn* est un phénomène important de l'environnement économique roumain actuel, et, comme nous l'avons déjà vu, en Roumanie il y a un grand nombre d'investisseurs italiens*;* par l'étude cas, qui permet une investigation extensive d'une seule illustration d'un phénomène d'intérêt [15, p. 65], on peut comprendre en profondeur le fonctionnement et le management des unités en système de *lohn* (sans prétention de généralisation statistique, au moins une tentative de généralisation théorique). Nous avons choisi la méthode de l'étude de cas, car nous sommes intéressés dans l'étude de la culture organisationnelle qui, avec des racines dans l'anthropologie est, d'habitude, étudiée par des méthodes de recherche herméneutiques, comme l'ethnographie [24, p. 554] Les instruments que nous avons utilisés pour collecter des données ont été: l'observation, l'interview et le questionnaire. La recherche de terrain a commencé en avril 2005. Les questionnaires sont en cours d'interprétation, donc nous présenterons les résultats généraux de l'observation et des interviews prises au manager roumain (des interviews structurées) et aux employés (des interviews demi structurées). Nous aborderons seulement quelques aspects de la culture organisationnelle de cette PME.

Le capital de l'entreprise est intégralement privé et d'origine italienne; l'entreprise est située dans une commune (récemment devenue ville) du département de Maramureş; constituée en 2001, sont objet principal d'activité est la production des articles d'habillement et des accessoires. En 2004, le chiffre d'affaires de cette entreprise se situait entre 100.001-500.000 €. Sa structure organisationnelle suppose: le propriétaire (le titulaire) – italien, la directrice générale – roumaine, une contremaître, une adjointe au contremaître et 35 employées (y inclus les collaborateurs).

La principale raison d'investir en Roumanie a été le coût bas de la main d'œuvre. Pour le fonctionnement de l'unité de production implantée en Roumanie aucune stratégie n'avait pas été conçue. De même, le choix de la zone de l'emplacement de l'entreprise s'est basé sur les relations personnelles de l'administrateur italien chargé de la constitution de l'unité et de sa modernisation technologique. Au début, l'entreprise s'est confrontée à des problèmes, provoqués, d'une part, par le manque de l'expérience professionnelle de l'employée roumaine chargée avec le recrutement du personnel et, d'autre part, par le manque de main d'œuvre dans la commune respective. Ce dernier problème est encore actuel; même s'il y a de la main d'œuvre disponible dans les villages limitrophes, il n'y a pas d'infrastructure nécessaire pour le transport de celle-ci. Au début, même si l'entreprise a eu accès à une main d'œuvre qualifiée dans le domaine des confections (avant 1989, dans la commune respective fonctionnait une petite entreprise de confections et dans la ville la plus proche il y avait une grande entreprise de confections, les habitants de la commune faisant la navette pour y travailler), l'investisseur italien a envoyé une contremaître pour former le personnel existant dans le travail avec le matériel de type lycra, sur des machines automatisées, importées de l'Italie.

La directrice générale actuelle a débuté comme secrétaire, avec des taches qui, en réalité, dépassaient les attributions de son emploi (phénomène souvent rencontré dans les PME roumaines), le principal critère de son recrutement étant la disponibilité d'apprendre la langue italienne, dans le plus court terme possible. Parce que l'emploi

de la main d'œuvre italienne était trop coûteuse, le propriétaire a décidé de les rapatrier et a promu la secrétaire, après une période d'épreuve avec des objectifs stricts à atteindre – période pendant laquelle on a réussit à doubler la production –, sur la position de directrice générale.

La meilleure description du modèle actuel de fonctionnement de cette unité de production peut être faite en deux mots: taylorisme appliqué. L'aspect le plus relevant dans ce sens-là est le silence imposé au personnel de la "salle" (ainsi est nommé l'atelier des confections), qui doit se concentrer sur la norme à réaliser, en fonction de laquelle il est rémunéré. Le temps de travail est calculé très strictement, étant basé sur un système d'horaires "à la carte". Mais, ce calcul n'est pas dans l'avantage des employés, il sert surtout à un contrôle plus strict de ceux-ci, car, en réalité, on ne respecte pas un horaire de travail, celui-ci étant en fonction des commandes existantes. La rémunération est en fonction du nombre de pièces produites, une confectionneuse pouvant arriver à être payée à 7.000.000 lei environ (plus que le double du salaire minimum brut sur l'économie). Celle-ci est la raison principale pour laquelle les heures supplémentaires sont acceptées, surtout dans le cas des confectionneuses qui doivent soutenir financièrement leur famille. En même temps, l'horaire prolongé de travail a constitué la principale raison pour laquelle un grand nombre de confectionneuses ont démissionné (et pour laquelle l'entreprise a des difficultés à recruter du personnel local) et représente une source d'insatisfaction du personnel actuel (qui pourrait conduire à d'autres démissions, car, même s'il y a des réunions ou, théoriquement, les employés peuvent exprimer leurs mécontentements et faire des suggestions concernant leur travail, en réalité, l'atmosphère dans l'entreprise peut être décrite comme "terreur masquée"; même l'espace physique est conçu d'une telle manière que les cadres puissent surveiller en permanence l'activité dans la "salle", même les zones d'accès à la toilette et à la chambre de récréation, le bureau de la directrice générale étant placé d'une telle manière et ayant, en plus, des fenêtres sous formes de rayons de miel sur trois parties de la pièce, qui transmettent très clairement l'idée d'une surveillance continue).

C'est une culture organisationnelle caractérisée par une grande distance par rapport au pouvoir (caractéristique aussi de la culture nationale roumaine, conformément aux dimensions de Hofstede, investiguées pour le cas de la Roumanie) [11], avec un management de type autoritaire paternaliste, souvent rencontré dans le cas des PME roumains; l'employé – spécifiquement pour le modèle taylorien – est vu comme *homo oeconomicus*, qui cherche à satisfaire son intérêt économique (financier), implicitement à la base de la motivation du personnel se trouvent les suppositions de la théorie X de McGregor; les relations interpersonnelles sont réduites au minimum, on exerce un fort contrôle des employés, l'orientation sur résultats est prédominante; il y a une grande dépendance de l'employé face à l'entreprise, surtout pour des raisons financières qui assurent la survivance d'une famille entière et pour des raisons des lieux de travail dont l'offre est faible dans la zone respective.

Dans cette phase de notre étude, on peut conclure que le mode de fonctionnement de cette entreprise et sa culture organisationnelle ne sont pas le résultat d'un style de management italien ou roumain, mais elles sont le construit processuel de l'interaction de tous les acteurs impliqués.

Une analyse plus détaillée sur la culture de cette entreprise constituera le sujet d'un futur article.

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THE METHODOLOGY OF ANALYSIS FOR THE NONQUALITY OF PRODUCTS

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ABSTRACT. The Methodology of Analysis for the Nonquality Products. An important category of quality costs are non-quality (the costs caused by lack of quality) or the costs of defaults, which reflect, in fact, the material and non-material losses due to re-manufacturing, re-conditioning or re-buting the products which do not meet the clients requirements, the other costs (for identification and evaluation) being considered investments which are necessary in order to obtain a better quality. The analysis of non-quality emphasizes these aspects which are not favourable for the entreprise, through some specific indicators (the total cost of de-classified products, the losses from inferior qualities, the total cost of rebutes, the amount of losses from rebutes in total production costs etc.).

From the very moment an entrepreneur decides to allot a certain sum of money in order to start up and develop a business, he is interested in the profits that will result from the investment, in the risk of possible losses and their amount. Similarly, in order to achieve, maintain or improve the quality of its products, aimed at reaching a certain level settled before hand, each company must undergo a financial effort, by means of allotting a sum of money for this purpose.This effort is materialized in quality costs, some of which are preferable (prevention and evaluation costs), while others are unforeseeable and undesired by the company and can trigger serious prejudices (desertion costs).

One of the compulsory objectives in the analysis of quality costs is the evaluation of the level and the possibilities of cutting internal and external desertion costs. These desertion costs or those caused by the poor quality of products are also referred to as “nonquality costs”.Their presence has negative effects on the company’s turnover, the losses generated by the nonquality being estimated at 8-20 percent of the turnover. The nonquality represents the overall discrepancy between the envisaged quality and the one that has actually been obtained. This difference implies the loss that the company has to face, incurred because due to the nonconformity, disfunctionalities, abnormalities occurred either during the production process or after delivery. The losses generated by the nonquality can be ***material*** (wastes, reshuffles, reconditioning, displaced products, sent-back products, refused products, compensations, penalties for the delay of the delivery, replacement of products under guarantee, etc.) and ***immaterial*** (loss of clients, of the market quota, damaging that affects the image of the company, the loss of its reputation, etc.) The assessment of the overall cost of these losses represents an essential obligation of the company’s management and, particularly, of the department for quality management, because it is in charge with carrying out the actions needed

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to improve quality, the control and the search of possible solutions applicable for cutting these costs, in order to guard or increase the company's turnover.

The analysis of the desertions or of the nonconforming products is particularly relevant among the elements of quality costs. The different desertions can be identified and analyzed both from the point of view of their quantity and value, for each product, sector or for the entire company, establishing their causes in order to determine the necessary steps that will be undertaken in order to prevent them in future processes.The case of nonconforming products, that will be discussed in what follows, refers to the cost of internal desertions, i.e. those costs that are triggered by the rectification of the nonconformities discovered before the products' delivery to the beneficiaries. According to the requirements stipulated in the ISO 9001 standards, all nonconforming products must undergo an evaluation performed by a designated authority. It is for this reason that all nonconforming products must be submitted to a separate report, in which all the elements of the problem should be included: the stage in which the nonconformity was discovered; full data on the desertions (type, gravity); the thorough identification of products and of the damaged quantity; the actions that must be undertaken; the recommendations of the commission of analysis and the decision taken according to its stipulations; details of the executed reprocessing and reconditioning and of the results; the nature of the corrective actions undertaken in view of the future prevention of the desertion. After the evaluation of the nonconforming products, one of the following decisions, which in each of the following four cases determine additional expenditures, can be taken.

1). Acceptance in existing conditions. The authority in charge with the analysis of the product's quality may decide in favor of the utilization of the nonconforming products as such, when the nonconformity is insignificant and its presence will not affect the performance of the finite product. In contractual terms, this procedure is conditioned by the acceptance of the buyer, otherwise such a decision, even if the nonconformity is insignificant, may either lead to the loss of the more pretentious client, accustomed only to a high-quality product, or the damaging of the company's image on that particular product's market. These immaterial losses, though harder to quantify, must be taken into consideration in order to point out as objectively as possible the efficiency of the quality-related activities within the company.

2). Reprocessing, reconditioning. In some cases, the improvement can be accomplished by means of reprocessing or reconditioning, which ensure a complete conformity with the stipulated requirements. However, this decision also implies both expenditures and time for basically applying retouches on the same product that has not been originally well achieved.

3). Reclassification. In this situation, the product is included in a poorer quality category. Practically, these products can be marked as second or third quality products and sold as such at a low price. The main indicators that help to point out these losses are the following:

✓ *total cost of the displaced products*

$$C_{td} = Q_d \times c$$

where: Q_d – quantity of displaced products
c – unit cost

✓ proportion of the displaced products in the production costs

$$P_d = \frac{C_{td}}{C_t}(\%)$$

Due to the fact that displaced products are sold at a low price, one may speak of a **"loss of inferior qualities"**, resulted from the difference that exists between the average price per assortment and the price corresponding to the high-quality class. On the other hand, the products of a joint-stock company are addressed to some specific categories of clients with different tastes, preferences and purchasing power.This is why, from the begining of its activity, the company foresees "a loss of inferior qualities." This is a fictional loss and it is determined by the fact that not all products are high-quality. Nevertheless, it can turn into an actual loss if the achieved level of the indicator exceeds previous achievements. The loss of inferior qualities can be quantified for each assortment as well as for the entire range of assortments that the company manufactures.

By means of the data received from "APULUM" joint-stock company, Alba-Iulia, the paper will try to point out these "losses of inferior qualities" corresponding to two products. The analysis will be carried out, using the data available in table no. 1 and table no. 2. This analysis aims at following the next steps:

1. Fixing of the unit loss per "j" assortment ($\overline{d}_j$):

$$\overline{d}_j = \overline{p}_j - p_{I_j} \quad (1)$$

where: $\overline{p}_j$ - represents the average price for the "j" assortment, and $\overline{p}_j = \frac{\sum s_k p_k}{\sum s_k}$

p_{I_j} - represents the price of the "j" product's high-quality class

Year 2003 - product: Plate "Wanda"

$$\overline{d}_{W_o} = 37.682 - 38.000 = -318 \text{ ROL/piece}$$

- product: Cup "Simina"

$$\overline{d}_{S_0} = 29.331 - 30.000 = -669 \text{ ROL/piece}$$

Year 2004 - product: Plate "Wanda"

$$\overline{d}_{W_1} = 45.420 - 46.000 = -580 \text{ ROL/piece}$$

- product: Cup "Simina"

$$\overline{d}_{S_1} = 31.416 - 32.000 = -584 \text{ ROL/piece}$$

2. Fixing of the total loss for the "j" assortment (D_j)

$$D_j = q_j \overline{d}_j \quad (2)$$

where: q_j - represents the manufactured quantity of "j" assortment

Year 2003 - product: Plate "Wanda "

$$D_{W_0} = 509.773x(-318) = -162.107.814 \text{ ROL}$$

- product: Cup “Simina”

$$D_{S_0} = 17.790x(-669) = -11.901.510 \text{ ROL}$$

Year 2004 - product: Plate "Wanda"

$$D_{W_1} = 414.157x(-580) = -240.211.060 \text{ ROL}$$

- product: Cup “Simina”

$$D_{S_1} = 10.310x(-584) = -6.021.040 \text{ ROL}$$

3. Fixing of the loss for the entire production composed of the two assortments (D)

$$D = \sum D_j = \sum q_j \left(s_j\right)\overline{d}_j \quad (3)$$

Year 2003:

$$D_0 = D_{W_0} + D_{S_0} = -162.107.814 + (-11.901.510) = -174.009.324 \text{ ROL}$$

Year 2004:

$$D_1 = D_{W_1} + D_{S_1} = -240.211.060 + (-6.021.040) = -246.232.100 \text{ ROL}$$

Using the linked substitution procedure the factors’ influences are separated, according to the model (3):

I. The absolute modification of the losses of inferior qualities:

$$\Delta D = D_1 - D_0 = -246.232.100 - \left(-174.009.324\right) = -72.222.776 \text{ ROL}$$

In 2004, in comparison to 2003, the losses of inferior qualities amounted with 72,222,776 ROL ($|D_1| > |D_0|$), the fictionnal losses being converted into actual losses.

II. The influence of factors. The factors will be analyzed in the following order qj, s_j, $\overline{d}_j$

1. The influence of the production physical volume (q_j)):

$$\Delta D\left(q_j\right) = \sum q_{j_1}(s_{j_0})\overline{d}_{j_0} - \sum q_{j_0}(s_{j_0})\overline{d}_{j_0}$$

$$\sum q_{j_1}(s_{j_0})\overline{d}_{j_0} = \frac{\sum q_{j_1}(s_{j_1})\overline{d}_{j_0}}{I_{s_j}^{\overline{d}_{j0}}}$$

where: $I_{s_j}^{\overline{d}_{j0}}$ - represents the index of the structural modifications caused by losses

Table 1

DATA ON THE QUALITY OF THE PRODUCT: PLATE "WANDA"
FROM 2003 AND 2004

CLASS OF QUALITY	QUANTITIES (q_k)		STRUCTURE ON CLASSES OF QUALITATY (s_k) (%)		UNIT PRODUCTION PRICE (p_k)		UNIT PRODUCTION COSTS (c_k)		VALUE OF PRODUCTION AT PRODUCTION PRICE -thousand ROL-		VALUE OF PRODUCTION AT TOTAL COST -thousand ROL-	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	
top quality	462,960	353,360	90.80	85.32	38,000	46,000	34,000	36,800	17592480	16254560	15740640	13003650
2nd quality	27,708	38,997	5.44	9.42	36,100	43,700	32,300	34,960	1000260	170417	894970	1363334
3rd quality	19,105	21,800	3.76	5.26	32,300	39,100	28,900	31,280	617090	852380	552130	681900
TOTAL	509,773	414,157	100 %	100 %	x	x	x	x	19,209,830	18,811,110	17,187,740	15.048.890

Table 2

DATA ON THE QUALITY OF THE PRODUCT: CUP „ SIMINA "
FROM 2003 AND 2004

CLASS OF QUALITY	QUANTITIES (q_k)		STRUCTURE ON CLASSES OF QUALITATY (s_k) (%)		UNIT PRODUCTION PRICE (p_k)		UNIT PRODUCTION COSTS (c_k)		VALUE OF PRODUCTION AT PRODUCTION PRICE -thousand ROL -		VALUE OF PRODUCTION AT TOTAL COST -thousand ROL-	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
top quality	12,773	7,681	71.80	74.52	30,000	32,000	24,000	25,600	383,190	245,792	306,552	196,634
2nd quality	3,558	2,062	20.08	20.05	28,500	30,400	22,800	24,320	101,403	62,685	81,122	50,148
3rd quality	1,459	567	8.20	5.50	25,500	27,200	20,400	21,760	37,205	15,422	29,764	12,338
TOTAL	17,790	10,310	100 %	100 %	x	x	x	x	521,798	323,899	417,438	259,120

$$I_{s_j}^{\overline{d}_{j0}} = \frac{\sum s_{j_1} \overline{d}_{j_0}}{\sum s_{j_0} \overline{d}_{j_0}}$$

where: s_j - represents the structure of assortments

This index is estimated according to the data included in table no. 3

Table 3

Products	q_{j0}	$\overline{d}_{j0}$	$q_{j0}\overline{d}_{j0}$	s_{j0}	q_{j1}
(0)	(1)	(2)	(3)=(1)X(2)	(4)=(3)/Total (3)	(5)
Plate "Wanda"	509.773	-318	-162.107.814	93,1%	414.157
Cup "Simina "	17.790	-669	-11.901.501	6,84%	10.310
Total	x	x	-174.009.324	100%	x

Table 3 (sequel)

$q_{j1}\overline{d}_{j0}$	s_{j1}	$s_{j1}\overline{d}_{j0}$	$s_{j0}\overline{d}_{j0}$	$I_{s_j}^{\overline{d}_{j0}}$
(6)=(5)X((2)	(7)=(6)/Total (6)	(8)=(7)X(2)	(9)=(4)X(2)	(10)=Total (8) /Total (9)
-131.701.926	95,02%	- 302,16	296,25	
- 6.897.390	4,98%	- 33,32	-45,75	
-138.599.316	100%	-335,48	-342	0,981

$$\sum q_{j_1}(s_{j_0})\overline{d}_{j_0} = \frac{-138.599.316}{0{,}981} = -141.283.706 \text{ ROL}$$

$$\Delta D(q_j) = -141.283.706 - (-174.009.324) = +32.725.618 \text{ ROL}$$

Due to the reduction of the manufactured quantity (from 527,563 pieces to 424,467 pieces), the losses of inferior qualities were cut by 32,725,618 thousand ROL.

2. The influence of the structure of assortments (s_j):

$$\Delta D(s_j) = \sum q_{j1}(s_{j1})\overline{d}_{j0} - \sum q_{j1}(s_{j0})\overline{d}_{j0} = -138.599.316 - (-141.283.706) =$$
$$= 2.684.390 \; ROL$$

In 2004, in comparison to 2003, we notice a reduction of losses of inferior qualities due to the modification of the structure of assortments in favor of the Plate "Wanda" assortment (from 93.16% to 95.02%), an assortment which has a smaller unit loss (-318 lei/piece) than the unit loss of the Cup "Simina" assortment (-669 lei/piece). Consequently, we notice a reduction of the losses of inferior qualities for the entire production, worth 2.684.390 ROL.

3. The influence of the unit loss for assortment ($\bar{d}_j$):

$$\Delta D(\bar{d}_j) = \sum q_{j1}(s_{j1})\bar{d}_{j1} - \sum q_{j1}(s_{j1})\bar{d}_{j0} = -246.232.100 - (-138.599.316) =$$
$$= -107.632.784\ ROL$$

After the analysis of the influence of the unit loss for assortment, we notice an increase of the overall loss, worth 107,632,784 ROL, due to the increase of the unit loss of the Plate "Wanda" assortment (from 318 ROL/piece to 580 ROL/piece), an assortment which is characterized by a high proportion (95.02%).

As $d_j = \bar{p}_j - p_{I_j}$, and $\bar{p}_j = \frac{\sum s_k p_k}{\sum s_k}$ we notice that the unit loss is influenced by two secondary factors: the structure on classes of quality (s_k) and the price on classes of quality (p_k).

3.1. The influence of the structure on classes of quality (s_k)

$$\Delta D(s_k) = \sum q_{j_1}(s_{j_1})\left(\frac{\sum s_{k_1} p_{k_0}}{\sum s_{k_1}} - p_{I_{j0}}\right) - \sum q_{j_1}(s_{j_1})\left(\frac{\sum s_{k_0} p_{k_0}}{\sum s_{k_0}} - p_{I_{j0}}\right) =$$
$$= \sum q_{j_1}(s_{j_1})(\bar{p}_j^r - p_{I_{j0}}) - \sum q_{j_1}(s_{j_1})(\bar{p}_{j_0} - p_{I_{j0}}) =$$

=[414.157 (37.521-38.000)+10.310 (29.453-30.000)]-(-138.599.316)=
=[198.381.203+(-5.639.570)]–(-138.599.316)]= -204.020.773+138.599.316=
= -65.421.457 ROL

The company has recorded an increase of the losses of inferior qualities by 65,421,457 ROL due to the increased proportion of the inferior quality for the Plate "Wanda" assortment (second quality from 5.44% to 9.42%, third quality from 3.76% to 5.26%). Even though the Cup "Simina" assortment recorded an increase of the proportion of the high-quality class (from 71.80% to 74.5%), it has not had a great impact on the reduction of the losses of inferior qualities because the changes within the structure on classes of quality are insignificant.

3.2. The influence of the price on classes of quality (p_k):

$$\Delta D(p_k) = \sum q_{j_1}(s_{j_1})\left(\frac{\sum s_{k_1} p_{k_1}}{\sum s_{k_1}} - p_{I_{j1}}\right) - \sum q_{j_1}(s_{j_1})\left(\frac{\sum s_{k_1} p_{k_0}}{\sum s_{k_1}} - p_{I_{j0}}\right) =$$
$$= \sum q_{j_1}(s_{j_1})(\bar{p}_{j_1} - p_{I_{j1}}) - \sum q_{j_1}(s_{j_1})(\bar{p}_j^r - p_{I_{j0}}) =$$
= -246,232,100 - (-204,020,773) = - 42,211,327 ROL

The price on classes of quality had a negative influence on the losses of inferior qualities, i.e. their rose by 42,211,327 ROL. This is due to the increase of Plate "Wanda" assortment's proportion and, within this product, to the decrease proportion of the high-quality class's in favor of the second and third classes, which have cost less.

III. Validity relations:

$$\Delta D = \Delta D(q_j) + \Delta D(s_j) + \Delta D(\bar{d}_j)$$

-72.222.776 = 32.725.618 + 2.684.390 - 107.632.784

$$\Delta D(\bar{d}_j) = \Delta D(s_k) + \Delta D(p_k)$$

- 107.632.784 = - 65.421.457 - 42.211.327

Taking into consideration these fictional losses for each assortment and the entire range of products, tracing their evolution, the manufacturer is able to observe whether the losses of inferior qualities are being transformed in to actual losses.

Using the data on the losses for each assortment, the manufacturer can adapt the structure of assortments in favor of those assortments that have smaller unit losses, a change that may have very positive consequences on the company's financial balance, due to a bigger turnover and profit, however, taking into account, as it was shown before, the customers' different tastes, preferences and purchasing power.

Another factor that leads to the increase of the losses for each assortment can either be the modification of the structure in favor of the lower-quality classes, or the rise of the price of higher-quality classes, an apparently negative aspect, but quite stimulating in view of achieving higher-quality products.

These losses of inferior qualities, without having a high proportion in the overall production, because "APULUM" joint-stock company, Alba-Iulia, displays a rate of over 75 percent for each product of high-quality class, represent obstacles in view of increasing the company's incomes and profits.

4). Rejection is not a feature of the product's quality but rather of the quality of the entire production process, starting from the conception stage to that of execution. The wastes can be recoverable or non-recoverable and can be caused by one of the following: equipment desertion, nonconforming quality of the raw materials, non-observance of the technological process, superficial training of the employees. In this particular case, none of the above-mentioned actions can be undertaken, and the product must be rejected. These rejections represent a total waste of work and time; the main indicators employed to point out and analyze the value of the rejections are the following:

✓*the total cost of rejections*

$C_{tr} = Q_r \times c$

where: Q_r – the quantity of the rejected products

c - the unit cost for each product

✓*the rejections' proportion in production costs*

$$P_r = \frac{C_{tr}}{C_t}(\%)$$

where: C_t – total production costs

✓*total actual losses due to rejections*

$P_{tr} = C_{tr} - rec$

where: *rec*- the cost of recoverable materials from rejected products

✓*the proportion of the total actual losses in production costs*

$$P_{Ptr} = \frac{P_{tr}}{C_t}(\%)$$

where: P_{tr} – total actual losses due to rejections

The complaint indicators are another category of indicators that reflect the nonquality of products**.** They can be of different types, like:

- the quantity of the refused products at reception and denounced during guarantee;
- the value of the refused and denounced products;
- the proportion of the refused and denounced products, from the point of view of their quantity and value, in all the delivered products;
- the losses caused by qualitative displacements;
- the expenditures undertaken for the improvement of the refused and denounced products.

The complaint indicators refer to the cost of the external desertions. They are analyzed at a certain point, aiming at reducing their value in time. In order to trace the causes, the place where the deficiencies that led to the production of qualitatively nonconforming products took place, the manufacturer will include specific identification data within the registration system of complaints such as: the type of desertions, the time span corresponding to their production, the date of the complaint's reception etc. Over the past few years, "APULUM" joint-stock company, Alba-Iulia, has not recorded any complaint from its customers, and, as for rejections, these are acceptable up to 4 percent of the total production, including the products broken during transportation because of their degree of fragility; however, it is important to mention that this limit has never been reached.

The indicators of quality, and especially those of nonquality, must be included within the range of instruments that are restricted to management. If they are not, they are not controlled and might become a disaster for the company [6, pp. 8]. The Western managers have a different point of view as compared to that of the Romanian ones, because the first ones are particularly interested in the number of complaints coming from the customers, elaborating special registers and undertaking severe measures in view of improving the external situation, while the latter ones focus on quality costs, especially those generated by desertions which must be as few as possible.

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USING NON TARIFF BARRIERS FOR CORRECTING MARKETS INEFFICIENCIES

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ABSTARCT. Using Non Tariff Barriers for Correcting Markets Inefficiencies. Product labelling is considered a type of technical measure that governments use to correct inefficiencies in markets and to achieve other regulatory goals. The purpose of labelling regimes is to inform consumers about attributes of products or how they are produced. Labelling can take various forms, ranging from mandatory information disclosure requirements to private voluntary programs. Because labelling per se does not oblige producers to modify their products in order to enter a market, labelling usually is considered a relatively trade-friendly regulatory approach. Nevertheless, by design or effect, labelling can be costly for businesses and restrict trade.

Introduction

Technical regulations and industrial standards are important, but they vary from country to country. Having too many different standards makes life difficult for producers and exporters. If the standards are set arbitrarily, they could be used as an excuse for protectionism. Standards can become obstacles to trade.

Despite the visible struggle in last few years for trade liberalisation and trade barriers elimination, far less information exists for non-tariff barriers than for tariffs, which complicates understanding of the nature, extent and trade effects of these measures. While past trade negotiations unfolded under GATT regulation have strengthened disciplines on the use of various types of non-tariff measures, concerns voiced by the private sector and disputes between governments indicate the persistent importance of this broad category of measures.

Identification and analyses of non-tariff barriers have significantly evolved. Whereas the focus once was on bans, import licensing, quotas and other trade policy measures taken at the border, concerns have changed over time, with increasing importance of less obvious types of non-tariff measures that make market access difficult [11, p.17]. These include technical barriers to trade (TBT) and other domestic policies in importing countries.

Technical barriers to trade (TBT) refer to technical regulations and voluntary standards that set out specific characteristics of a product, such as its size, shape, design, functions and performance, or the way a product is labelled or packaged before it enters the marketplace. Included in this set of measures are also the technical procedures, which confirm that products fulfil the requirements, laid down in regulations and standards.

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All these measures usually serve legitimate goals of public policy – e.g. protecting human health and safety, or the environment. At the same time, product standards and other TBT have an important influence on market access and the export performance of businesses. They can be costly and burdensome by design or effect and restrict international trade.

The WTO Agreement on Technical Barriers to Trade (TBT Agreement) tries to ensure that regulations, standards, testing and certification procedures facilitate trade and do not become unnecessary barriers. The 1994-Agreement was part of the outcome of the Uruguay Round and extends and clarifies the 1979-Agreement that was reached in the Tokyo Round of multilateral trade negotiations. It requires that technical regulations and standards, as well as testing and certification procedures, be transparent, justified by legitimate objectives, such as national security, prevention of deceptive practices, human health and safety, animal and plant life and health, or environmental protection, and do not create unnecessary obstacles to trade. Countries have the right to pursue domestic policy objectives through technical regulations and conformity assessment procedures; however, when designing these measures, they are required to use relevant international standards, if these exist and would be effective and appropriate [11, p.2].

The Technical Barriers to Trade Agreement **(TBT)** tries to ensure that regulations, standards, testing and certification procedures do not create unnecessary obstacles. This agreement recognizes countries' rights to adopt the standards they consider appropriate — for example, for human, animal or plant life or health, for the protection of the environment or to meet other consumer interests. Moreover, members are not prevented from taking measures necessary to ensure their standards are met. In order to prevent too much diversity, the agreement encourages countries to use international standards where these are appropriate, but it does not require them to change their levels of protection as a result.

The agreement sets out a code of good practice for the preparation, adoption and application of standards by central government bodies. It also includes provisions describing how local government and non-governmental bodies should apply their own regulations — normally they should use the same principles as apply to central governments.

The agreement says the procedures used to decide whether a product conforms with national standards have to be fair and equitable. It discourages any methods that would give domestically produced goods an unfair advantage. The agreement also encourages countries to recognize each other's testing procedures. That way, a product can be assessed to see if it meets the importing country's standards through testing in the country where it is made.

Manufacturers and exporters need to know what the latest standards are in their prospective markets. To help ensure that this information is made available conveniently, all WTO member governments are required to establish national enquiry points.

Technical barriers for assuring consumer protection

Of a continually increasing interest has become investigating various types of technical barriers as part of a work programme on non-tariff barriers to trade, in order to deepen understanding of their nature and trade effects.

It is pursuing work in the area of product labelling, where practices have grown more complex in recent years and traders and governments have voiced concerns about potentially negative implications for market access.

Few goods that are placed on the market escape some form of labelling regulation. Therefore, this type of regulation potentially impacts on a very large portion of global trade [9, p.4].

In recent years there has been a trend towards growing complexity in labelling practices, driven in part by the increasing sophistication of consumers and the widening range of products. The pressure to supply more information is increasing, in terms of not only amount but also detail. This development has been well documented e.g. for food, where there is an extensive history of labels developed to provide consumers nutritional and other health and safety related information (use of pesticides, fertilisers and other chemicals, food additives, irradiation etc.). The demand for more information is also taking hold in markets for many non-agricultural products (textiles and clothing, household appliances).

In the food sector, labelling has become more widespread in many countries. This parallels the development of new products and new production methods, which has contributed to a desire of consumers to know more and the desire of producers to improve their competitive position through marketing [6, p.502]

The number of voluntary initiatives is growing. There has been a proliferation of eco-labelling programs world-wide in particular consumer sectors, and they are spreading to new sectors. They cover now almost any food and agricultural product [2, p.18]. Certification and eco-labelling are also growing in the tourism industry. The latest trend is the certification of “sustainable” natural resources industries, such as forestry and fisheries, and the marketing of associated products with a “sustainable management” eco-label [1]

The information delivered on a label can be different in character depending on the purpose of the message. For example, the information conveyed on a bag of frozen vegetables will be different from the information printed on a packet of cigarettes. The former product label may provide consumers with general information about such attributes as the contents’ weight, vegetable mix, nutrition and best-before-date, whereas the latter product label is likely to include *inter alia* a list of toxic chemicals and health warning. Governments may require warning labels for products that carry certain risks (e.g. are flammable, toxic) or green labels for products that are recyclable or biodegradable. Quality ‘designations’ (e.g. purity level of gold in jewellery or cocoa content in chocolate) and labels describing processes or conditions of production may also provide valuable information on which to base purchases and therefore reduce information asymmetry. Besides specific attributes of a product, label information may describe the way in which a good has been produced, including ethical issues surrounding production practices that consumers may value [8, p.24].

Labelling can also be used to stimulate behaviour change, supporting regulatory goals in situations where externalities associated with consumption and production patterns create significant social costs. Examples are public health and environmental protection. Dietary label information or health warnings can be used to influence consumer behaviour (eating, drinking and smoking habits) so as to reduce public health problems. Government-sponsored or private labelling schemes typically seek to motivate consumers to buy, and manufacturers to produce,

products made of materials or processes that place fewer burdens on the environment. Product packages may for example be required to display a label indicating the percentage of recyclable ingredients or products containing ozone-depleting substances may be required to display an appropriate warning [10, p.19]. Most voluntary eco-labelling programmes assess and certify environmentally friendly products based on their entire life cycle. The basic idea is that labels such as these can differentiate products and consumer demand for the labelled items will increase. Increased consumer demand, and a price premium which the labelled product may carry, in turn are expected to act as incentives for companies to change their production processes or products' content formulas [7, p.274].

Although informational remedies can be viewed as the least intrusive form of government regulation, this does not necessarily mean that labelling causes less interference in trade than the other forms of regulatory policy. While some trade disputes could be averted by the use of labelling regulations instead of other regulatory options, there is much evidence that labelling can also create trade friction. It appears that the economic and trade effects of labelling depend on the characteristics of a given product market as well as the labelling policy chosen and its design and implementation.

Irrespective of the degree to which labelling may affect trade, there are a variety of ways in which labelling is sometimes perceived to act so as to restrict trade, some of which are mentioned here for illustration:

- The existence of **different requirements for labelling in different countries** imposes costs for producers who wish to supply several markets. Similarly, labelling requirements differing across regions of a state can affect internal trade. This raises the issue of harmonization or other forms of regulatory rapprochement.
- By design or effect, the **process of obtaining a label may be more difficult** for foreign producers, e.g. if compliance procedures may be more cumbersome or stricter, including because of customs controls.
- **Adjustments that labelling schemes require suppliers to make** may go well beyond producing and paying for the label. For example, producers may have to set up identity preservation or other segregation procedures to ensure the traceability of inputs and final goods [3, p.27].
- The effect of the label on consumers depends*, inter alia*, on the type of information or message conveyed by the label. The **labelled information may carry negative connotations, implicit warning, and bias consumers against competing products**. Some messages may make the imported product appear less attractive. This has been an issue in some controversies over labeling [5, p.10].

Thus, a labelling regime can entail a cost element that may be significant or small and may be the same for domestic and foreign manufacturers or suppliers or affect them differently. In some cases, the additional costs may be attenuated by the willingness of consumers to pay "price premiums" for labelled products. What needs to be taken into account in the overall evaluation of trade effect is how the burden of the labelling-related costs is distributed along the supply chain, i.e. whether costs are passed on to consumers in the form of higher prices at the retail level or whether the costs are passed on to foreign exporters in the form of lower prices paid for the imports.

Concluding Remarks

As the review of this material has shown, the regulatory activity of product labelling is very diverse. The review of labelling notifications finds that labelling schemes are predominantly aimed at consumer information and protection, although governments use labelling also to advance other objectives, including the facilitation of trade. The review also confirms that there is significant regulatory activity in this area for the agricultural and food markets. TBT notifications provide some insights into evolving labelling practices even though the notifications process itself provides an incomplete picture of the regulatory activity in this area and the notifications themselves contain no data indicating what the specific trade effects of a particular measure would be.

Concerns which countries have expressed about specific labelling measures in the TBT Committee identify certain aspects of the regulatory activity in this area that cause problems in trading relationships. While very few disputes about labelling under the WTO dispute settlement system have occurred, concerns and disagreements among trading partners over labelling approaches and many more complaints from exporters faced with label schemes in their export markets suggest the need for a fuller analysis of developments in this area. Forthcoming work on this project aims at contributing to a better documentation of the issues that give rise to these concerns, along with an exploration of market opportunities that labelling policies may offer. It will also review what the existing theoretical and empirical work can contribute to the understanding of the trade significance of labelling policies.

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THE INDEX OF HUMAN DEVELOPMENT, A MARK OF THE SUSTAINABLE DEVELOPMENT

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ABSTRACT. The Index of Human Development, a Mark of the Sustainable Development. Human Development Index is used to quantify the long term evolution of average human development level, being the synthesis of three essential dimensions: a long healthy life, an appropriate education and a decent standard of living. Its value is representative for goals like: to rank the regions from a territory after their level of development; to quantify the local disparities; to analyse the dynamics of human development in a certain period of time; to localise underdeveloped zones; to build up the regional development policies.

A. Human Development – An Element of the Sustainable Development

Broadly, human development may be defined as a process of enlarging and diversifying people's choices. The respective notion exceeds the sphere of macro economical indicators (a category in which the essentials are the national income and the GDP, both overall and per capita); it even goes beyond human resources in that it evaluates factors like people's liberty and dignity, their role in development. Specialists sustain that human development is, eventually, "a process by means of which people are given more options" [9] – by the mere fact of being more complex than a simple process of economic development.

Given the above evidence, human development may be regarded from multiple points of view: economic (focused on ranks regarding different implied indicators), social (because it presupposes large human communities), sociological (based on the human liberty to choose and decide, according to personal desires and possibilities), philosophical (treating the individual by way of personal development) and psychological (taking into consideration the reason, the motivation determining and sustaining individual activity).

Human development is a basic constitutive element of the sustainable development. From this point of view, it has to overcome several difficulties: the rectification of the negative aspects and the implications determined by unemployment and inflation; the actual dams raised by poverty; solving the structural crises in worldwide countries, the food and the raw material crises. Nowadays, the evolution of international economy is tributary to permanent asymmetries in the development of different states (human evolution included). That is why, besides the categories defining development in a classic formulation (as interdependence of environmental issues, of general welfare and economic development), human development also has in view the effect reverberating on economy determinants like culture, management and the social capital [4].

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The development occurs as a result of global production increase, which leads to GDP improvement per capita. Yet, this phenomenon is possible only after acquiring superior scientific and technologic knowledge, inside an information – oriented society. In other words, we deal with the possibility of appealing to groups of people inclined towards the "new", capable of "adventuring" themselves in the attempt to apply this "new" [3], of determining institutional changes and validating social adjustments.

B. The Index of Human Development and the Human Development Reports

People's preoccupation for the nature and the purpose of the development led to the apparition of specialized organisms at an international level. What's more, since 1990, means of adjusting and assessing the so-called HDI (Human Development Index) have been elaborated and put to practice, inside U.N.O., by way of the UNDP (The United Nations Development Program).

HDI represents a complex instrument meant to evaluate a multitude of indicators referring to a national economy. As UNDP shows, it is constituted by the aggregate influence of a wide series of criteria [7, pp.139-250; 1, pp.650-663; 5], among which: the population; the demographic evolution; the average life-span; the state of health and the access to medical care; the teaching rate; the percentage of highly educated people; educational disparities; qualified people rate; nourishment; daily calorie consumption; nourishment safety; employment rate; the level of poverty/ welfare; human safety; individual responsibilities; personal initiative; technology; investments in the social sphere; urbanization; economic performances (synthetic indicators at a macro- level): GDP per capita, national income per capita etc.

The index of human development is a *relative measure* that stems from the analysis and the calculation of indicators reflecting as much information as possible from the ensemble of previously presented components, with the contribution of market value spans (see the minimal/maximal limits in the case of each factor), like: life-expectancy, between 25 – 85; the teaching rate, between 0 – 100 percent; the average education rate, between 0 – 15; per capita income, between 200 – 40,000 USD (inside the PPP). For each above-mentioned component / factor, the HDI is approximated as a ratio (like any other index), in which [1, p.644]:

- the numerator is rendered as a difference between the value registered during the human development in the specifically individual domain and the given value, denoting the accomplishments;

- the denominators are normative connotations, revealing the discrepancy between the minimal value and the maximal one for each indicator.

Consequently, the human development index is a specific means of adapting – on long terms – the *medium level of human development*, deduced from a set of norms that are related to the values of each HDI components. Roughly speaking, by "reducing" the large series of preceding factors, the HDI is the synthesis of three essential dimensions: 1. a long and healthy life; 2. a suitable education; 3. a decent life standard (underlined by the per capita income). The numeric value of HDI reflects the demarcation line separating a certain country from the possible maximal level of human development (a level for which the HDI = 1.000, hypothetically determines: an 85 years old life – expectancy, a 100 percent teaching rate, a 15 years average education rate and a 40,000 USD per capita income).

The HDI magnitude is representative for: classifying regions in a territory, according to the level of development; quantifying regional disparities; analyzing the dynamics of human development in a given period of time; spotting the underdeveloped regions; founding the strategies of regional development. In its present form, the HDI cannot be referred to in relation to the short term depiction of changes – at least not in what two of its components are concerned: the life-expectancy and the teaching rate of adult population – which do not match short term strategic interventions.

In the *Annual reports on human development* elaborated by UNDP (according to regions and countries), the HDI is calculated on the basis of the main series of international statistics available at the moment of the respective document elaboration. Given the fact that agencies supplying information at an international level continuously improve series of data, they annually or periodically achieve both an actualisation and a revision of information and tendencies, starting from the modifications gradually occurring (i.e. the HDI value and the position of one state or another as comprised in several editions of the *Human development report)*. The motivation of these approaches consists in the fact that changes registered in the list of countries included in the HDI hierarchy may very well influence the position occupied by a certain state in the Report (even though the estimation of the HDI consistently applies to the same methodology). It may, for example, happen that a certain state downgrades in a hierarchy, between two successive reports; but, if we take into consideration comparable data – reviewed with the aim of reconfigurating the true value of the index – the position of that country inside the Report and the HDI values might exceed the preceding estimation.

For most of the states having approximately the same level of human development, the transfiguration of the relative position occupied in the HDI hierarchy often reflects only slight differences among basic indicators. It follows that the index values and the positions of some countries in the HDI list, in distinct Report editions, are not immutable values. For example, in 2004, at the occasion of annual revision of data concerning the GDP per capita (at PPP), teaching rates for adult population in several countries have been significantly modified. Due to these changes and to the adherence of two new states to the HDI list, completing the comparison between hierarchical positions of the last two reports has become more problematic now than in the past.

The latest Annual report concerning human development inside UNDP, in 2004, is called “Cultural liberty in the context of contemporary world diversity”, its coordinating director being Sakiko Fukuda-Parr. The content of this Report benefits from the contributions of either former Nobel Prize winners in economy or of ex state presidents, of famous names in international economy. The remarkable introductory chapter belongs to the 1998 Nobel Prize winner in economy, Amartya Sen (one of the founders of the UNDP Human development reports). Here is a fragment outlining his conception: “Instead of praising – with no apparent reason – inherited traditions, instead of warning people against the danger of a possible or imminent conflict of civilizations, the perspective of a human development should better focus on the importance of liberty in cultural spheres and on strategies of defending and enlarging cultural liberties that people might benefit from.” [9]

Within the 2004 Human development report there are three categories of states, organized on distinct stages of development of the 177 countries taken into

consideration, which were compared from the point of view of estimated indicators [7, pp.139-142 and next, on categories and groups of states]:

a) The first category (in which the HDI is established between the maximal value of 0.956 and the minimal 0,800), comprised of 55 enlisted countries, stipulates that the first places in High Human Development are occupied by Norway (HDI = 0.956), Sweden (HDI = 0.946); they are followed by Australia (HDI – 0.946), Canada (HDI = 0.943) and Holland (HDI = 0.942). The same group of High Human Development contains Belgium, U.S.A., Japan, Austria, France etc.

b) The Medium Human Development category comprises 86 such states (their HDI being situated between the maximal 0.796 and the minimal 0.501), starting with Bulgaria (HDI = 0.796) and the Russian Federation (HDI = 0.795); the 69th place is occupied by Romania (HDI = 0.778, the same as in the case of Venezuela), followed by Ukraine; the same category also includes Brazil, Saudi Arabia, Tunis, Georgia, the Republic of Moldova (number 113 with an HDI = 0.682) etc. Comparatively speaking, the HDI hierarchy of 2003 mentions that Romania was number 72 (as opposed to number 69 in 2004).

c) The last category of Low Human Development comprises 36 countries (with an HDI between the maximal value of 0.497 and the minimal 0.273), starting with Pakistan (HDI = 0.497), Togo, Congo, Lesotho etc. and ending with Niger (HDI = 0.292) and Sierra Leone (HDI = 0.273).

A general view on the 2004 Human development report shows the following data, which are included in Table 1:

Table 1.

The Human Development Index – Information on regions / countries, according to the 2004 Human development

Regions / countries / stages of development	Life expectancy at birth (years) 2002	Teaching rate at adults (%), 2002	GDP/capita (PPP USD) 2002	HDI
International level	66.9	...	7,804	0.729
OECD	77.1	...	24,904	0.911
High Human Development countries	77.4	...	24,806	0.915
Medium Human Development countries	67.2	80.4	4,269	0.695
Low Human Development countries	49.1	54.3	1,184	0.438
Central-Eastern Europe and CIS	69.5	99.3	7,192	0.796
ROMANIA	**70.5**	**97.3**	**6,560**	**0.778**

The source: Data are obtained from the *2004 Human Development Report*, at http:/www.undp.org.in/hdr2004/Report_hdr2004/hdr04_HDI.pdf, p.142 (general frame) and p.140 (data concerning Romania) – accessed in 07.05.2005.

As it is shown in Table 1, Romania occupies a favorable place – both in Central and Eastern Europe, and worldwide – with regard to life expectancy at birth and to the teaching rate in the case of adults (persons of 15 years old and more).

Similarly, the interpretation of data offered by the 2004 Human development annual report shows that the Romanian GDP per capita (at PPP) is 6,560 USD/inhabitant; the numbers are below both the High Human Development countries and Central-Eastern Europe regions + the Commonwealth of Independent States CIS (7,192 USD/inhabitant); they are also below the international ensemble (7,804 USD/inhabitant). Yet, we should notice that the value of the GDP per capita is above the Medium Human Development countries (4,269 USD/ inhabitant). As the Romanian HDI is concerned – estimated as 0.778 – this represents a value close to that of Central and Eastern Europe = CIS (where HDI = 0.796), exceeding the Medium Human Development regions (HDI = 0.695) and even the international ensemble level (HDI = 0.729).

It should also be mentioned that one of the difficulties of determining the HDI in the 2004 Report stemmed from the new approaches to the problematic of its actualization, among which: ethnical tensions and social exclusion; immigration, its reasons and consequences; culture as a global product; multicultural federalism; religious liberty. It is practically impossible to assess the level of development by means of indicators that do not imply actual calculation. That is why public results of the Human development report can be completed – because not entirely numerical – only if non-numeric aspects (difficult to analyze and estimate) are considered.

C. Conclusions

After evaluating latest results in the attempt to trace Romania's evolution towards increasing life-standards, optimist anticipations affirm that 2015 might be the year our country will manage to exceed the HDI value of 0.800, thus marking a decisive step in the process of its development. Economic rise becomes imperative once it implies attaining several fundamental purposes as stipulated in the 2004 Global human development report. *The Millenary Development Objectives* [2], supposedly attained in 2015, are the following: 1. eradication of extreme poverty and hunger; 2. universal introduction of primary education; 3. supporting sex equality and promoting women; 4. reduction of infant mortality; 5. improvement of maternal health; 6. fighting HIV/AIDS, malaria and other diseases; 7. maintaining environmental durability; 8. creating a global partnership for development.

The analysis of the latest Human development reports reveals that their elaboration had at least two common elements in view:

• The fact that economic, social and cultural-educational phenomena have historical roots (the process accompanying reality's progress)

• The fact that current situations are related to past events (a proof of economy's cyclic character).

With this in mind, knowing the socio-economic, cultural, scientific and ecologic determinants of Romanian realities presupposes:

✓ A scrupulous establishing of those indicators relevant for the state's situation (level of development, a potential of self development, of rise and of cooperation with other states);

✓ The identification of socio-cultural tendencies at a regional level, aiming at a universally European and international integration.

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STUDIA UNIVERSITATIS BABEŞ-BOLYAI, OECONOMICA, L, 1, 2005

AGRITOURISM MOTIVATIONS

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ABSTRACT. Agritourism Motivations. This paper tries to present some elements of what agritourism can be. This specific form of tourism has the role of sustaining rural development in general and rural community, the farms in particular.

The fragmentation of landed property (the medium surface of the exploitation is 2 hectares, split in many parcels) is the main characteristic of Romanian agriculture. This fact is due to the existence of many inheritors of a single parcel in the case of decided owners. In the same time, the new owners or the private farmers, as they are being named in the landed reform, continue to have a low level of endowment with mechanized agricultural equipments.

Nowadays, the majority of rural areas are left behind and many inhabitants of the villages are living in poverty. The main cause of rural poverty is the absence of the adequate earning possibilities in the rural area. The agriculture had and still has the role of professional buffer, instead of being a factor of economic growth. In these conditions, a good part of the labor force can leave the agriculture without necessarily causing the reduction of agricultural production. The question is can the other non-agricultural activities from the rural area absorb these people? The under-development of rural areas has been deepened by the sector policies, especially by the agricultural policy. Such measures like the sustaining of the agricultural prices have delayed the development of some competitive private channels for the acquisition of input and the retail of agricultural products.

Besides, the high percentage of the subsistence farms was breached the development of agricultural markets, as the demand of raw materials and production factors was low and the offer of agricultural products was very weak. All these reasons led to the maintenance of the mono-occupational structures in the rural areas. The rural inhabitants are engaged in strong seasonal activities with low added value. The migration in the urban areas of the upstream and downstream branches bound to agriculture has weakened the rural markets. The absence of the non-agricultural activities in the rural area has minimized the effect of multiplication between agriculture, industry and trade.

The drastic reduction of the number of employees has blocked the access of rural inhabitants to the working places from the urban areas and forced the agriculture to absorb the excess of labor force, leading to high level under-employment and low marginal labor productivity.

Within the strategies of economic development, the creation of new activities has had a very important role. At present, the role of non-agricultural entrepreneurs

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as a source of creation of new working places and income is limited. That is why the development of the non-agricultural activities integrated within the farm and complementary to the agricultural activities represents a real alternative for the rural community.

The rising and the organization of every settlement was based on the agricultural output system. This essential characteristic of the rural areas constituted the basis for the further development of other activities which made possible the rising of the present-day multifunctional and polyvalent village.

The analysis of the evolution of the correlation rural and agriculture reveals important structural and functional mutations. If in the past the majority of the rural activities were agricultural, nowadays the percentage of the non-agricultural structures and activities has become more important. The creation of a great number of non-agricultural activities in the rural areas requires a great deal of attention because the major mutations of the rural can affect its fundamental characteristics and end by transforming into urban area.

The rural area is an individual, specific and authentic space, not affected by industry. The features of authentic rural space stand out from those of industrial, urban or mining areas, whether we refer to the economic structure, the population, the working activities, the culture or the social life.

The rural area can be easily recognized because it is unique. It is not common not to recognize the rural area when we see it. In general, in the rural area the food is produced in traditional conditions, using the ancient technologies. This is the reason for why the social relations in the rural areas are based on kinship and neighbourhood.

The local community and the State have to find an alternative for the rural development, under these circumstances. Without mistake, the agritourism is an appropriate alternative, because it functions within the farm, and not the least, because of its influence on the rural area.

There are many reasons why the agritourism should exist and many hopes bound to its development. The people who manage and develop this type of tourism are animated by the need of increasing their income. This need is the main motivation on the individual scale. The rural community and the State can also have their own motivations for the promotion of agritourism.

Generally, the rural tourism and the agritourism in particular, have positive effects on the tourists, on the performing farms, on the local community and on the entire region. The effect can be different: economic, social and cultural. The entire rural community has a great deal to gain from the agritourism, which becomes an active factor of rural development. This is how the practice of agritourism is done the benefit of the farm, but also for the benefit of the tourists, of the local community and of the entire region.

Generally, the small farms are managed directly by their owners. This means that the owners are in the same time the inhabitants of the settlements where they carry on their activities. More exactly, they have owned places for living which can be adapted to the agritourism requirements. In the particular case of the Romanian economy, characterized by the restructuring of the industry and the migration of the population back to the rural area, the agritourism represents a solution against povrsty

and against this migration process, being a guarantee of the maintenance of the traditional way in the rural activities.

In a synthetically way we can assert:

Economically, the agritourism is a type of business adequate for the rural area. It provides new working places, it encourages the traditional activities and finally, but not the least, it is a source of income, which remains within the rural region. In the same time, the presence of tourists allows the creation of local development funds for infrastructures.

The practice of different forms of tourism in the rural area, without any connection with the rural space can have negative effects on the latter, for example the penury of agricultural and food products due to the increase of the demand for such products, the unwanted influence of the international cuisine on the local one or the destruction of the landscape and the ecological balance due to the increase of the built surface.

Socially, the agritourism has a great contribution to the increase of the quality of life in the rural area, to the increase of the hygienic, sanitary and behavior standards of the rural inhabitants, the enrichment of the diversity of rural activities, especially when the youth are concerned, to the stabilization of the rural life, to the increase of the number of young people engaged in new activities, to the training and formation of the new generation, the establishment of friendship between tourists and local inhabitants, to the interregional cooperation, to the attenuation of the development differences between regions and to the creation of a positive and attractive image of the Romanian rural areas.

Ecologically and culturally, the agritourism as a direct provider of income for the local community members offers solutions for the conservation of the available resources, for the integrated development of the rural areas, for the maintenance of the rural landscape and the environmental protection, for the revival, the development and the capitalization of the local traditions and festivals and handicraft, for the maintenance and restoration of historical and artistic monuments.

The practice of agritourism as an integrated, complementary activity maximizes the global positive effects and minimizes, even abolishes the negative effects generated by the practice of other forms of rural tourism.

As we previously asserted, the agritourism creates and stimulates new rural activities, for example the handicraft, the small industry, the fisheries, the environmental protection, the activities bound to the infrastructure etc. At present, when the authorities and the local community have to identify a development strategy for the Romanian villages, the agritourism can represent a real unitary development system. This type of activity is based on the potential of the rural areas, and the investment amount is relatively smaller than those necessary in other sectors, translated in an attraction for the rural entrepreneurs.

The agritourism increases the economic capacity of the farms because of the growth of the internal consumption of agro-food products within the farm where these products were produced. In the particular case of foreign tourists, the agritourism can be considered a form of export of agro-food products. The fact that most of the products consumed during the agro-tourist activity come from personal

production this increases the rentability of this activity and keeps the services price under the average price from the classical tourism. According to the Romanian scientific literature [3, p.302] the calculations show that the price of a meal in an agritourism farm is lower with 40-50% than a meal served in a hotel restaurant. The explanation comes from the simple fact that the agritourism price doesn't include the value added tax, the commercial, traveling expenses, warehouse expenses etc. The meat, the eggs, the cheese, the milk the butter are put directly on the consumer's table. In the same time, the price of the agro-tourist services doesn't include additional expenses, fees etc. This means that the price of the agro-tourist services is relatively low.

Consequently, the agritourism policies have to protect the price advantage of this specific form of rural tourism by exemption from taxes and reduction of fiscal pressure or the agritourism farms could loose their traditional clients.

As it is shown above, the agritourism joins the agricultural activities with the tourism services, within the farm, being a source of supplementary income which generates positive effects on the farms.

The agritourism activity a "family business", which takes place at home, is in the same time a source of income which goes directly in the farmer's pocket, it requests low investments, itoffers cheap services, it can be well integrated in the existent living place, it doesn't imply changes of the landscape and it can be adapted to the local habits and traditions.

All these features are the farmers' motivations for practicing agritourism and plead for the development of the agritourism in Romania.

The practice of the agritourism generates some advantages for the farms:

1. it improves the use of labor force in the farm (which is very low at present), contributing to the rural stability and the inversion of the rural-urban migration to urban-rural migration;

2. the external activities of the members of the family are replaced by inner activities, the farmers and their families gain experience and knowledge in the services' sector and in the same time the shuttle phenomenon is being reduced;

3. a secure job and supplementary income for the family members inside their farm, financial balance for the farm. The agritourism income is entirely collected by the family, without being passed to different national or international intermediaries, who could capitalize it outside the rural area;

4. a direct contract between the farmers and the tourists with a socio-cultural impact on both parts. On one side, the farmers learn from new experiences, discover new information about the urban area, with all its advantages and disadvantages, and on the other hand, the tourists discover the country life, sometimes hard but characterized by specific and unique human relations and social life and folk culture. More than that, all these unique features are different in every region, village or even farm.

5. the restoration and adaptation of the old buildings and infrastructure of the farm, the improvement of the existent living area;

6. the direct selling of quality typical products; women can prove their managing abilities;

7. the maintenance of the rural landscape and the conservation of the village values.

To benefit from all these advantages, the agritourism farm has to be privately supported.

The tourists can benefit from the following:

1. the prices and the fees are much lower and convenient for the tourists and even the less rich people can afford this type of tourism;

2. the tourists can choose every time the right destination, they can visit different regions of their country or even of other countries because the agritourism farms are placed all over the rural area;

3. every tourist comes with his own expectations, wishes, aspirations, likes and dislikes, but still, everyone has the possibility to choose from the various types of comfort and the good hosting conditions, as well as the variable level of prices;

4. the direct contact with nature, with the agricultural and rural activities, with the rural area and its traditions allow the tourists, and especially the children to come in contact with nature, with the different rural activities like riding of a horse, folk culture and traditions. Frustrations of the living in a big town are sometimes the only reason why which the tourists visit the countryside. The rural tourism and the agritourism allow the tourists to come in direct contact with every-day life in the country and create the premises of a mutual understanding of the people coming from different areas.

The agritourism is a direct provider of income for the local community and facilitates the improvement of the living standards, it leads to the development of the infrastructure and protects the environment.

The regional benefits of the agritourism are the conservation of the tourism income inside the region, instead of being lost in the favor of the producers and the investors from outside the region; in the same time the social pressure from inside the region is diminished, the regional and local values are preserved, the differences are becoming less visible between regions, making possible a better interregional cooperation.

The State and the local administration have to support and stimulate in every way they can the agritourism. The agritourism can be implemented only by the conjugated, continuousl effort of the farmers, the state and the local authorities. Only then we can benefit from advantages: such as higher quality living, healthy environment, preservation of traditions.

To benefit from the new economic possibilities which characterize this period of time, new knowledge and abilities are requested. The implementation of some active measures for the development of the working people from the country is necessary. These measures can be:

- courses of continuous professional traing in the rural area meant to cover the lack in education and to create the conditions for professional improving;
- training in the direction of farm management and non-agricultural activities from the rural area management; this particular objective can be successfully accomplished by supporting the professional literature in this domain;
- the guarantee of the access of the workers from the rural area to the active measures of re-qualification specific for the unemployed;
- public support for the development of the local infrastructure, using in this activity the local labor force.

In conclusion, we consider that it is an emergency to create a national,

regional and local system for monitoring the rural area, in order to know exactly the situation of the Romanian village. In the same time, it is imperative to elaborate local, regional and national programs for the development of the rural area, because a new rural philosophy is needed.

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PREDICTING FINANCIAL STATEMENTS

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ABSTRACT. Predicting Financial Statements. This paper try to emphasize the importance of predicting financial situation for any firm's management, necessity of this process and certainly are present a most used practice modalities of preview a balance sheet, a profit and loss account and a cash-flow statement.

1. The need for financial prediction

In any activity, the existence of a program that gives the future coordinates of the activity is very important. In the economic activity such an objective must be obtained. The enterprises must plan the future levels of their assets, expenditure, income, results in order to efficiently allocate their sources of funding and their expenditure.

The firms need more assets if they wish to increase their sales, meaning that they have to make new investments. For this they need sources of funding that in most of the cases are represented by contracting new loans. These loans generate interest. Although a part of financing can be self finance, a high growth rate implies external financing even for a very profitable firm. In these circumstances every firm, in its process of financial prediction, needs to constantly have solvability, liquidity, profitability rates.

As a conclusion, any accounting management that wants to be efficient must accept the predicted financial statements. The degree of detail of this financial situation depends upon the period of time considered.

The prediction of financial situation refers to the following documents:

- the predicted financial position synthesized in the actual predicted balance sheet
- the predicted financial performance synthesized in the predicted Profit and Loss account
- the modification of the predicted financial position reflected in the predicted Cash-Flow
- the predicted efficiency of the activity reflected in the main predicted financial indicators.

2. Prediction of sales

Prediction of sales, that is the estimation of net turnover for a certain future period, is the starting point in estimating the future funding needs. The prediction of future sales is done by analyzing the net turnover of the last 5 or 10 years, its trend giving the future evolution. This can be very useful. Even so, the hypothesis that the sales will grow in the same rhythm as in the past not always can be valid and

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can lead to unrealistic predictions. Because of this other information is being analyzed, such as:

1. Naming the strategic fundamental objective of the firm.

Every firm acts in a specific economic and competitive environment and because of this the future strategic objectives are dictated by this environment. Practically, a firm can establish a certain objective. The degree in witch this objective is accomplished is very much influenced by the governmental policy, by the legislative system, etc.

2. The elaboration of a market research.

Every company produces for the market, and because of this it must know the demand. The market research must offer the producer information on future evolution of demand and factors that can act in the future. In real activity this information has a certain degree of probability because many natural, political, legislative factors can appear.

Every good prediction is made with a lot of effort. If the prediction is wrong, the consequences can be very bad:

a) If the demand is higher than the prediction, the firm won't be able to satisfy the customers. The consequences can be accumulated orders, delayed delivers and finally lower market share because the clients go to other firms that are more competitive and prompter with the deliveries.

b) On the other hand, if the prediction regarding sales is too optimistic, the company will be in the situation of having more product reserves and unused technology. This will generate low rotation speed for fixed assets, increased costs which will result in general depreciation of the firm's stocks and value. If the company has financed its development with bank loans, the problems could be much worse.

Because of these a correct sales prediction is useful for a firm's long run success.

3. Methods of predicting financial situation

We will refer to the methods of predicting the Balance Sheet and the Profit and Loss Account because the Cash Flows and the financial indicators will come as a result of the predictions made regarding the financial position.

Consequently, the following methods can be used for predicting the two documents:

The most used method for the prediction of financial statements is "percent of sales", witch can be successfully applied in the following hypothesis:

a) the majority of the elements of the balance sheet varies together with the sales;

b) the current value of the firm's assets are optimal for the current value of the sales.

The first hypothesis refers to most elements of financial position but there are also elements that don't vary in the same way as the sales: we are talking here about shareholders equity, long term liabilities, liquid assets and fixed assets.

The second hypothesis implies that an increase in sales doesn't necessarily means an assets growth, especially fixed assets. The assets can be underused and a sales growth can be determined by a full usage of the fixed assets. In this case there won't be a relationship between the value of the assets and the volume

of the sales. This is mainly the case of firms that need many fixed assets for production and not firms with commercial activity.

The method “percent of sales” has the following stages:

1. Identification of the financial elements that vary together with the sales;
2. Each of the past elements is divided by the net turnover to determine the share of that element in total sales and the result in used in the next stage;
3. Estimation of income and expenditure levels and prediction of Profit and Loss Account for the next period, starting from the prediction of sales.
4. The predicted value of sales is multiplied by the share of each element determined at point 2 in order to obtain the predicted value of the financial elements that vary together with the sales.

These stages can lead to a predicted balance sheet without equilibrium between assets and liabilities. In the liabilities will appear a so called “need for supplementary funds” – NSF. This need will generate new loans, from the shareholders or banks and the choice will start from a compared analysis between the costs of these two and existing restrictions. The restrictions regarding supplementary loans are determined according to:

- the maximum level of loans established by the indicator “degree of debt”;
- the loan estimated for the following period;
- the difference represents the loan that the firm can contract.

If the need for funds is not satisfied by contracting new loans, then new shares are issued and the assets grow. The equilibration of predicted balance sheet by contracting loans will take into consideration the cost of these new loans (the interest or the dividends).

The need for funds can be determined from the estimated balance sheet equilibrium or a formula that has some advantages:

a) it reveals the relation between the sales growth and the need for finance;

b) by the equation NSF=0 we can see the growth rate that can be financed from the firms resources; this growth rate is know as the sustainable growth rate.

The formula for the need for financing is:

$$NSF = (ACR/CAN)*\Delta CAN + (AI/CAN)*\Delta CAN - (DCR/CAN)*\Delta CAN - (PV/CAN)*\Delta CAN - M*Rap*CAN1$$

ACR – current assets that grow together with sales growth;
CAN – net turnover;
AI – fixed assets that vary along with sales;
DCR – short run debts that vary along with sales;
PV – provisions against risks;
M – (Net profit/CAN)*100;
Rap – 1 - % of net profit given as dividends.

For exemplification we will consider a company α that has the following predictions:

- the estimated net turnover is 1.500 mil. Lei for year N+1;
- the profit rate (Net profit/Net turnover)*100 is estimated at 4%;
- from the net profit 50% is given as dividends;
- general liquidity rate is not to exceed 250%;
- debt degree (total debt/total liabilities)*100 is not to exceed 50%;
- the production technology is used at the maximum capacity;

- the expenses will decrease to 60% of sales;
- assets sales is estimated that will generate 300 mil. Lei loss;
- other exploitation expenses are estimated at 98 mil. Lei;
- profit tax is 16%.

The balance sheet and the profit and loss account at 31.12.year N is:

Simplified Balance sheet at 31.Dec.year N (Thousand lei)

Fixed assets	300
Current assets	390
Stocks	200
Commercial effects to receive	170
Liquidities	20
Total assets	690
Commercial effects to pay	100
Taxes and wages to pay	50
Current debts	150
Bonds	140
Total debts	290
Share capital	200
Reported result	200
Net result	10
Repartition of result	(10)
Total shareholders equity	400
Total liabilities	690

The simplified profit and loss account at 31.dec.year (Thousand leis)

Net turnover	1000
Material costs	700
Amortization costs	20
Loss from asset selling	168
Exploitation result	112
Interest costs	100
Current result	12
Gross result	12
Profit tax	2
Net result	10

Simplified balance sheet at 31.12.year N and simplified predicted balance sheet at 31.12.year N+1 (thousand leis)

	YEAR N		YEAR N+1		
	Real value	% of sales			
	(1)	(2)	(3)	(4)	(5)
Fixed assets	300	30	450	450	450
Current assets	390	39	586	586	586
Stocks	200	20	300	300	300
Commercial effects to receive	170	17	256	256	256

	YEAR N		YEAR N+1		
	Real value	% of sales			
Liquidities	20	2	30	30	30
Total assets	690	69	1036	1036	1036
Commercial effects to pay	100	10	150	150	150
Taxes and salaries	50	5	76	76	76
Current debt	150	15	226	226	234
Bonds	140	-[1]	-[1]	140	284
Shareholder equity	200	-[1]	-[1]	200	288
Reported result	200	-[1]	-[1]	230	230
Net result	40	-[1]	-[1]	60	60
Result repartition	(40)	-[1]	-[1]	-60	-60
Total equity	400	-[1]	-[1]	430	
Available funds	690		226	796	1036
Need for suplimentary funds	0	-	810[2]	240	0
Total liabilities	690	-	1036	1036	1036
Net turnover	1000	-	1500	1500	1500

1 – not applicable (these positions don't vary along with the sales)

2 – If the bonds, shares and profits remain in the same position as in year N their contribution to the funding need is 540 mil. Lei. Therefore there is still need for 810 – 540 = 270 mil. Lei

The estimated balance sheet for 31.Dec.N+1 is obtained from the one for 31.dec.N like this:

- The values in column (1) represent the effective values of balance sheet elements at 31.dec.N
- The values in column (2) represent the share of balance sheet elements that vary along with sales. The shareholders equity and bonds are not present here
- The values in column (3) are obtained by multiplying the percents obtained before with the estimated net turnover of 1.500 mil. Lei
- For column (4), we introduce in the balance sheet the values for bonds and shareholders equity from year N. At least one of these positions will suffer changes later
- Also in column (4) we add to the reported result at 31.dec.year N the estimated growth of profits along the year. The profit rate estimated by firm α is 4%. The estimated net turnover is 1,500 mil. Lei so the estimated net profit is 60 mil. Lei. The percent of dividends paid from the net profit is 50%, that is 30 mil. Lei. The remaining 30 mil. is reported to be attributed in the following years witch means that the total value of reported result will increase from 200 mil. Lei to 230 mil. Lei estimated for year N+1.
- In column (4), we sum up the values for all elements in the balance sheet and we obtain an estimated asset of 1,036 mil. Lei. Also the values estimated for debt and shareholders equity are summed up and the value is 796 mil. Lei that is the available liabilities for financing the assets. The supplementary need for funds will be 240 mil. Lei obtained by equilibrating the assets and the liabilities.

- The values in column (5) are obtained by determining the ways of financing the need for 240 mil. Lei. This is done starting from the restrictions imposed for financial indicators like this:

The restrictions regarding the degree of debt imposed:
Maximum of debt allowed = 0,5 * Total assets = 0,5 * 1,036 = 518 mil. Lei
Minus: Loaned capital estimated for year N+1:
Current debt = 226 mil. Lei
Bonds = 140 mil. Lei
Total = 366 mil. Lei
Maximum of supplementary loan = 518 – 366 = 152 mil. lei
The restrictions regarding the general liquidity degree impose:
Maximum of current debt allowed = Current assets allowed/2.5 = 234 mil. Lei
Minus: Current debt estimated for N+1 = 226 mil. Lei
Maximum of supplementary current debt = Maximum of current debt allowed
Current liabilities already estimated = 234 – 226 = 8 mil. Lei
Need for shareholders equity
Total supplementary need for funds = 240 mil. Lei
Maximum of allowed supplementary loan = 152 mil. Lei
Need for shareholders equity = 240 – 152 = 88 mil. Lei
The predictions for external financing are:
Current debt = 8 mil. Lei
Long run debt = 144 mil. Lei
Supplementary shareholders equity = 88 mil. Lei

We haven't taken into consideration so far the effects generated by the supplementary sources of financing. We are talking about the supplementary interest that appears together with the loans or the supplementary dividends to pay once new shares have been released. In this case, we assume that the loans impose an interest of 4 mil. Lei. Also we assume that the new shares are released at the end of the year so that no supplementary dividends are to be paid. Consequently the net result will decrease to 57 mil. Lei (the estimated gross result after taking into consideration the interest = 72 – 4 = 68 mil. Lei; the estimated net result after taking into consideration the interest = 57); this means the growth of the reported result will be of 28.5 mil. Lei. This will lead to a sum of 1.5 mil. Lei that is still needed for financing the assets. This amount cannot be funded by issuing new shares because the debt degree is already maximum.

After taking into consideration the effects of debt the estimated simplified balance sheet for 31.Dec.year N+1 will be as follows

A. Simplified provisioned balance sheet for 31.Dec.N+1 (mil. Lei)

Fixed assets	450
Current assets	586
Stocks	300
Commercial effects to receive	256
Liquidities	30
Total assets	1,036
Commercial effects to pay	150

Taxes and salaries	76
Current debt	234
Bonds	284
Share capital	288
Reported result	228.5
Net result	57
Result repartition	(57)
Shareholders equity	516.5
Available funds	1,036
Supplementary fund need (NSF)	1,5
Total liabilities	1,036

B. Simplified profit and loss account at 31.dec.N and estimated profit and loss account at 31.dec.N+1 (mil. Lei)

	Real value	% of sales	Estimated
Net turnover	1,000	100	1,500
Material costs	700	-	900
Amortization costs	20	0.02	30
Loss from asset give away	168	0.168	300
Other exploitation costs	-		98
Exploitation result	112	0.112	172
Interest costs	100	-	104
Current result	48	-	68
Gross result	48	-	68
Profit tax	8	-	11
Net result	40	-	57

Using the estimated balance sheet and the profit and loss account we can determine the predicted cash-flow. Using the indirect method this will be:

C. The predicted cash-flow for 31.Dec.N+1 (mil. Lei)

Exploitation activity	
Net result	57
Adjustments:	
Regarding current assets	-107
- Δ Rights	-86
-Δ Stocks	-100
-Δ Costs	0
+Δ Suppliers	50
+Δ Debt	26
+Δ Profit tax	3
Regarding nonmonetary exploitation elements	30
+Δ Amortization costs	30
Regarding investments	300
+ Loss from fixed assets sale	300
A. Net cash flow from exploitation activity	280
Investing activity	
- Fixed assets bought	-550
+ Fixed assets sold	67

B. Net cash flow from investing activity	-483
Financing activity	
- Contracting loans on short and long term	153.5 (152+1.5)
+ Bonds issued	88
- Dividends paid	-28.5
C. Net cash flow from financing activity	213
Net reserve flow (A+B+C)	10
Estimated reserve for end of N+1	30
Reserve at the beginning of N+1	20

NOTE!

For the estimated cash flow we will take into consideration the following information extracted from the investment budget: new investments in the amount of 550 mil. Lei will be made a part of the old machinery will be sold at a value of 67 mil. Lei; the estimated net accounting value (entry value minus costs with cumulated amortization) is 367 mil. Lei.

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CULTURE AND BUSINESS COMMUNICATION: A FRAMEWORK OF ANALYSIS

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ABSTRACT. **Culture and Business Communication: A Framework of Analysis.** In this study, we define the notion of culture from the anthropological perspective and look at the basic cultural orientations and how they can impact and shape human communicative behaviour. This analysis can help business people grasp cultural differences and raise their awareness about the importance of determining appropriate strategies for intercultural exchanges.

Motto:

In the realm of culture, outsidedness is a most powerful factor in understanding…. A meaning only reveals its depth once it has encountered another foreign meaning….

Michael Bakhtin

The conceptualisation of culture

Communication experts in the pragmatics of intercultural communication have been concerned with the challenging task of agreeing on a clear and explicit definition of culture and demonstrating both how communication is influenced by culture and how culture is reflected in communication.

There are two main perspectives on the concept of culture: high culture and anthropological culture. The former use focuses on cultural elitism, civilisation or the refinement of the mind, i.e. the best intellectual and artistic accomplishments of humankind. This is culture in the narrow sense, which Hofstede labels as 'culture one'. Anthropological culture comprises any aspect of the ideas, communications or behaviours of a group of people, and is used to organise their internal sense of cohesion and membership. Hofstede describes this sense of culture as 'culture two' - a collective phenomenon made up of 'patterns of thinking, feeling and acting *mental programs*, (…) *software of the mind*' that 'vary as much as the social environments in which they were acquired' [10, p.4, original emphasis). Throughout this article, we refer to this broader construct of culture.

As Sarangi records, outside anthropology and history, academic preoccupations with the conceptualisation of culture date back to the 1950s, when literary criticism was extended to cultural phenomena. The concept of culture as comprising a whole way of life is also reflected in Bakhtin's notion of 'carnival' and 'the culture of the marketplace', as 'the carnival does not distinguish between the actors and spectators (…) (it) is not a spectacle seen by the people, they live in it, and everyone participates because its very idea embraces all the people' [1, p.7]. Thus, the main

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tenet of this reading of culture is that individuals are seen as living in their culture and the culture as lived by individuals.

Keeping in view what features of culture are highlighted, following Sarangi and Yamada, we can distinguish three dominant orientations in defining it: the mentalist, the behaviourist and the semiotic perspectives.

First, the *mentalists* view culture as a mental map or a whole of encyclopaedic knowledge acquired by individuals as members of society, which helps them to decipher the world around them and which they draw on in actual communicative settings. Culture in the mentalist conceptualisation is deterministic, although it is recognised that individuals consciously follow cultural scripts and schemata in their actions. Sarangi [13, p.6] remarks that such an approach falls short of a theoretical investigation of the notion of culture *per se*, as it is 'caught up with the individual's psyche' and, therefore, seen as static and abstract.

Second, the *behaviourist* approach defines culture as learned behaviour in the absence of explicit teaching. In contrast with the mentalist view, the behaviourist concept recognises the choice of selection, as within a social group individuals are constrained by what is deemed as acceptable social practice. By recognising human agency in selecting those patterns of communicative behaviour that are valued in a certain social context, culture is turned from a map *of* behaviour into a map *for* behaviour. As Sarangi notes, for analytical purposes, behaviour as socially and contextually shaped, i.e. as social action, 'is a useful means for investigating the invisible dimensions of culture implied in the mentalist approach' [13, p.7].

Third, culture is seen as a as a *semiotic* system, i.e. a system of symbolic meanings that are imposed on reality, 'an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate and develop their knowledge about and attitudes towards life' [3, p.89]. It follows that culture is both historic and immediate, as it defines the communicative encounter, but it is also redefined with each new interaction. This perspective is resonant with Halliday's theory of 'language as social semiotic', according to which the linguistic system is projected onto the social system, and verbal meanings are the expression of meanings that are inherent in the culture: 'Any construct of cultural meanings – that is, any social context – is realised in the form of acts of meaning in the various semiotic modes of which language is one' [8, pp. 8-9].

The semiotic approach places culture between the mentalist school, which reifies it as a 'super-organic reality', and the behaviourist school, which reduces it to acquired behaviour [cf. 13]. In this line of thought, Geertz maintains that culture is neither about explaining mental phenomena nor about explaining social behaviour. What culture does is account for social practices in context: 'culture is not a power, something to which social events, behaviours, institutions, or processes can be casually attributed: it is a context, something within which they can be intelligibly – that is thickly – described' [3, p.14].

More recent approaches problematise the notion of culture and are against a fixed definition of it, for culture should be thought of as an active rather than a passive process. On this view, rather than ask the question 'What is culture?' which

implies overgeneralising it and fixing its meanings, we should turn our attention to what culture does, that is, how culture is reflected in human interactional conduct.

This is what we endeavour to achieve in the ensuing section by outlining a model of dominant value orientations of cultures that will help us understand management styles and organisational structures and, more specifically, the language-culture relationship, i.e. how the discourse level is inseparable from cultural behaviour.

Dimensions of cultural variation

Brake et al. review the findings of anthropologists, psychologists, communication experts, and business consultants and put together a conceptual model for understanding the key orientations that each culture contains.

This organisational framework starts from the anthropological theory of Kluckhohn and Strodtbeck, who claim that in every culture there is a set of preferred value orientations related to three eternal problems that human beings have had to deal with: (i) relationship of the individual to others, (ii) temporal focus of human life, and (iii) man-nature relationship. The model also includes the theories of (i) Hall [5], dealing with orientations to communication and space; (ii) Hofstede and Hampden-Turner and Trompenaars, studying orientations to power, individualism, competitiveness and structure, and (iii) Rhinesmith and Stewart and Bennett, addressing orientations to thinking.

The solutions to these universal problems permeate all aspects of everyday life, thus distinguishing one culture from another. In what follows, we refer to cultural variations that derive from our relationships with our fellow beings and to the way in which these habitual patterns influence interactional behaviour.

Trompenaars identifies five dimensions of how we relate to other people: (i) universalistic vs. particularistic (i.e. rules vs. relationships); (ii) collectivistic vs. individualistic (i.e. the group vs. the individual); (iii) neutral vs. emotional (i.e. the range of feelings expressed); (iv) diffuse vs. specific (i.e. the range of involvement), and (v) achievement vs. ascription (i.e. how status is accorded). Every culture contains each one of these orientations, the key difference among them consisting in emphasis. Where applicable, we draw a parallel between Trompenaars' and Scollon & Scollon's interpretation of the way in which certain aspects of cultures shape communication strategies.

We can associate the first two pairs of orientations since they are both centred on the same variable, namely *individualism*. In a *universalistic* culture, focus is placed on abstract rules before relationships. This orientation emphasises societal obligations in the sense that what is true, correct, and appropriate can be identified and applied to everyone. As a consequence, individual interests are subordinate to group interests and loyalty is highly valued. In a *particularistic* culture, relationships come first and weight is given to changing circumstances and personal obligations.

Individualistic cultures value individual identity and independence over shared identity and encourage self-reliance and competitiveness. Motivation tends towards achievement and power, and hiring and promotion are based on skill and achievements. Cultures that display an orientation to individualism include most Northern and West European countries (exceptions are Finland and Germany), Australia, Canada, and the United States. *Collectivist* cultures, on the other hand, being more concerned with relationships rather than tasks, tend to subordinate individual interests to group interests and are motivated towards affiliation and security. As a result, praising an individual's

achievements in his/her work team can cause embarrassment just as putting co-workers in competition to one another could prove detrimental to their morale.

According to Hofstede's and Trompenaars' data, cultures that tend to a universalistic orientation include the United States, Germany, Sweden, the United Kingdom, and Switzerland, while Japan, China, and Hong Kong tend to a particularistic orientation. Cultures that place a high value on individualism include most Northern and West European countries, Australia, Canada and the United States. Finland and Germany, however, place a relatively low value to individualism as compared to the other Northern European cultures. A more collective orientation is found in most Asian, Arab, Latin American, and Southern European cultures. Italy, however, has a relatively high individualistic orientation.

The distinction between *neutral* and *emotional* cultural orientations is centred on the variable of *communication* and is in relation to the question of the functions of language. On the one hand, we speak about high-context, indirect, expressive, and formal cultures; on the other, about low-context, direct, instrumental, and informal orientations.

In *high-context* situations or cultures, information is integrated from the environment, the context, the situation, and from non-verbal cues that give the message a meaning that is unavailable in the explicit utterance. In *low-context* cultures, which are preoccupied with specifics and details, most of the information is in the explicit code. Thus, the lowest-context cultures are probably in Switzerland, Germany, Scandinavia, and North America, including the United States, while the highest-context cultures are found in the Orient [cf. 6, 7; 4]. This explains why American businesspeople frequently complain that the Japanese never get to the point: they fail to recognise that in high-context cultures speakers tend to provide a context and setting and let the point evolve. Cultures that have some characteristics of both high-context and low-context systems include France, Great Britain, and Italy, which are somewhat less explicit than cultures in Northern Europe.

In the relationships among people, reason and emotion play an important role. *Expressive* cultures have an emotive communication style characterised by a high degree of subjectivity and a stress on the establishment and maintenance of personal and social connections. Conversely, if reason dominates, the communication style is emotionally neutral and *instrumental* with a high degree of objectivity and a stress on task achievement and the accuracy of the communication rather than on its appropriateness or style. In general, cultures in Latin America, the Middle East, Southern and Eastern Europe can be highly expressive, whereas in Japan and England people shy away from showing their emotions, especially in the workplace. Americans tend to be instrumental although they seem to be more expressive than their English and Japanese business partners.

In *direct* cultures, there is preference for explicit communication, including identification, diagnosis, and management of conflict, whereas *indirect* cultures have a preference for implicit communication in handling conflict and negative thoughts. Much indirectness in communication serves the desire to save face, protect honour and avoid shame. Thus, American businesspeople with their 'get down to business' and 'give it to me straight' attitude can find their Japanese partners evasive and mysterious, while these can perceive them as pushy, impatient and insincere.

Formal cultures place a high value on following business protocol and social customs, and have a strong sense of history, national culture, and tradition. Organisations in such cultures tend to be hierarchical, and communication with superiors tends to be more indirect and guided by protocol. Latin American, Arab, Asian, and European cultures are all formal to various degrees. Individuals from *informal* cultures tend to feel uncomfortable with social or power differences and want to be more direct and candid when communicating and establish a friendly, relaxed atmosphere when doing business. The United States and Australia are widely considered to be the most informal cultures in the world.

This difference between a focus on information and a focus on relationships often leads to a misunderstanding of the purposes of specific communicative events in intercultural business communication. From the point of view of the functions of language, Westerners may want to get to the bargaining table as quickly as possible, since they believe that it is in direct talk that information is exchanged, while Asians may, on the contrary, want to set up a series of social events in which the participants can more indirectly approach each other and begin to feel more subtle aspects of their relationship.

The distinction between *specific* and *diffuse* cultures or, in Kluckhohn and Strodtbeck's terms, *doing* and *being* cultures, is centred on the *action/involvement* variable. Doing/specific cultures are task-centred, placing stress on productive activity in goal accomplishment and achievement. Being/diffuse cultures are relationship-centred, stressing affiliations, character, and personal qualities. A diffuse orientation is demonstrated in Latin America, South America, Africa, Southern Europe, Japan, South-East Asia, while USA, Canada, Northern Europe, and Scandinavia tend to have an enthusiasm for specific issues. Trompenaars' statistical studies and cases show that North Europeans, especially Scandinavians, are less specific than Americans are. Of course, both doing and being cultures are active; the difference lies in whether the primary mode of activity is task driven or relationship driven.

Another fundamental dimension in intercultural communication is *power distance*, which has its say in how status is accorded. While some cultures accord status to people on the basis of their achievements, others ascribe it to them by virtue of birth, kinship, age, class, gender, and education. Two key orientations are distinguished along this variable: *hierarchy* cultures and *equality* cultures. With the former type, power and authority are centralised and organisational structure – in terms of hierarchical levels – is tightly controlled. Hofstede's findings show that the nine countries with the highest power-distance index are the Philippines, Mexico, Venezuela, India, Singapore, Brazil, Hong Kong, France, and Colombia. Gudykunst and Kim report that African and Asian cultures generally maintain hierarchical role relationships.

In equality cultures, inequality is thought to be an unsatisfactory condition, and attempts are made to minimise it. Power is decentralised in organisations, which encourages individual autonomy, initiative and participation in decision making. The manager is perceived as a consultant figure rather than as an authority. The nine cultures with the lowest power-distance index are Austria, Israel, Denmark, New Zealand, Ireland, Sweden, Norway, Finland, and Switzerland. The United States and other Anglo countries, such as the United Kingdom, Australia, and Canada, are ranked slightly lower than the median in power distance [cf. 17].

Now that we have the overall picture of the basic cultural orientations, it remains for us to analyse how they can impact and shape conversational behaviour. This analysis can help businesspeople grasp cultural differences and raise their awareness about the importance of determining appropriate strategies for effective intercultural exchanges. In the pursuing section, we focus on the relationship between cultural features and rhetorical strategies involved in discourse systems.

Discourse forms

For the purpose of studying interdiscourse communication, the most important aspect is how a culture conceives of the functions of language. Scollon and Scollon point out that language is used *simultaneously* as an instrument for the neutral conveyance of information (i.e. the communicative function) and as an emotional means for the expression of relationships (i.e. the metacommunicative function). The issue to consider in intercultural communication is whether there is a tendency in one culture to give more importance to one function over the other.

We have shown that instrumental communication is problem-centred, impersonal, pragmatic and goal-oriented. Attention is primarily paid to what is said rather than to how something is said and to the accuracy of the message rather than to its appropriateness or style. On the other hand, in cultures where relationships take precedence over informational communication, stress is laid on building trust before business can be transacted. Meaning tends to be implicit and less literal, the precise meaning depending on the broad context, not just the words. In such a culture, the communication of meaning relies considerably on voice tone, body language, facial expressions, eye contact, speech patterns, past interactions, and … silence.

For example, the Chinese, Japanese, and Korean tradition of communication without language is a result of the strong influence of Zen Buddhism, according to which language is necessary for the transmission of trivial or secondary information, whereas the essential things cannot be conveyed by language [cf. 15, p.139]. In light of this belief, silence is used to designate deep thinking about the subject under discussion or as a strategy to help the interlocutor save (negative) face by leaving options open out of respect for the conversation partner rather than disengagement. In this case, an American doing business with a Japanese, for example, may feel anxious to fill silences, which may be considered pushy or impulsive or even emotional, as silence in Asia is active rather than passive.

The second issue related to the functions of language in Scollon and Scollon's analytical framework of intercultural professional communication is whether relationships are deemed to be negotiable or given by the society. They notice that there is a marked difference between Asia, where kinship organises relationships vertically, and contemporary Western societies, where relationships are being continuously negotiated with a view to establishing 'horizontal or lateral' relationships based on equality and freedom. From the point of view of intercultural communication, as Scollon and Scollon further explain, language is used to affirm vertical and generational relationships in the former case and to achieve continuous change in the latter case. Consequently, in a situation in which members belonging to these two cultures do business together, the Asians will insist on calling their partners by their last

names and titles, while Americans will feel frustrated for not being able to develop a relationship on a first-name basis, which they feel would benefit their business more.

The emphasis on information or on relationship in language use is also influenced by whether group harmony or individual welfare is favoured. Research literature on intercultural communication quoted by Scollon and Scollon points out that 'ancient Chinese rhetoric emphasized the means by which one could phase one's position without causing any feeling of disruption or disharmony. Ancient Greek rhetoric, on the other hand, emphasized the means of winning one's point through skilful argument' [15, p.142]. Scollon and Scollon conclude that this difference in assumptions about the functions of language will influence the inference making process in business encounters between Asians and Westerners. For one thing, Asians will try to avoid disrupting the harmony of negotiations by expressing their points less directly and less strongly than Westerners, who are more task-oriented in their choice of rhetorical strategies.

Conclusion

We have presented culture not as a material phenomenon but as an end product of learning that manifests itself in the way people perceive, relate to and interpret their circumstances. This definition of culture is germane to a pragmatic theory of intercultural communication, whose task it is to throw light on how culture is materialised into human communicative interchanges.

The attraction of intercultural contacts for sensitive interactants is that they provide a perspective on one's own and others' behaviour. An understanding of the dimensions along which cultures differ and of how specific communication acts differ across cultures has certain beneficial effects. First, by studying other cultures and in actual intercultural encounters our own behaviour is exposed and challenged. In other words, such knowledge will highlight and challenge assumptions about our own behaviour (see our motto to this chapter). Second, cognitive knowledge about intercultural differences combined with actual encounters from other cultures is likely to reduce ethnocentrism and make the cultural others be perceived as less strange and less threatening.

To conclude, intercultural communication can be a source of strength and an asset, as it can help one to discover oneself. The reality of intercultural diversity and the capacity to understand it add value to our quality of human beings.

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THE IMPACT OF PLASTICS WASTE UPON THE ENVIRONMENT

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ABSTRACT. The Impact of Plastics Waste upon the Environment. The large quantity of waste in the last decades comes mainly from plastics. One solution for reducing this plastics waste is recycling them.

Plastics are defined as being the materials produced on the basis of polymers, capable of getting, when heated, the desired shape and keeping it after cooling. They are characterised by high mechanical resistance, low density, high chemical stability, thermoinsulated and electroinsulated properties etc. Almost all plastics contain, besides the polymers which have a binding role, certain components which give them certain qualities:

- *the filling material* (wood flour, tissues, asbestos, glass fibres) which reduce their cost and improve their mechanical properties)
- *plasticizers* (esters with low boiling point), which increase their elasticity and reduce their fragility
- *stabilizers* (antioxidants and photostabilizers) which contribute to the preservation of plastics properties during manufacturing and using processes
- *dyes* which provide the desired colour

Plastics are obtained from accessible raw materials, and the range of articles made from plastics is very diversified. All these advantages have determined their use in several branches of national economy and technique, without considering the disadvantages that are involved in their use.

ADVANTAGES	DISADVANTAGES
Low weight	They are not biodegradable
Great variety of properties	High volume at discharge
Longevity	High degree of pollution at incineration (because of the contained additives)
Easy manufacturing modality	Difficult to recycle (great diversity, a difficult decomposing process)
Reduced energy consumption in their manufacturing	The basic substances are mostly cancerigenic or toxic (ex. PVC)
Low price	

Plastics are considered dangerous from two reasons:

First of all, a serious problem of the packaging made from plastics – bottles, casks is represented by the fact that, in time, the product that is contained in these ones, gets in a reaction with the plastic. Thus, if we keep a toxic substance in a plastic

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bottle, it is not recommended to use the same bottle for keeping liquids that are used in nourishment. And this is because these liquids will be infested by the molecules from the toxic substance that was previously in the bottle, substances that penetrated the walls of the recipient.

Secondly, plastic is obtained from the combination of several chemical synthetical toxic products in the polymerization process. The plastics industry tells us that this process makes the toxic chemical substances to adhere one to another so strongly that they are not anymore toxic for us. But we are not told that polymerization is never a perfect process 100%. Always, this process lets some toxic substances migrate from the plastic into: food, water, air, the human body etc. many of these chemicals not only determine cancer but, at the same time, they alter the normal functioning of the endocryne system of humans and animals.

Plastics can be classified into seven different types. The type of plastic is inscribed in the inferior part of the recipient, through a number. The three cyclical arrows show that the packaging is to be recycled. The separation for each type of material is compulsory before recycling it.

Material	The properties of the material	Examples
PET Polyethylene terephthalate 	Transparency, resistance, durability, impermeable at gas and humidity, resistant at heat	Bottles for water, juice, beer, soda, oil. **Observations:** As a result of PET recycling we obtain: carpets, jackets, recipients for food, bottles and phials, sacks for storing and transporting clothes etc. The waste from Pet packaging have a great impact on upon the environment because they are not biodegradable – burried in the ground they resist between 700 and 800 years. On the national level they represent a big quantity of waste which is not collected and consequently not recycled.
HDPE High Density Polyethylene 	Rigidity, resistance, durability, permeable at gas, impermeable for humidity, easy to manufacture	Bottles for milk, juice, cosmetics, shampoo, liquid detergent, bags and sacks etc. **Observations:** As a result of recycling this material we can obtain: plastic furniture, flower pots, plastic fences, coloured phials for liquid detergent, shampoo, rinsing concentrate, transparent bottles for milk and water etc. The chemical strength of this material permits its use in manufacturing packaging for chemical products such as detergents and bleachers. The bottles with dyers are more resistant at breaking than those without a dyer.

PVC Vinyl Chloride 	Transparancy, resistance at fats, oil and chemicals, durability, flowing characteristics and stable electronic properties	Transparent packaging for food and others, medicine phials, insulations, wires and cables, tubes, fittings, slabs, windows, products made of synthetical leather, bottles etc. **Observations:** As a results of recycling this material we obtain: floors, panellings, gutters, slabs, mats, props for tapes and CDs, electrical boxes, insulations, cables, waterhoses for gardens, tubes, fittings etc.
LDPE Low-Density Polyethylene 	Easy to process, resistant, durable, flexible, easy to stick (when warm), impermeable at humidity	Plastic bags for bread and frozen products, carpets, casseroles for food, furniture, pipes etc. **Observations:** By recycling this plastic we can obtain: transportation covers, garbage boxes, slabs, furniture, compost containers, plastic-wood articles (timber) etc
PP Polypropylene 	Resistant at heat, chemicals, fats and oil, impermeable at humidity	Yoghurt glasses, boxes for margerine and butter, medicine phials, carpets, ropes, car components etc. **Observations:** From this material, by recycling, we can obtain: carcasses for car batteries, brushes, brooms, granules, pipes, recipients for yoghurt and syrups etc.
PS Polystyrene 	Transparent, insulator, relatively low melting point, versatile	Protection packaging, lids, glasses, bottles, CD carcasses, plates for exposing meat, egg cartons etc. **Observations:** As a result of polystyrene recycling we have: thermometres, cups, plates, transformers, thermic insulations, frames, expanded glasses, big plates etc.
Others Polyester, Acrylic, Nylon, Polyuretan, mixed plastic 	It depends on the material or the combination of materials	Reusable bottles for water, juice etc. **Observations:** By recycling these materials we can obtain: bottles for juices and syrups, plastic-wood applications. This symbol is applied when we use another material than those presented so far or a combination of plastic materials.

In order to reduce the impact of plastics upon the environment the american organization Ecology Center considers the following 5 strategies as being important:

1. *Reducing the use of plastic*

The distributors and consummers can choose products that use very little packaging or none. We have to select the packaging materials that can be reused and transformed into new packaging – as for example glass and paper. If people refused plastic, as a packaging material, the industry would decrease production in this field and the related problems such as energy consumption, pollution and the negative effects on health would be diminuated.

2. *Reusing the recipients*

Because plastic recipients can be refilled, they can be used aprox. 25 times, this thing determining on one hand a sustantial reduction of the demand for irrecuperable plastic, and on the other hand diminishing the materials and energy consumption.

3. *Reusing the resins retrieved by the producers*

It is important for the plastics producers to get involved directly in their retrieval.Moreover, the reprocessing should be thought in such a way as to limit the number and types of recipients and to use only one type of resin for all the recipients so that the recipients should be pressed, the pigments elliminated, the adhesives used for labels should be dispersed in water and the aluminium lids should be elliminated easily. Recipients and resins producers can help develop the reprocessing infrastructure by taking the plastic from the consummers.

4.*Introducing a legislation for recycling materials*

Imposing by law that all recipients should contain a certain percent of recycled materials can reduce the quantity of raw materials that are used. For example, the ecological organization Californians Against Waste makes efforts to increase the percent of recycled material contained in plastic packaging. At present, non-food packaging contains 25% recycled material, following that, in the future, the law will be applied for food recipients as well, and the quantity of recycled material will increase to 35%.

5. Standardizing labels and informing the public

The symbol of cyclical arrows from the plastic materials is an example of ambiguous and misleading label. We have to develop significantly different labels for “recycled”, “recycling” and “made of plastic type X”. (Source: www.ecologycenter.org)

The plastic materials contained in wastes are not recycled in a significant proportion in UE countries and this is because of difficulties linked to the diversity of plastic materials and the collection way. They can be collected together with bottle or together with another recyclable material as it is done in Germany („grüne Tonne”) and in France („Ecopubelles”).

For recycling plastics in different UE countries they take into account the folowing:

- usage restrictions for certain plastic materials (for exampe PVC which is considered very toxic)
- recomandations for reducing plastics consumption (Italia);
- systems for returning packaging (Danemarca, Germania).

Since 1989 there have appeared on the market the so-called bio-degradable polyetylenes that can undergo a biological decomposition, but not a total break of the polymer chain.

The recycling of different types of plastic has a problem regarding the incompatibility of polymers. Anyway, the introduction of the so-called “compatibilizers” which create polymeric stability between the links from the different strucures of molecules in the plastics, facilitates the use of combinations. With the help of these “compatibilizers” we can produce, from low-quality materials, a certain type of plastic alloy. The non-recyclable plastic has caloric value and can be used as fuel.

Although certain plastics may seem identical, in fact they are groups of different materials with a different molecular structure. Recycling depends on the process of separation of each material, this being efficient in the factories where the recycling materials generated in production can be easily separated. Recycling changes the mechanical properties of plastics. This is why it can’t be possible to recycle big quantities of a certain type by re-integrating them immediately in the same production process. In some sectors, the misconceptions regarding secondary products (the products obtained after the mechanical or chemical manufacturing of plastic wastes, which are raw materials for other production processes) remains an important obstacle in plastic recycling, although the problem of environment protection must be also taken into account.

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LEGAL REGULATIONS IN THE FIELD OF ELECTRONIC BUSINESSES IN ROMANIA

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ABSTRACT. Legal Regulations in the Field of Electronic Businesses in Romania. The creation and development of the Internet had as direct result the creation and development of the electronic businesses all over the world. With the creation of the concept of electronic business, the first signs of electronic criminality have also appeared, that required the preparation and adoption of an adequate legal framework worldwide and in Romania, as well. In this context, this column comments the existing legal regulations in force in Romania in the field of electronic businesses.

The recently attained progress in the fields of technology-computers, telecommunications and software, as well as in other fields of information have radically changed the lifestyle of the population of the world in a way that was impossible to imagine 20 years ago. These changes were the basis for the transition from the industrial era to the informational era. In this context the Internet business environment was born and developed, considered by many a "free market", that is a place where there are no taxes and customs duty have to be paid, and may fight for the preservation of this situation with the goal to obtain maximum profit with minimum expenses.

The creation and development of the economic environment called Internet has attracted a series of facilities, but also disadvantages. One of its greatest disadvantages was the translation of the limits of criminality from the real world to the virtual world. Development of the criminality in the virtual world urged the preparation of a legal framework that could be adapted to any country in the world. In this context, in Romania a series of laws and regulations have been adopted in this field. They will be discussed here.

Law No. 365 / June 7, 2002 on the electronic commerce grants great fiscal facilities to the owners in the Romanian fields in order to stimulate the electronic commerce by these means. This law entered into force on the date of its publication in the Official Gazette of Romania, Part I (July 5, 2002) and will be **enforced after 3 months from its entering into force**.

As far as we and the experts in the field are concerned, the law on electronic commerce will only create a legal framework for the transactions on the Internet and will regulate the issue of delinquency, stipulating long years in prison for crimes like hacking or carding. Despite of all this, the volume of the electronic commerce will not record a spectacular growth overnight, on one hand due to the lack of a high-performance electronic banking system, and on the other hand due to the under-development of the distribution industry. As opposed to the general perception, the majority of the electronic transactions are not of type B2C, but B2B and B2G. The Law on electronic commerce, in addition to the Law on electronic signature, will have positive effects. The banks will

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be more and more involved in the development of the infrastructure that enables online payments and will try to find solutions not only for the cardholders, but for the bank account holders, as well. Virtual transactions have taken place before, but the payments were mainly made in cash, upon delivery or through banks. We consider that the positive effect of the law would be the acceleration of the clearing operations. The law on electronic commerce will not directly affect this aspect, but by increasing the volume of the transactions, the improvement may come from inside the banking system itself. By this normative act the internet traffic will increase and the service offer of the Internet suppliers and mobile communication operators will diversify. In addition, the advantages of the new law will not only resume to the level of the banks, as their transaction volume will increase, but at the client level, as well, who will have to bear reduced costs. On the other hand, the law must not only be regarded through the advantages it produces, but also through the hidden costs resulting from its absence.

By the Law No. 455 / 2001 on the electronic signature, it is considered that: "the electronic signature represents data in electronic format that are attached to or logically associated with other data in electronic format, and they serve as identification method" (Art. 4, Paragraph 3). The law establishes the framework for using the electronic signature for any documents, both unilateral, bi- or multilateral legal documents. In this law a series of rules have been set down that can be considered equation rules of the documents in electronic format with the documents in the traditional format as far as their legal effects are concerned (Art. 5 - 7).

In order for a document in electronic format to be considered a document under private signature it is required to include, attach or logically associate an extended electronic signature, generated by using a secured device. A document in electronic format has the same effects as an authentic document, if the document on electronic signature has been logically attached is recognized by the opposing one.

By means of the European Directive concerning the electronic signature, it was established that the member states will provide a legal framework in order to enable the electronic signature, based on a qualified certificate and created by a secured device, to be considered as evidence in the court of law and to meet the legal requirements of a signature in the same way a regular signature is complying with the legal provisions for hand written or printed data.

This law entered into force on the date of its publication in the Official Gazette of Romania, Part I (July 31, 2001) and will be **enforced after 3 months from its entering into force**.

The Regulation No. 4 / June 13, 2002 concerning the transactions performed using electronic payment instruments and the relationship between the parties to these transaction.

This regulation applies to the banks, as Romanian legal persons, as well as to any Romanian branches of banks, as foreign legal persons, hereinafter referred to as banks, and has as a goal the establishment of the principles for the issuance and usage of electronic payment instruments on the territory of Romania, especially of the cards, and the conditions that need to be complied with by the banks and other parties to electronic payment transactions, regardless of the currency they are issued/denominated in.

In the first chapter the legislator defines the concepts the law uses. Also in this chapter it is stated that usually the card includes securing elements to protect its material body, customized features included on its surface and, as it is the case, other

components inserted in its material body, including the magnetic band and/or the microprocessor (specialized integrated circuit). The law also presents the common features of the cards.

Chapter 2 refers to the rights and obligations of the parties to the transactions performed by means of the electronic payment instruments and the conditions for performing electronic transactions. Within this chapter it is also stated that any actions and acts of commerce performed *on the territory of Romania* that involve transactions with electronic payment instruments, generally, and with cards, specifically, are subject to the *Romanian laws*.

In ***Article 7*** it is stipulated that *based on a contract* the *issuer* guarantees the holder *not to disclose* to any third party the *PIN code*, any other identification code and/or the password, or any other similar confidential information. The information concerning the deposited amounts and the operations performed by means of the electronic payment instrument will only be revealed to the holder, and these information may be disclosed, according to the law, to the competent authorities so they dispose of them or in the situations stipulated under Art. 17. The contract between the issuer and the holder is considered concluded when the requestor of the electronic payment instrument – the requestor – receives the electronic payment instrument and a copy of the contract signed by both parties, and for the remote access payment instruments, others than cards, when the authorized user receives the user name and personal identification code/password and/or any other similar proof of their identity.

In Section 2 and 3 of this chapter the rights and obligations of both parties are specified.

In Section 4 and 5 of this chapter the obligations and responsibilities of the holder of an electronic payment instrument and of the receiving trader are stipulated.

Chapter 3 stipulates the issuance of the electronic payment instruments and the identification of the informational frauds.

The banks may issue only electronic payment instruments authorized by the National Bank of Romania. In order to obtain the authorization to issue electronic payment instruments, the requestor shall present the National Bank of Romania – Regulation and Licensing Department, a series of documents stipulated in this law. After the analysis of the submitted documentation, within 30 days from their reception, the National Bank of Romania shall inform the requestor on its decision regarding the licensing of the requestor. If the decision is favorable, the National Bank of Romania will issue the requestor a *temporary license*, valid for 90 days, period in which the requestor will be subject to a special monitoring of the National Bank of Romania. If the results obtained in the monitoring period are in accordance with the conditions stipulated in this regulation, the National Bank of Romania will issue the requestor a final license for the electronic payment instrument type specified in the request for authorization.

When issuing a card under the license of a brand owner, the issuer shall execute their commission within the terms and conditions of the contract they concluded with the owner. On basis of the request approved by the issuer they will conclude and sign a contract with the owner, contract that will include explicit provisions regarding the rights and obligations of the parties. After the conclusion of the contract, the issuer's authorized representative will issue the holder a customized card together with the special envelope that includes the PIN code or the code that enables the identification of the holder/user and grants the access to the cardholder's account.

Section 2 of this chapter refers to the frauds and potentially hazardous activities. By organizing the informing activities, the issuer and the accepting bank are responsible for the identification, evaluation and limitation of the effects of frauds and potentially hazardous activities. The accepting banks will classify the traders depending on the parameters they consider determinant for the suspicious activity so that, as is the case, to be able:

1. to enforce limitations for their authorization requests;

2. to install a terminal under their control at the selling point of the accepted trader, by introducing the obligation for the holder to enter the PIN code.

The issuer has the obligation to identify the fraudulent activities, to inform any source in this matter in order to avoid any risks of non-payment and to take all the required measures to limit the frauds and to discourage fraud attempts.

In chapter 4 the transitory and final provisions are specified: For non-compliance with the provisions of this regulation, the National Bank of Romania may apply the sanctions stipulated under Art. 60 of the Law No. 101/1998 on the Statute of the National Bank of Romania, as amended and supplemented subsequently, and under Art. 69 of the Banking Law No. 58/1998, as amended and supplemented subsequently.

Within 90 days from the entering into force of this regulation, the issuers and accepting banks shall prepare internal regulations, in accordance with the provisions of this regulation, related to the activities involving electronic payment instruments. On the date this regulation enters into force, the regulation of the National Bank of Romania No. 6/1995 on the principles and organization of card payments by banking institutions, published in the Official Gazette of Romania, Part I, No. 282 / December 5, 1995, complemented with the Memorandum of the National Bank of Romania No. 19/1996, published in the Official Gazette of Romania, Part I, No. 187 / August 13, 1996, as well as any contrary provisions are abolished.

Regulation No. 13/1999 regarding the electronic bidding on the RASDAQ market

The first article stipulates: The State Property Fund uses the facilities offered through the RASDAQ system for selling through electronic bidding the stocks managed by them at the trading companies. These bids will take place outside the business hours of the RASDAQ market and will be subject to the provisions of this regulation.

Within one session of bidding the FPS will offer for sale at most 3 trading companies.

In ***Article 2*** the terms used in the regulation regarding the progress of an electronic bidding are defined, along with the required documents, namely: seller, bidding conductor, customer, eligible S.V.M., participating S.V.M., transferable security issuer, round, system, request, first acceptance price, second acceptance price, potentially winning requests, winning price, winning request, bidding committee, presentation file (Annex).

In ***Article 3*** the obligations of the bidding conductor are presented related to the obligation to submit within 15 calendar days before the electronic bidding date the information referring to the electronic bidding (name of the issuing company, its taxpayer code, number of shares, identity of the bidding conductor, date of the bidding, etc.) and the presentation file of the issuing company whose share will be offered for sale, prepared by the bidding conductor, approved by the issuer and endorsed by the seller. The bidding conductor is responsible for the accuracy of the complete filling out of the presentation file.

The regulation stipulates that the transfer of transferable securities using the method of electronic bidding represents a mediation of transferable securities, in accordance with the provisions of Art. 34 of the Law No. 52/1994 on the transferable securities and stock markets, and is subject to the Regulation No. 3/1998 regarding the authorization and performance of the mediation of transferable securities.

The following articles of the regulation present the structure of an electronic bidding. The electronic bidding starts at 15:00 on the announced day, and has three rounds, delimited by two ten-minute breaks. Any request introduction or change is confirmed twice in the system, in order to rule out their withdrawal. The first two rounds have a fixed duration of 15 minutes for the first round and 10 minutes for the second round. The third round has a duration of 5 minutes, but it can be extended with an unlimited number of 5 minute extensions. The extension will be made within the current 5 minute interval, where at least one significant change takes place. Significant change represents the modification of a request that leads either to a change of the sequence of the potentially winning requests or a change in the potentially winning requests listed in the system.

The regulation also specifies the methods of introducing and changing a request. The request may have the form of a price. The price can only be increased, with the steps presented in the table below:

Request price before the change	**Minimum increase step**
Under 1,000 RON	*50 RON*
1,001 RON – 10,000 RON	*100 RON*
10,001 RON – 50,000 RON	*500 RON*
50,001 RON – 200,000 RON	*1,000 RON*
Over 200,000 RON	*5,000 RON*

The regulation concludes with the specification of the responsibilities and sanctions stipulated in case of non-compliance. Non-compliance by a participating S.V.M. with all their obligations related to settlement that arises from the bidding, regardless of the fact that it is due to the fault of the customer or the S.V.M., attracts the suspension of the participation right of the respective S.V.M. in the RASDAQ system. Non-compliance with the provisions of this regulation, including the requirements stipulated in the related technical rules will attract the suspension of the participation right of the respective S.V.M. in the RASDAQ system for three consecutive electronic biddings. The bidding session is suspended for at most 30 minutes if a S.V.M. introduces a request for another issuer than the one they deposited the guarantees for, in accordance with the provisions of Art. 5. The participating S.V.M. that introduced the respective request is excluded from the bidding and will remain suspended for a period of 30 working days from performing transactions on the RASDAQ market.

The Law on the electronic attorney creates the largest market for the electronic signature. This law allows the attorney documents to be stored, accessed and duplicated very easily. And not in the last place, the electronic document will be secured in incomparably better conditions than the printed documents.

The Law on electronic archives stipulates that all electronically signed and secured documents must be kept for long period of time due to the different situations that may appear, such as a certificate on which the electronic signature was based may expire, and the technologies used in the virtual environment are changing very

rapidly. This law regulates the way electronic documents can be kept in complete safety.

The Law No. 677/2001 on the protection of people regarding the processing of data of personal nature and the free circulation of these data (Official Gazette No. 790 / December 12, 2001) takes over all the provisions of the directive 95/46/EC of the European Parliament and of the Council as of October 24, 1995 concerning the protection of people in what the processing of personal data and their free circulation concerns. The Law was adopted through the decree No. 946/2001 and entered into force in December 2001, after its publication in the Official Gazette of Romania.

This law includes severe rules regarding the confidentiality and security of the processing, as well as the international transfer of personal data, in accordance with the Directive 95/46/EC. Thus, transfer to another country of personal data that are subject of a processing or to be processed after the transfer may only take place if no breach of the Romanian laws is committed, and the country the data are to be transferred is obliged to ensure a similar level of protection. The level of protection will be determined by the monitoring authority, taking into consideration all the aspects the data transfer is performed, and if it establishes that the level of protection offered by the target country is not sufficient, the authority may prohibit the data transfer.

According to the Law on copyright and neighboring rights, the copyright is considered the main protection system for the computer programs. This law was published in the Official Gazette on March 26, 1996. Chapter 9 of the law refers to the protection of computer programs.

The Law on copyright and neighboring rights includes provisions concerning the owner of the rights, the subject of the specific protection, the exclusive rights of the copyright owner, exceptions from the exclusive rights, duration of the rights, payment of the rights, civil and misdemeanor sanctions. This law is an almost complete copy of the European Council Directive as of May 14, 1991.

From our point of view, the creation, adoption and enforcement in Romania of the proper legal framework for the information technology will have as effect on one hand the increase of the turnover in our country by the major foreign software houses, and on the other hand the development of a 100% Romanian software industry.

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"THE BUSINESS OF INTERNATIONAL BUSINESS IS CULTURE"

MARGARETA PETRUȚ[*]

ABSTRACT. The Business of International Business is Culture. The starting point here is the assumption that understanding one's cultural environment and accepting cultural differences is essential in communicating with people from other cultures and that students need to be trained in order to increase their awareness and develop the necessary skills. The paper presents the results of a seminar activity designed with this purpose in mind for several groups of fourth year students in economics. They had to express their opinions regarding an appropriate description of the Romanian society in terms of Hofstede's 'dimensions' and became more aware of their cultural background.

Geert Hofstede's statement, chosen as a title here, is meant to focus our attention on the importance cultural issues have today for all those who are part of the business world. We can think of culture, especially national cultures, as a system of taken for granted assumptions about the way the world is. So taken for granted that we can't imagine that other people have equally deeply-founded but quite different assumptions. Different cultural groups have different values, styles and personalities, which may have a substantial effect on the way they 'do business'. Cultural diversity is based on the notion that cultural identities should not be discarded or ignored but should be maintained, nurtured and valued.

More and more, business people have become aware that "business is different wherever you are " and that ignoring differences involves high costs. As a result of the internationalisation of commerce and operations they have to cope with different ways to perceive the human relations, different languages, life styles and work. Working closely with others from different cultures can lead to misunderstanding, and worse, offence, regardless of everyone's good intentions. Although cross-cultural and language training in business environments is absolutely necessary in order to avoid such risks, for some people it is still an uncomfortable thing; it focuses attention on our most basic traits and customs, on our very identity.

Developing cultural awareness for future business people

My assumption here is that in addition to training students for appropriate linguistic performance ESP teachers in Romanian universities, and especially those teaching students in economics, must also make their students aware of the proper linguistic performance in diverse types of intercultural settings. They must also encourage students to develop their understanding and of their own cultural identity. To achieve this, the teacher must also talk about cultural relativism as well as the universality of certain components shared by different cultures. The teacher should guide cultural discussions so that they do not become judgmental and lead to conclusions that some cultures are superior or inferior.

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With this emphasis on training students to understand and interpret the culture and to function in that environment the burden placed upon language teachers can increase. We cannot be expected to be linguists, psychologists, philosophers, and cultural anthropologists at the same time. Some teachers still express concern over where they should place emphasis. What should receive the most attention? They ask ”How can there be time to deal with culture when students must pass examinations and there are so many things to do?” However, those teachers who do spend some time with intercultural themes usually reported real satisfaction in their experiences with students.

According to Rebecca M. Valette, [1, p. 75] for a foreign language teacher, cultural goals may be divided into four categories: developing a greater awareness of and a broader knowledge about the target culture; acquiring a command of the etiquette of the target culture; understanding differences between the target culture and the student’s; and understanding the values of the target culture. As students progress through a foreign language course it is expected that they will increase their awareness of the culture or cultures characteristics of the speakers of the language under study. This broadened awareness may touch on all aspects of culture.

One goal of foreign language teachers may be to sensitise the students to the existence of differences in daily life patterns between the target culture and the native culture. The first step is increasing student awareness of the existence of these differences. Then an effort is made to develop an understanding of these values.

The analysis of the target culture is as challenging as the investigation of one’s native culture. As students begin to study various facets of the target culture in depth, they will begin to realise that their own culture incorporates a complexity of patterns they were never aware of. They will also discover that a culture is not a static but an ever-changing phenomenon.

An experiment in building cultural awareness

The experiment involved the participation of fourth year students in economics who proved to be very much interested in cross-cultural management. The total number of students who took part in the experiment was 72.

The idea for the experiment was suggested by relevant information found in Geert Hofstede’s article “Managerial Values” [2, p. 147] on some dimensions of national culture differences identified in three different research projects. Hofstede is most well known for his work on four dimensions of cultural variability, commonly referred to as "Hofstede´s dimensions." These dimensions refer to Power Distance, Individualism versus Collectivism, Masculinity versus Femininity and Uncertainty Avoidance, each of them being described through characteristic aspects of life in the family, at school and at work place. These dimensions were first discussed in one of his 1980s publications and were based on survey data collected from a multinational corporation with operations in 40 countries.

The students worked in small groups of 3 or 4 and had to examine four tables, each table containing the description of culture differences in terms of one of the four dimensions, and to use them for an analysis of the society they live in. The task proved to be rather difficult for most of the students as they strove to be as objective and accurate as possible in rendering their opinion. As few of them

have relevant work experience they felt more confident when making their decision on items concerning the family and school aspects of each dimension. They asked a lot of questions in order to clarify the content of each item under discussion and needed feed-back as they did not always trust their ability to choose what best reflected reality. After this preliminary phase of clarification they were reminded that all they have to do is to respond according to their experience and perception. They had to give their personal opinions first in writing and then they discussed them with the other students in each group.

The results reflect their level of understanding and although no attempt to generalise was made they might be interesting for anyone who would like to carry out further research in this area. The first dimension examined was Power Distance which, according to Hofstede & Bond (1984), is defined as " the extent to which the less powerful members of institutions and organisations accept that power is distributed unequally". Thus, about 80% of the students estimated that our society is a large power distance society i. e., one in which, in the family, children are educated towards obedience to parents who are treated as superiors rather than equals. In school, the education is teacher-centred and does not encourage initiative but the learning is not perceived as representing personal 'wisdom' from the teacher. At their work place subordinates expect to be told what to do rather than consulted but hierarchy is not existential inequality. In spite of the high percentage already mentioned, students were intrigued that in this case like in that of the other dimensions, paradoxically, not all the items were found as accurately describing this society as a large power distance one but rather as a mixture. Some of the items indicated characteristics typical for the small power distance society (learning represents impersonal truth, hierarchy means an inequality of roles, established for convenience)

Analysed in terms of the Collectivist/Individualist differences, the Romanian society is one in which collectivist characteristics are dominant, according to the students involved in this experiment. The percentages indicating this ranged from 58% at the work place to 72% in the family. Though the students could not agree if education in the family is aimed at developing "we" or "I" consciousness, the family and the group were considered as having a more important place than the individual. At school the learning is still for the young only and there was serious uncertainty if the purpose is to learn *how to do* or *how to learn*. At the work place they say we are dealing with *particularism* which means that value standards differ for in-group and out-groups and relationship prevails over task.

The students encountered more difficulties in analysing the Feminine/ Masculine types of differences but finally their responses defined the society we live in as a feminine one. The percentages actually show that the distinction is less clear than for the first two dimensions as they range from 65% favouring a feminine society in the family to only 50% at the work place. Thus, it was agreed to a certain extent that in the family there is still more stress on relationships rather than on achievement but more emphasis on competition rather than solidarity. At school average student seems to be the norm and student failure is relatively minor accident rather than leading to suicide. The fifty/fifty percentage describing situation at the work place indicates that there seem to be recent developments in this area and a probable orientation towards more *masculine* characteristics of our society. In Hoftede's

terms this would mean that assertiveness is more appreciated and there is more stress on careers and a trend towards overselling oneself.

Uncertainty Avoidance was the fourth and last dimension discussed. Here the percentages show that students perceive the society they live in as characterised by strong uncertainty avoidance. They see it as proving to have a high anxiety and stress level in the family, and also that showing of aggression and emotions are accepted. At school students are comfortable with structured learning situations and the teachers should have all the answers. Interestingly enough, they find the work place defined by the emotional need for rules, being them written or unwritten, and by a high degree of formalisation and standardisation.

After giving their response individually, the students were asked to support their views in group discussions. There were hot debates concerning some of the items and all students could bring their contribution based on their life experience. Students saw this activity as one of the most challenging they had and were ready to discuss their opinions freely bringing in interesting arguments. They showed great interest in having similar activities and in learning more about their own culture which gives them a clearer perspective on other cultures and a better understanding of the world they live in.

No doubt simply informing students, future members of various organisations about cultural differences is an incomplete strategy for helping them bridge the gaps that impair co-operative work To achieve maximum benefit, information should be supplemented with behaviourally specific skills or “tools” that equip people with practical techniques for solving workplace problems that derive from culture-based differences. Awareness is a first step, a major one, but alone is insufficient.

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MECHANISMS FOR COLLABORATION INSIDE HETEROGENEOUS MULTI-AGENT SYSTEMS

GHEORGHE COSMIN SILAGHI[*]

ABSTRACT. Mechanisms for Collaboration inside Heterogeneous Multi-Agent Systems. This paper investigates the main means for obtaining collaboration inside heterogeneous multi-agent systems. We argue that in such systems the designer cannot impose rules that restrict the behavior of the agents, if the overall goal is some beneficial property of the society. The collaboration can be stronger if agents are let to reason and behave as self-interested entities.

1 Introduction

The proliferation of computer systems led to a new conception about how computer or non-human entities might work together. The concept of "open-systems" groups together a large number of systems of different design that can interact and cooperate in order to accomplish some specific tasks. Given the broad range of tasks that such systems should address, flexible patterns of communication and cooperation are required [3]. Multi-agent systems represent a modern approach for modelling so-called open systems.

Although there are situations where an agent can operate usefully by itself, the increasing interconnection and networking is making such situations rare. In the usual state of affairs, agents interact with other agents [2]. Agents should be built in such a manner that they should accept incoming messages, respond to them or launch new communication paths. When designing multi-agent systems or societies of agents, the society engineer should build upon a physical communication infrastructure and should design the rules (norms) that agents should accomplish in order to behave properly and being accepted in the society.

In this context, there is a need to study how agents can interact, how they should be built in order to satisfy the social ability property of the weak notion of agency. The worldwide research efforts go toward the study of mechanisms and protocols design for constructing heterogeneous agent societies. Therefore, the main objective of this paper is to express our opinion about the means of achieving collaboration inside multi-agent systems. Building well-founded interaction protocols or interaction norms inside a society, besides being an important research topic, represents a great importance in obtaining efficiency and welfare in economic societies. Therefore, we will investigate the means of achieving collaboration, the theoretical foundation of such tools, pointing out what we understand to be the most subtle and convincing way for collaboration. We think that when collaboration is achieved through competition between self-interested agents, the solution is more stable and there are fewer incentives to break the establish equilibrium. We will develop in short the theory of collaboration concepts and the most important societal frameworks where collaboration

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occurs. We will refer only to the set-ups where competition can occur, as voting, auctions, bargaining and market equilibrium, trying to reveal how these theoretical developments can be employed for modelling computational societies.

The paper is organized as follows. Section 2 will present the forms of collaboration, with an emphasis on the forms that can be achieved inside a multi-agent system. Section 3 will brief the most important frameworks where self-interested agents can behave together. Section 4 will brief the paper, drawing out the main conclusions.

2 Forms of collaboration

Weiss [9] defines collaboration with the expression of “working together”. Collaboration often refers to forms of high-level cooperation that require the development of a mutual understanding and a shared view of the task being solved by several interacting entities. Sometimes, collaboration and cooperation are used in the same sense. Agents communicate to achieve better their goals or the ones of the society in which they exist. Communication enables the agents to coordinate their actions and behaviour, resulting in systems that are more coherent [2].

Coordination refers to the state of a community of agents in which actions of some agents fit in well with each other, as well as to the process of achieving this state [9].

Two manifestations of coordination play important roles in distributed computing: competition and cooperation.

Cooperation is the coordination among non-antagonistic agents. Competition is coordination among competitive or self-interested agents. Coordination is achieved through competition by negotiation, while cooperation is realized though planning (distributed or centralized planning).

Negotiation has much to do with distributed conflict resolution and decision-making, and requires that the agents use a common language. In the course of negotiation an agent makes a proposal that then is commented (refined, criticized, refuted) by other agents [9]. Negotiation may be interpreted as coordination among competitive or simply self-interested agents. Another common interpretation of negotiation is that of distributed, communication-based search through a space of possible solutions.

Figure 1 shows a taxonomy of some different ways in which agents can coordinate their behaviour and activities.

Coherence is how well a system behaves as a unit. A problem for a multi-agent system is how it can maintain global coherence without explicit global control. In this case, agents must be able on their own to determine goals they can share with other agents, determine common tasks, avoid unnecessarily conflicts and pool knowledge and evidence. Social commitments can be a way toward coherence. Another means toward coherence is based on economic principles. We can see agent societies as markets, with some internal clearing mechanisms. Herbert Simon argues that although markets are excellent in clearing all goods, they are less effective in computing optimal allocation of resources [8]. Economists found the same result within the study of microeconomics [5]. Therefore, the organizational structure is essential for the purpose of coherence. It is believed that coherence and optimality are strongly related [2].

Analyzing these forms of coordination as means toward collaboration, we want to insist on the right-branch of the taxonomy, pointing out that competition is more often encountered in open systems societies, with heterogeneous agents, as economic environments are.

Cooperation through planning is suited for distributed problem solving environments, where entities with a-priori known capabilities are pushed to work together under tight rules. Cooperative distributed problem-solving studies how a loosely coupled network of problem solvers can work together to solve problems that are beyond their individual capabilities.

We think that in open environments, enforcing strong norms is dangerous; therefore, we should find those mechanisms that can lead toward the realization of the society-level objectives. In this context, if agents think that they behave in competition while pushing toward the social welfare of the society, the established equilibrium represents a stronger solution of the societal game.

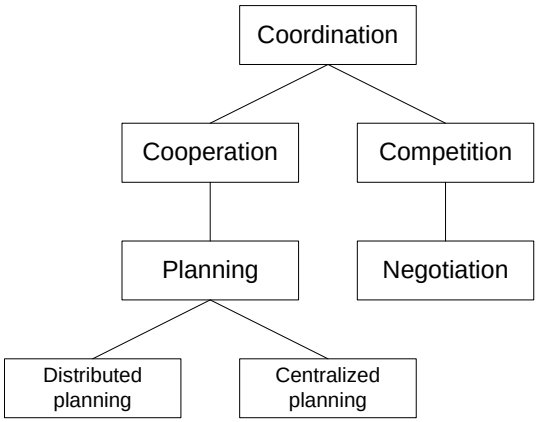

Figure 1. A taxonomy of agent coordination tasks [2]

3 Frameworks for competition between self-interested agents

In this section we will shortly investigate the main frameworks employed for studying agent interaction. We should mention that the non-cooperative game theory represents the theoretical foundation for performing pertinent analyses. We will brief on voting, auctions, bargaining and general equilibrium environments.

In multi-agent systems, agents are provided with an interaction protocol and they can choose their own strategy [8]. A self-interested agent will choose the best strategy for itself, which cannot be explicitly imposed from outside. Therefore, the interaction protocols need to be designated using a strategic perspective. The main question is what social outcomes follow a given protocol that guarantees that each agent's desired local strategy is the best for that agent and thus, the agent will use it. This approach is required in designing robust non-manipulable multi-agent systems where agents may be constructed by separate designers or may represent different real world parties.

3.1 Voting

In a voting setting, all agents give input to a mechanism and the outcome that the mechanism chooses is based on these inputs [8]. The solution of the mechanism is then, imposed for all agents. Such environments are often called as social choice settings. In most settings, this outcome is enforced so that all agents have to abide to the solution prescribed by the mechanism. In voting environments,

the most important feature for a designer is to build the social choice rule. The social choice should have some well-defined properties, as being defined for all pairs of inputs, being asymmetric, transitive and Pareto-efficient, being independent for irrelevant attributes and should not bring out a dictator in the front of the society. The formal definitions of these aspects are out of the scope of this paper. We advise the reader to consult [5] for a more formal insight.

In such environments, the design difficulty is expressed by the Arrows impossibility theorem stating that no social choice that accomplishes all the required properties exists. Therefore, the designer should relax some properties and in the end, should check how the voting protocol reflected the designer's objectives. We can mention voting protocols like the plurality protocol, the binary protocol or Borda voting [8].

Researchers studied how voting is robust with insincere voters. The revelation principle assures that if a protocol implements a social choice function in Nash equilibrium, therefore, agents' best strategy is to reveal their types truthfully. But, the Gibbard-Satterthwaite impossibility theorem states that is there are more than 3 possible outcomes (which is the case in most of the practical situations) and the equilibrium is obtained with some dominant strategies, therefore, the social choice function imposes a dictator through voting [5], which is not a desired outcome of the game.

3.1.1 Auctions

An auction usually consists of an auctioneer and potential bidders. The auctioneer wants to sell an item and get the highest possible payment for it, while the bidders want to acquire the item at the lowest possible price.

A key feature for auctions is the presence of asymmetric information [4]. Therefore, the appropriate concept of equilibrium is the Bayesian Nash equilibrium.

Researchers studied 4 main setups for auctions. In the English (first-price open-cry) auction, each bidder is free to raise his bid. When no bidder is willing to raise anymore, the auction ends, and the highest bidder wins the item at the price of the bid. An agent' strategy is a series of bids as a function of her private value, her prior estimates of the other bidder's valuations and the past bids of the others.

In the first-price sealed-bid auction, each bidder submits one bid without knowing the others' bids. The highest bid wins the item and pays the amount of her bid. In general, there is no dominant strategy for bidding in this kind of auction. An agent's best strategy is to bid less than her true valuation, with an amount that depends on what others bid [8]. With common knowledge assumptions regarding the probability distributions of the agents' values, it is possible to determine Nash equilibrium strategies for the agents.

In the Dutch (descending) auction, the seller continuously lowers the price until one of the bidders takes the item at the current price. The Dutch auction is strategically equivalent to the first-price sealed-bid auction.

In the Vickrey (second-price sealed-bid) auction, each bidder submits one bid in a seal, without knowing the others' bids. The highest bidder wins, but she pays the price of the second highest bid. An agent strategy is to bid according with a function of her private value and prior beliefs of the others' valuation. In such auction a

dominant strategy exists: in a private value Vickrey auction, the dominant strategy of each agent is to bid her true valuation (Vickrey in [8]). Vickrey auctions have been advocated and adopted for use in computational multi-agent systems, but are not widely adopted in auctions among humans.

Regarding auctions, some issues as the efficiency of the resulting allocation, the possibility of collusions among bidders, if the auctioneer or bidders can lie or not or some undesirable private information can be revealed during auctions, are of great importance. Occurrences of these kinds of issues can influence the way the designer sets up an auction.

It is argued that all four auction protocols produce the same expected revenue to the auctioneer in private value auctions where the values are independently distributed and bidders are risk neutral [4]. Among risk-averse bidders, the Dutch and the first-price sealed-bid auctions give higher expected revenue to the auctioneer [4]. In non-private value auctions with at least 3 bidders, the English auction leads to the higher revenue. The reason is that other bidders willing to go high up in price causes a bidder to increase her own valuation of the item.

From the perspective of deterring collusion, first-price sealed-bid or Dutch auctions are preferable [8].

Regarding the insincere bidders, it is known that common value auctions suffer from the winner's curse. If an agent bids her valuation and wins the auction, she will know that her valuation was too high because the other agents bid less. Milgrom argues that knowing this in advance agents should bid less than their valuation [4]. This could remain the best strategy in Vickrey auctions. They fail to induce a truthful bidding in most auction settings.

Sandholm argues that in computational auctions, it is important to enhance the system with a look-ahead mechanism [8]. That regards the situation when successive auctions will hold with the same participants. Knowing the entire list of proposed auctions, participants can adjust their bids guided toward the overall gain, not by the local auction-winning objective.

Auctions are difficult to analyse in a unified framework, as a lot of subjective features influence the dominant strategies of the players. Anyway, we consider auctions as being the most important and used setting when one has to model interaction between self-interested agents toward control of some environment resource.

3.2 Bargaining

In a bargaining setting, agents can make a mutually beneficial agreement, but they have a conflict of interest about which agreement to make. The definition of a bargaining situation states that there are two or more agents with a common interest to cooperate, but with conflicting interest about how to perform the cooperation. Bargaining is any process through which the players try to reach an agreement [6].

Bargaining theory is concerned on the efficiency and the distribution properties of the outcome solution. Efficiency relates to the possibility that the players fail to reach an agreement, or that they reach an agreement after some costly delay. The distribution property relates to the issue to exactly how the gains from the cooperation are divided between players.

Axiomatic bargaining theory does not use the idea of a solution concept where the agents' strategies form some type of equilibrium. This kind of approach was

considered in non-cooperative game theory. Instead, some axioms are postulated for a situation in order to be considered as a solution. Nash bargaining solution [1] is the early solution concept that uses this approach. Nash proposed a setting with 2 agents. The agents have to decide on an outcome $o \in O$, and the fallback outcome $o_{fallback}$ occurs if no agreement is reached. We should consider the fact that each agent has her own utility function. Nash bargaining solution selects the outcomes that maximize the joint utility of both agents, considering the fallback outcome. If many deals are individually rational to both agents – i.e. having higher utility than the outcome $o_{fallback}$, then multiple Nash equilibriums exist. Nash bargaining solution has some desirable properties: invariance, symmetry, independence of irrelevant attributes and Pareto efficiency [8].

Considering other axioms, other bargaining solutions exist. One solution belongs to Kalai and Smorodinsky and provides with a fairer outcome, as it leads to equal global utility scores [1]. Therefore, the axiom of the independence of irrelevant attributes can be replaced by the monotonicity property. The Kalai-Smorodinsky solution selects the maximum outcome that is on the line that joins the disagreement point $(u_1(o_{fallback}), u_2(o_{fallback}))$ with the point $(m_1(O), m_2(O))$.

Strategic bargaining theory does not postulate axioms on the solution concept. Rather, the bargaining situation is modelled as a game and the solution concept is based on the analysis of which of the players' strategies is in equilibrium. Strategic bargaining theory explains the behaviour of rational utility maximizing agents better than the axiomatic approaches. Strategic bargaining analyses sequential bargaining where agents alternate in making offers to each other in a pre-specified order. The well-known Rubinstein bargaining theory [5] [8] allows one to solve such a game for subgame perfect Nash equilibrium, even though it is impossible to carry out the complete look-ahead in the infinitely long tree of the game.

The bargaining models assume the perfect rationality of the agents. They proved that no computation is required in finding a mutually desirable agreement. In the multidimensional space, the solution can be found by solving some equation system in the space the feasible utility imputations. To solve these equations, agents should perform a search, which usually is costly. Agents should make a trade off between the cost of the search for a bargaining solution and the gains they could receive after bargaining. Algorithms like Real-Time A* are proposed for the ante-mentioned trade off. In modelling bargaining settings that require nontrivial computations, each agent strategy should incorporate both negotiation actions and deliberative actions. The bargaining context can get much complex than the ones of agent searching algorithms.

3.3 General equilibrium theory

General equilibrium theory provides a distributed method for efficiently allocating goods and resources among agents, finding the best tradeoffs in a moderately complex multidimensional search space – based on the market prices [8]. We direct the reader toward the general definition of the Walrasian general equilibrium framework as in [5]. Within this framework, solving the general equilibrium

problem means finding a solution that respects the some well-established equation conditions. The solution has some remarkable properties: (i) Pareto efficiency, (ii) the existence of the solution is proved theoretically and (iii) the solution is unique under gross substitutes assumptions.

The motivation for us to study market mechanisms is that agents can find the solution while never centralizing all the information or control. Algorithms for searching the general equilibrium are centralized and decentralized. Centralized algorithms are based on numerical algorithms for solving the given equation within the market constraints. These specifications of the problem lead for solving some non-linear complementarity problem, which is a very hard problem topic for computational systems. Within de-centralized solutions, tâtonnement approaches are considered. The tâtonnement theory [8] proposed by Samuelson describes the process of price adjustments based on the discrepancy between supply and demand. The price tâtonnement algorithm is a steepest-descend search method. Sometimes, the algorithm fails to find a solution even in the cases when the equilibrium exists. However, there are sufficient conditions that guarantee that equilibrium is found if it exists.

The problem with the Walrasian equilibrium theory is the fact that its assumptions are hardly met in practice. In markets with a finite number of agents, each agent can act strategically. The agent has to speculate how its misrepresentation affects the market prices, which are simultaneously affected by how other agents respond to the prices, which changed due to the first agent's strategic action. Sandholm [7] investigates how much an agent can gain by speculation, re-writing the mathematical constraints each agent has to accomplish when optimising her target objective function. The above-mentioned author proved that solution concepts from game theory should be used to design market protocols. Agent strategies are in Nash equilibrium if each agent strategy is its best response to the others' strategies. This is a condition for the system stability in settings where all agents act strategically.

4 Conclusion

This paper investigated the means of obtaining collaboration inside societies with heterogeneous agents. In section 2 we performed a review about the most important ways toward collaboration, pointing out that competition frameworks are the ones that should be considered in environments with heterogeneous agents. We insisted about the importance of considering this study topic, as being interrelated and important for both economics and the agent systems field. Section 3 investigated voting, auctions, bargaining and general equilibrium models as the frameworks used for analyzing self-interested agent behavior. We pointed out the problems the societal engineer has to cope with when building interaction protocols or norms of the society.

We can conclude that if the rules are well designed, the collaboration is stronger when agents are not constrained toward an a-priori imposed behavior. Therefore, letting agents to reason and to select their best strategy will assure the environment with stability and with the beneficial properties of designated mechanism.

Researchers go further and try to formalize means of self-interested agent collaboration inside coalition formation theories. These theories are based on cooperative game theory and put the foundation for the studying the cases when indeed, self-

interested agent will engage in collaboration without being forced by external rules. Further research should go on this direction.

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FOREIGN CAPITAL IN THE ROMANIAN OIL INDUSTRY. STUDY ON THE PERIOD 1850-1940.

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ABSTRACT. Foreign Capital in the Romanian Oil Industry. Study on the Period 1850-1940. *The Romanian word for black oil, "păcură",* used in documentary sources referring to crude oil exploitations in the Romanian Principalities as early as the 14th century, comes from the Latin word *picula*. This etymology made some authors consider that oil exploitation on the current territory of Romania started a long time ago, in the times of the Dacians. The oldest documentary evidence regarding the existence of some crude oil wells appeared in Moldova: "on 4 October 1440 a document issued by the chancellor's office of Princes Iliaş and Ştefan, sons and heirs to the throne of Alexandru cel Bun, mentioned the village of *Lăcăceşti on the Tazlăul Sărat, right beside the black oil pool* ["păcură" in Romanian]."

The first modern Romanian oil distillery was build in 1857 in Râfov, near Ploieşti, by Teodor Mehedințeanu. This oil distillery obtained the exclusive right of providing Bucharest with the lamp oil necessary for lighting. In 1857, by replacing rape oil with the lamp oil provided by the Râfnov oil distillery, Bucharest became the first town in the world *entirely lit by means of refined oil*. [2, p.24]

Between 1860-1890 the first attempts to industrialize the extraction and the processing of Romanian oil were made, but, because of the lack of domestic capital, the results fell short of expectations. The first company set up with foreign capital was *Valachian Petroleum Co. Ltd.*, established in 1864, which belonged to the Englishman Jackson Brown. On its establishment, the company had a capital of FFr 4 million. [7]

The influx of foreign capital that started in 1895 in the Romanian oil industry contributed to the development of this economic branch. Initially, the foreign capital played a positive role in the modern industrialisation of oil extraction and processing. The economic development of the country required this foreign capital contribution because of the shortage of domestic, national capital.

We have made the above statement to make it clear that by no means do we intend to deny the beneficial role played by the foreign capital in the industrialisation of the Romanian economy. However, although we admit that the foreign capital had a positive effect in an initial stage, we cannot fail to mention that the Romanian national oil industry gradually became subordinated to it.

This issue – i.e. the attempt to monopolise a strategic sector of the national economy, most often seriously harming national interests – has caught the attention of Romanian economists since around World War I, determining lively debates.

- ***Romanian oil and foreign capital***

One of the Romanian authors deeply interested in analysing the way in which Romanian natural non-recoverable resources, especially oil, were turned to best account, was G. N. Leon. His interest in the matter was all the more legitimate

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as “A real *problem of the oil* appeared worldwide at the turn of the 19th and 20th centuries, when derivatives obtained from black gold were used as fuel for the first time.” [4, p.11]

His study of the problem of the oil starts from the idea that the wealth of a nation could *also* be assessed in terms of the production factors existing in the geographic space in which the nation in question lives. However, even if a certain space were characterised by a multitude of natural production factors, such abundance does not automatically generate national welfare. Welfare can only be achieved to the extent to which the pre-existing natural resources are backed up by workforce and capital – production factors without which economic activity cannot be carried out and materialised.

Certainly, it was very difficult for a state to develop relying exclusively on domestic production factors, all the more when such factors could be insufficient. The lack of production factors could be remedied by attracting new production factors, even if of an origin foreign to the economic system in question.

In the case of Romania, it was stated that natural production factors were characterised by abundance and variety, whereas population was sufficiently numerous to exploit the natural resources. What Romania lacked was *the production factor “capital”*.

The lack of capital to support the development of oil extraction and refining was decisive, and, consequently, in 1943 – point at which G. N. Leon was expressing his position – “Romania is the sixth oil producing country in the world, namely in the following order: America, Russia, Venezuela, Iran, the Dutch Indies and then Romania, with almost 2%, i.e. with a production of 5,800 thousand tonnes. Once Romania used to hold the fourth position.” [4, p.181]

During the interwar period, the importance of attracting foreign capital to the national economy in view of turning to best account the productive forces of the nation was much insisted upon. Unconditioned acceptance of foreign capital led to the situation in which more than 80% of the total capital invested in the oil industry was of allogeneous origin. [See Table 1]

We would like to remark the almost insignificant weight of domestic capital in comparison with the foreign one: 5.5% Romanian capital, 94.5% foreign capital. Undoubtedly, in a branch of the national economy where the overwhelming majority of investments belonged to foreign investors, national interests were impossible to pursue.

G. N. Leon spoke against the unconditioned acceptance of foreign capital, all the more as the sector in question was one of strategic and economic significance to the country.

The position of the author was extremely peremptory: “The significance of oil as generator of energy and especially as means of national defence determined foreign capitalists to transform the wealth of our country into a weapon aimed against Romanian interests and against the states with which the capital of origin states was not in friendly relations. In other words, Romanian oil was no longer a national, but an international good.” [4, p.182]

Maintaining a critical attitude towards the way in which foreign capital was accepted in Romania, G. N. Leon considered that foreign economic agents “were not satisfied just with the benefits due on the invested capital, but also tried everything

they could to shape State politics, both regarding the economic activity and Romania's relations with foreign countries." [4, p.182]

- ***The national oil industry under international capital***

In G. N. Leon's opinion, adopting a mining economic policy that did not first and foremost pursue national interests could have seriously harmed the future development of the national economy. Renouncing the policy of promoting national interests would have induced negative effects not only at the level of the economic branch, but also at that of the entire national economy.

The author explained *the negative effects* of abandoning a mining economic policy pursuing national interests by identifying several main causes that could generate them: the unconditioned acceptance of foreign capital; the unreasonable exploitation of oil resources; the transportation and the distribution of oil products at the discretion of companies in the field.

In the author's opinion, the unconditioned acceptance of foreign capital was the most important cause among the above-mentioned, generating all the others. We will discuss this topic in more detail.

As the author himself admitted, in the context of modern world economic framework, the development of national economy was impossible just by means of domestic production factors. Accepting and attracting certain production factors into the national economic activity from the outside had become a necessity.

However, acceptance of production factors – insufficient and impossible to replace by means of national resources – should have occurred under certain conditions mainly referring to quantitative and qualitative principles. In the case of oil extraction such conditions imposed on accepting the production factor "capital" started from focusing on the quantitative element characterising the admission of the production factor in question onto the national market.

Focusing on this condition was all the more important as in Romania "technical and financial capacity was the criterion by which concessions were granted and, definitely, the technical and financial capacity of national companies could not compare with that of American and British companies." [4, p. 183]

Under such circumstances, accepting free competition between Romanian and foreign companies would have been detrimental to domestic capital owners since the competition would have started from too different positions. The idea of accepting the technical and financial criterion as the main eligibility criterion in conceding oil exploitations would have deprived Romanian companies, inferior to foreign competitors, of any chance of development.

The inferiority of Romanian companies resided in the fact that the national oil industry was still in an incipient stage, having no experience in comparison with the big international corporations – the case of Standard Oil Corporation! However, a young national economy stands no chances of surviving competition with far more experienced and strong competitors unless supported and protected.

Our point of view is supported both by G. N. Leon's opinion and by the ideas of the economic protectionism promoted by Friedrich List: "The industry of a society cannot grow unless its capital grows, and the capital of a society can only grow proportionally to the savings that can be made gradually on its income." [5, p. 180]

Realising the potential danger represented by the foreign companies which could have completely swallow up the entire national oil drilling industry, on 4 July 1924, the Parliament of Romania promulgated the *Mine Law* – imposing restrictions on investments made in the field of oil: 51% domestic capital and just 49% foreign capital. By virtue of this stipulation, it was estimated that between 1924 and 1929 30% of the total oil production belonged to Romanian companies. [4, p.183]

G. N. Leon considered that property in the field of mining, resources in general, as well as concessions were domains in which national states had to adopt, first of all, a policy serving their own interests. It was logical and normal that a state, if owning certain resources, should wish to exploit them "under certain guarantees of reasonable exploitation, of ensuring reserves for future needs, and of supervision of national work. Therefore mining conditions in most states take these aspects into consideration." [4, p.183]

We would like to appreciate the attitude of the author regarding this matter. Productive activities in commodity economy are predominantly carried out on the basis of non-recoverable resources. Even if a certain state had possessed a large amount of resources, intensive exploitation would have finally led to their much more rapid exhaustion. Exploitation of resources should have considered the national interest, taking into account the prospects of future development of the national economy.

Why should oil exploitation and processing be carried out by means of national work after all? We consider that the answer to this question is to be found in the author's acceptance, in a dissimulated form, of the theoretical principles regarding *the productive forces of the nation and the development of the national economic space*, principles stated by Friedrich List.

According to the German author, it was wrong to consider the causes of wealth equal to wealth itself; in other words, national wealth was not to be understood necessarily in terms of the resources owned by a certain nation. Instead, both with the Romanian and the German authors, the real national wealth was understood as the *power of creating/generating wealth.*

"The power of creating wealth is thus infinitely more important than wealth itself; not only that it guarantees possession and multiplication of what has been acquired, but also the capacity to replace what has been lost. If this applies to individuals, it applies all the more to entire nations that cannot live on allowance." [5, p. 122]

This was all the more important as G. N. Leon considered that the main beneficiaries of foreign capital investments were the owners of the capital in question. We would like to remark that the author rejected the idea that foreign capital investments were absolutely beneficial to the national economy since, although investments were made in Romania, the usufruct of the benefits on these investments belonged to foreign companies.

If the benefits obtained from exploiting national resources did not contribute to the development of the national economic framework but made capital owners richer, they no longer played any role in creating/generating and accumulating national wealth.

The case of the "Romanian-American" company, established in 1904, which, in G. N. Leon's opinion, obtained immense benefits by exploiting Romanian oil was an illustrative example in this sense. We will further on analyse the situation of the above-mentioned company between 1904 and 1939, starting from some statistical data provided by G. N. Leon. [See Table 2]

If in the beginning the mentioned company was established by foreign capital only, in time, as it developed, capital increase was performed by reinvesting part of the benefit obtained by means of exploiting and processing Romanian oil. We would like to mention that just a part of the obtained benefit was reinvested, while large sums of money were not re-capitalised.

"From 1920 to 1939 included, i.e. a period of 20 years, the company achieved a net benefit of ROL 2,183,282,415, which means an average of ROL 109,164,120 yearly, and, since the company came to the country with only ROL 12,500,000, it results that every year it made an average benefit 8.37 times bigger than the capital it brought to the country." [4, p.190]

The sums resulted as a difference between the net benefit and the total reinvested were repatriated to the countries of origin by the foreign companies. This surplus thus contributed to the development of the national economies of the states of origin of foreign companies, to the detriment of our own national economy. Indirectly, G. N. Leon explained that the development of the economy of big states was based on the exploitation – with huge benefits – of the resources of states lacking their own means of turning to best account their national wealth.

This discourse promoted by the Romanian author comes very close to accepting economic protectionism to the detriment of absolute economic freedom. In our opinion, there is nothing paradoxical with regard to G. N. Leon's opposition to the intervention, without limits, of foreign capital in the national economy. What was actually desired was the development of the national economy predominantly by means of national forces. It is not only G. N. Leon, but also the great majority of Romanian authors preoccupied by this problem that express their preference for the development of a national oil industry *by means of national forces, by means of domestic capital.*

Economic nationalism was no news; it was present as early as the era of economic classicism – Adam Smith and his theory of *international trade* – continuing with neo-classicism. The position of Romanian economists was concordant with the general picture. We will not interpret the points of view expressed by them as ill meaning, but rather as opinions that underlined the necessity of developing a strong national oil industry, to the service of a national economic and social framework.

Table 1

Origin of capital	*Billion, gold*	*Weight*
German	160	35.0%
English	115	25.2%
Dutch	60	13.1%
French	10	10.0%
Italian	45	2.2%
Belgian	10	2.2%
American	25	5.5%
Austro-Hungarian	6	1.3%
Romanian	25	5.5%

Source: 8, p.146

Table 2

Year	*Capital ROL*	*Origin of invested capital foreign or domestic*
1904	2,500,000	Foreign
1906	12,500,000	foreign – capital increase
1914	25,000,000	domestic benefit - increase
1916	37,000,000	domestic benefit - increase
1920	150,000,000	domestic benefit - increase
1921	200,000,000	domestic benefit - increase
1939	900,000,000	domestic benefit - increase

Source: 4, p.190 – processed data

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THE ROLE OF COMMUNICATION IN STAFF APPRAISAL

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ABSTRACT. The Role of Communication in Staff Appraisal. This paper tries to emphasise the role of communication in the appraisal of performance taking into account the situation of the Romanian economy and the conditions under which the appraisal systems are implemented in the Romanian enterprises. The main idea is to propose a new approach to staff appraisal which should involve a definite change of mentality and a great deal of communication between manager and subordinates.

Traditionally the treatment of performance in the organization is centred on the appraisal of performance and the allocation of reward. However, organizations are increasingly admitting to the fact that planning the performance, clarity of objectives and standards, the necessary resources, guiding and supporting the employee by the direct manager have become key-points that have a critical effect on individual performance.

A system for managing the activity and the performance of the employees has two main functions: the appraisal function and the development function. The first one supposes the evaluation of performance having as basis the performance standards established in advance and the results thus obtained are used for making decisions concerning the employees (transfer, promotion, salary increases).The development function is oriented towards improving the performances of the employees through the identification of training needs, the establishment of future performance standards and of some action plans that have as purpose the improvement of present performance. Sometimes there might be a conflict between these two functions as well as between organizational objectives and personal objectives.

In this context we have to mention the so – called performance cycle which comprises 3 steps: planning the performance, supporting the performance and reviewing the performance. The first step requires that the manager and the employee should share the same expectations about future performance. These can be found in the traditional job description as well as in specific objectives and competencies. It is advisable to have a combination of these as the job description alone is not enough. Performance expectations must be understood by the employee and discussed if necessary. Moreover, the employee should have his own contribution in establishing the performance objectives and he should understand very well what he is expected to do and how he should do it.

In supporting the performance the manager has a key role because he organizes the off - job resources and trainings; he should also guide his employees through discussions and positive feed-back. He has the possibility to offer the practical experience necessary for developing the employees'skills, as well as practical opportunities linked to the job.

Although it is the employee's responsibility to achieve the performance, the manager has the role to provide support and guidance and to appraise the employee's results.

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The third step, reviewing the performance, also implies collaboration between the manager and the employee in planning work and tasks. For instance, a manager should be updated all the time with the employee's progress while the latter needs to be informed about the organizational changes that can affect his objectives. Both should share points of view and see what they can do for improving their activity. These reviews are quite informal this is why they can take place whenever it is necessary. Their purpose is to facilitate the employee's future performance and to give the manager the opportunity to see whether the employee is on the right track; contrary, he should re-direct him.

The performance cycle describes the daily management of performance. It has been used for a long time in order to justify why there wasn't an official appraisal system, the general belief being that performance was anyway being evaluated on an informal basis. Practically it was noticed that it wasn't like this, that performance was evaluated clearly only when there were serious problems, hence the need for formal appraisal systems.

In fact these systems define the third step from the performance cycle. Generally, this means that each head of department will evaluate the performance of his subordinates every year, six months or even more often. In many organizations this system has either a rigid character or a formal one without seeing its necessity in practice. This situation originates also in the conflicting character that an appraisal system can have. The appraisal of performance should have as purpose the improvement of actual performance, the allocation of feed-back, the increase of motivation, the identification of individual potential and training needs, career development etc. The word "appraisal" itself means both evaluation and appreciation at the same time. Unfortunately, the second meaning has been lost and the first meaning has got a negative connotation based on criticism, the evaluator becoming something like a judge, instead of somebody meant to help. In fact this process implies impartiality and a positive starting point. As in pedagogy, the evaluation shouldn't be done with the only purpose of emphasizing the employee's mistakes, but also in order to show his accomplishments and to correct his mistakes if it's the case. Here comes the position of the manager towards his employees. In order to evaluate correctly, a manager needs to know in detail his subordinates'activity. This is possible especially within the departments because in a large organization it's too difficult to have the evaluation of the employees made only by one person. In order to get to know the activity of his subordinates, a manager must communicate with the employees. Communication is the basis of correct appraisal and the source of progress in an organization. Unfortunately, at least in Romania, people can't or don't want to communicate and the typical manager is still the supreme leader who wants to impose his views and finds it offending to communicate with the subordinates. These are probably consequences of the former regime and the little managerial practice that we have. This is why more and more human resources and consultancy centres are trying to demonstrate the necessity of trainings for managers in the field of communication.

If a manager doesn't communicate closely with his employees on a regular basis, he won't be able to understand their needs and to evaluate their performances correctly. Moreover, excessive severity and criticism create a stressful atmosphere within the organisation and the employees will start rejecting communication out of fear or caution. Lack of communication between management and employees may lead

to the decrease of performance or even to conflicts as it is quite often the unions'case which generally speaking do not communicate with the management on a regular basis and just show up at a certain moment with a list of demands and complaints.

Under the circumstances the logical question is what should be done in order to improve communication within the organisation and how we can make communication the basis of the appraisal system. What we need in Romania is especially a change of mentality regarding the relationship manager-employee. Excessive formality in this relationship creates a distance which usually obstructs efficient communication. Then lack of information and direct contact with employees make the manger unable to evaluate correctly a person or a situation. It has been noticed that in many Romanian organisations the manager tends to preserve the model he used to have 15 years ago, that is he surrounds himself with a group of people who, by all kinds of means, have managed to gain his trust and thus he believes he communicates with the entire organisation. This doesn't mean delegating authority, but it is an alienation from the internal life of the organisation, from the achievements and the problems of the employees. It has been also noticed that in some Romanian companies, despite the efforts made for the integration in the European Union, promotion is still based on unfair criteria, such as nepotism and favouritism, not to mention the worst phenomenon, corruption, which unfortunately exists from the lowest up to the highest level.

A remarkable example in the field of communication is the new general manager from Petromidia, a Romanian who lived in Israel and studied in USA. He started restructuring the company which was about to get bankrupt by visiting the factory and talking to the workers from all shifts, including the night one. Then he made a radio station of the enterprise where all the employees could go or call and express their views. Once a woman called complaining that she hadn't been paid enough at the last pay-check. The manger sent immediately his personal car and brought the woman to his office and solved personally her problem.

Such an example is probably not a singular one in the Romanian business environment, but still such a model is not common yet. This is why the trainings organised by human resources centres aim at placing managers in situations as practical as possible. Such a role-play experiment will gather up to 10 managers belonging to different companies but with similar profile. For three days they will perform the role of employees in the same company and the trainer will be the "manager". The managers have to accomplish different tasks or have to simulate various situations while the trainer plays the role the role of an authoritarian and distant manager first, then the role of an indifferent manager and finally the role of the communicative manager. The trainees are asked to analyse at the end of each day the attitude of the "manager", his positive and negative parts both from the perspective of the employee and of the manager. After the three days they have to decide which of the three attitudes is the most efficient for the company's activity and which for stimulating the employees'activity. There can be the same attitude or two different ones. From several trainings it's been concluded that the majority of the managers involved decided that the communicative attitude is the best one both for the company and the employees. However, some of them thought that the authoritarian attitude could be more helpful in the economical environment from Romania because for some employees too much openness is interpreted as a possibility for

not fulfilling their tasks in time and in good conditions. So it is obvious that a change of mentality is necessary both for employees and managers. A combination between authority, flexibility, openness and a communicative character seems to be the portrait of the ideal manager.

A situation in which communication is most important is the appraisal interview. This procedure is very important, both for the management and for the employees. When preparing this interview, two steps are very important:

1. Creating a positive climate which supposes short informal discussions between the manager and the subordinate referring to the interview that will take place. The role of these discussions is for the employee to understand the purpose of the interview and the fact that the emphasis will be on planning future performance. The subordinate should understand that he is supposed to play an active part in the interview in order to get a correct appraisal of his performance. In this respect he needs to prepare himself on the basis of the appraisal form that he must fill in advance. The more he will trust himself, the more efficient his participation will be.
2. The individual preparation both for the manager and the subordinate. The manager should take into account the following aspects:

- the subordinate's main duties and responsibilities
- the analysis of performance indicators and the competencies on the basis of which performance is appraised
- making an initial evaluation of the employees'performance, but avoiding creating a definite idea. The manager should be open to any suggestion the subordinate might make during the interview.
- Identifying possible causes for not achieving the performance indicators. In this context the manager has to identify certain modalities for improving the employees'performance. For the success of the interview it is necessary for the manager to be as specific as possible when referring to the problems and to their solutions.

Any good preparation of the interview can be destroyed by a wrong start. If it starts wrongly, there is the danger that the players, the manager and the subordinate, should create an approach of the type "judge/judged". This is why it is necessary that the subordinate should feel relaxed and comfortable in order to be more receptive to the manager's advice. The manager should use a positive tone, emphasising the perception that the employee has on his own performance. He should also present the objectives of the interview.

The interview should be structured taking into consideration the following steps:

- Listening to the subordinate's self-appraisal. He should be allowed to express his own point of view; the manager may ask for clarification, but without aggressiveness.
- The manager will present his own evaluation, his point of view concerning the employee's performance. He should start with the positive parts, underlying the fact that his evaluation is perfectible, explaining the reasons for the negative remarks and his wish to hear the subordinate's point of view as well.
- Discussing the differences of perception on present activity in order to reach a common view. After both points of view are presented the manager and the employee will examine the points they agree on as well as those they disagree on and their reasons. The manager should lead the discussion, not dominate it. It is important for the employee to find his points of view in the final appraisal. It is obvious that they can't reach a perfect agreement, but it's important to clarify where the differences come from.

- Analysing the causes of the unsatisfactory results. The causes can vary from insufficient briefing, to lack of motivation and external factors.

After all these steps have been undertaken, the manager can plan future actions, revising in detail the employee's activity and identifying specific actions for the employer to reach the performance standards. Some actions that will follow the appraisal interview are:

- The manager will fill in the employee's appraisal form, on the basis of the discussion they had. A copy of the document will be sent to the subordinate, who will have to sign it in order to confirm that the document also reflects his point of view. If there are disagreements, they must be added at the end of the form and signed.

- The planning of development activities which should be done immediately so that the employee would not ignore them.

- The periodical monitoring of the subordinate's progress through informal check discussions and counselling with the manager. These should be frequent enough to give the sensation of continuity.

- Offering feed-back when it's necessary. Managers don't have to wait for a formal meeting, because it is important to take measures at the right moment.

The information obtained from the interview will be used in the recruitment procedures, in the training process as well as in establishing the wage level.

The conclusion is that on his way to Europe the Romanian manager needs to change his mentality and to make efforts for achieving efficient communication with the rest of the organisation. The Romanian manager should also learn how to treat his subordinates better, how to be a coach and not a judge, how to inspire trust and not fear, how to help employees improve their performance instead of firing them at the first mistake. For an employee it is extremely important to see that his work is appreciated and that he can talk directly to his boss without being afraid of the famous phrase: "If you don't like it here, leave. There are plenty of people waiting to take your seat." A positive, open attitude coming from the manager will increase motivation and thus performance.

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ORGANIZATION OF THE AGRICULTURAL PRODUCTS MARKET AFTER AUCTION'S MODEL

VINCENȚIU VEREŞ*

ABSTRACT. Organization of the Agricultural Products Market after Auction's Model. As a cooperative enterprise, Bloemenveiling Aalsmeer offers globally producing growers and globally active wholesalers and exporters a total concept: a central marketplace for the buying and selling of floricultural products with a balanced range of marketing channels, good facilities for growers and buyers and effective logistics. Aalsmeer, the most prominent auction in the world, thus contributes significantly to processes of distributing and pricing flowers and plants.

The ways of manifestation of the agricultural product market are numeros. From the point of view of the level in the evolution of the agricultural products markets there are two distinct categories: traditional or "peasant" markets and modern markets [2,p.269], [4,p.12]. In the first category we find agricultural markets, trade fairs, cattle markets and fairs. These traditional forms have had an extremely slow evolution throughout the time as far as ways of organization, functioning and transaction of agricultural products are concerned. Even today, as at the beginning of the century, the meeting between the producer-seller and the buyer takes place in an open space and the exchange of agricultural products is made in relatively small quantities (in comparison with modern forms) and through the same way of negotiation. However there are some forms of the agricultural products market which have had a more rapid evolution and which have adapted to the requirements of the market. Thus, the stock exchange and auction with agricultural products appeared and today these forms coexist with traditional forms [1, p.14]. In some situations, these modern forms have developed even on the old structures and in the same place where trade fairs and agricultural markets have recently functioned.

Auctions are perceived as "the selling of a good in public by special rules and having as a result the selling of the product to the person who offered the highest price for it" [3, p.571]. Auction with agricultural products are, first of all, ways of manifestation of the agricultural products market, they are physical markets because the meeting between demand and supply is made physically in the place where the transaction takes place and the agricultural products are physically present there too, during the transaction. Secondly, the definition given above does not apply to all types of auctions with agricultural products, as there are auctions which start at maximum price and descend towards the price of exchange. This is the case of the well-known "Dutch" auctions, "veilingen".

Agricultural products are in general perishable, but fruits, vegetables and flowers are some of the most perishable products. In order that these products might

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be commercialized on the market, the market must have an irreproachable organization so that the products should arrive in the shortest time from the producing grower to the final client and the products maintain their physical and chemical characteristics as closer as possible to the ideal ones.

A perfect example of organization and functioning is that of "Verenigde Bloemenveilingen Aalsmeer" (VBA) from Holland, the largest and the most known auction in the world which sells flowers, ornamental and garden plants and which uses this method of the decreasing price.

This is a perfect example of organization and functioning and next we will try to demonstrate this.

VBA from Holland is the offspring of the merger between two selling associations from Aalsmeer which have been selling flowers and ornamental plants since 1912. The merge between "Bloemenlust" and "Centrale Aalsmeerse Bloemenveiling" happened in 1968 and resulted in a large organization of sales after auction's model, known by the mane of VBA. The building in which VBA started its activity of rapid sales of flowers and plants was a modern building with a surface of 88.000 m^2. Since then the building was permanently extended, due to the increasing volume of transactions, and today approximately 19 million flowers and 2 million plants exchange their owner daily on a surface of 1 million m^2 [5,p.2]. this building does not only house the largest auction of flowers in the world but it is also one of the largest commercial space in the world.

The internal organization of the cooperative. Besides its dimensions, VBA is a cooperative of producers where we find 3144 horticulturist members (in 2003) and at the same time owners of the commercial space. They sell their entire production of flowers by auction. They elect a board of directors formed by 9 persons, all members of the cooperative, who will determine the future policy. The management and implementation of the policy are controlled by three directors: General Director, Commercial Director and Executive Director. The 3144 members are grouped in 15 regional sections, each section having its own leadership. This way of organization allows people from VBA to adapt much easier to changes, to the economic evolution of the society and at the same time allows them not to lose control over the cooperative.

The organization and administration of the space. The space where the auction activities take place is divided into two parts: one part is destined for sales and the other part for clients and buyers from the auction.

The space destined for sales is also divided into three sectors. The first sector is intended for supplies and this is the space where flowers and decorative plants are received and stored in refrigerating rooms or in halls until the moment when they are sold at an auction. Nearby this sector we find the rooms destined for the sale by auction, which then communicates with the halls of distribution. Flowers arrive in the evening or in the night before the day in which they will be sold by auction. They are delivered by the horticulturists themselves or by a transport society, in case that the horticulturist have externalized this activity, and flowers are transported in special trucks to refrigerating stores. As for as ornamental and garden plants are concerned, these arrive a day before the sale. The control of products is made in the halls of the storehouse and in the refrigerating rooms by the VBA staff. The possible remarks concerning quality of the lot are written on a list which the horticulturist had attached to his products.

The space destined for buyers is divided between approximately 350 buyers, exporters and wholesalers. They have conditioning spaces where flowers and plants are prepared for expedition.

The access in all these areas is extremely easy and the flow of products is very well organized, so that immediately after a lot of products was sold, this is taken by the buyer and then loaded in the means of transport and sent, without troubling other people activity.

The total surface of VBA, including the two areas mentioned previously, is today comparable with the size of 165 football grounds, this surface increasing rapidly especially after the 80's.

Table 1

VBA Evolution Area

Aria (1000 m^2)	***1975***	***1980***	***2001***	***2002***	***2003***
Built up area	169	267	878	999	999*
Exterior area	255	296	772	811	811
Total site area	424	563	1650	1810	1810

Source: Annual Report, VBA , 2003.

The organization of auction sale. The main point of an auction is the sale which takes place in a saleroom. The sale of the products is made in 5 rooms: 4 for the sale of different types of flowers and one for the sale of ornamental plants. The total number of places for buyers (exporters, wholesalers and retailers) in these rooms is 2000 and the number of auction clocks which mediate transaction is 13. The period in which transaction are made is between 6.30 and 9.30 a.m., five days a week, from Monday to Friday.

After the buyer has been registered, he receives one or more electronic cards, by which he is identified and with which he will make transactions. By inserting the card in a niche from his desk, the buyer purchase any lot presented on any of the dials in the saleroom. The sale of the products is made by the decreasing method.

Each auction clock is served by two persons : the main auctioneer and an assistant. The latter introduces the information on the computer – the producers name, the amount for sale, the possible observations that the controllers have made – which are immediately displayed on the dial. The auctioneer , after announcing the transaction's characteristics, started the clock on the dial. The auction starts at the maximum unitary price that could be paid and descends toward a lower price. The buyer may stop the clock when the price displayed on the dial is the price that he wants to pay for that lot. The buyer who pushed the button the first can see on the dial his identification data and this fact gives him the certainty that he is the first one who pushed the button. In that moment he will communicate to the commissar the quantity that he wants to buy. The information of the transaction is automatically processed by the central computer in order to be processed and printed then on the buyer's invoices.

After the sale, the lot is taken out the saleroom. A "distribution ticket" is attached to the lot when it is taken out – printed immediately after the transaction on the ground of the data from the central computer – which mentions the buyer's name, the type of the product and quantity that was bought. In the distribution hall

there is, for each buyer, a truck which has the identification number of the buyer and on which are put the products that he has already purchased. The truck then moved into a space destined for conditioning, where the buyer may prepare his lot in order to be sent. If the buyer does not have a conditioning space, he can directly load the lot into the lorry, as he has direct access to this in the distribution room.

When the buyer finished all the transactions for which he had come to VBA, the computer prepares an invoice that he pays at the auction's payments office. In order to avoid payment in cash, the agents from four banks are nearby helping the buyers to pay directly, through the bank.

The result of this system is that every day all lots af flowers and ornamental plants are paid.

This way of exchange is extremely simple and efficient at the same time. It allows the sale of huge quantities of flowers and plants in record time; transactions take place in three hours maximum, in the morning. Approximately 1000 transactions per hour are made at each auction clock. The flow of goods, which is represented below, is driven very efficiently in order to avoid jams and delays in the taking over, manipulation and delivery of goods.

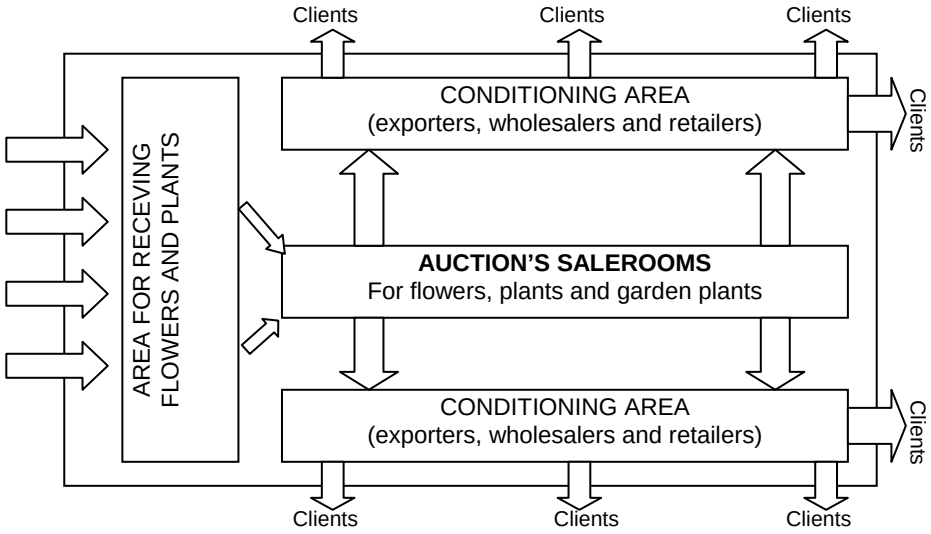

Figure .1 The way of organization of the auction's space and the flow of the agricultural products

The system used by the Dutch from VBA is, besides the things mentioned above, a very profitable one. This fact can be noticed in the data presented in table no.2.

Taking into consideration that in 2003 there were 254 days at work, the turnover registered at VBA, per day of work, is really impressive: 6.200.000 €. In 2003 the number of transactions made at VBA ascends to 8.898.000, which means approximately 35.000 transactions per day. Also, approximately 14 million flowers and 1.5. million decorative plants are sold every day.

Table 2

VBA sales turnover and Holland sales turnover
for cut flowers, plants and garden plants

Specification	*2001*	*2002*	*2003*
VBA sales turnover - Total (mil.€):	1488	1584	1598
- cut flowers	977	1021	995
- plants	418	455	489
- garden plants	93	108	114
Holland sales turnover – Total (mil. €)	3390	3582	3603
% VBA	*43.9%*	*44.2%*	*44.3%*
- Cut flowers	2299	2394	2331
% VBA	*42.5%*	*42.6%*	*42.7%*
- plants	865	939	1003
% VBA	*48.3%*	*48.5%*	*48.7%*
- garden plants	226	249	269
% VBA	*41.2%*	*43.4%*	*42.4%*

Source: Annual Report, VBA , 2003.

The most important sold quantities, by type of products, are presented below:

Table 3

Quantities sold by type of products

Quantities sold by type of products		*2001*	*2002*	*2003*
Top 5 – cut flowers -millions pieces-	Roses	1685	1740	1854
	Tulip	543	600	628
	Spray chrysanthemum	448	474	467
	Gerbera	294	295	298
	Freesia	132	133	132
Top 5 – plants -millions pieces-	Kalanchoe	26	27	27
	Hyacinth	11	13	15
	Ficus	16	15	14
	Saintpaulia	13	14	13
	Dracaena	10	11	13
Top 5 – garden plants -millions pieces-	Violet	26	22	22
	Pelargonium	10	12	11
	Petunia	7	6	6
	Lobelia	7	5	5
	Busy Lizzy	6	4	5

Source: Annual Report, VBA , 2003.

The organization of transport and delivery. Flowers and plants obtained in Holland are highly valued in the whole world. It is also very interesting that over 80% of the quantities sold at VBA are exported.

Being one of the most perishable agricultural products, well conditioning and rapid delivery are essential.

The buyers will pack products taking into consideration the requirements of the clients; combined bouquets of 7-10 flowers are often prepared. Next, flowers are packed in cartons and boxes. After conditioning, they are transported to the delivery centers or directly to the lorries equipped with refrigerating installations. Many transport specialized societies have arranged offices in this delivery centre. If products must arrive in remote places on the globe, they will be sent by plane, the containers with flowers being immediately transported to the airport.

This organization allows the flowers and plants sold at VBA in the morning to be loaded in planes in the evening of the same day and the next morning to arrive at destination, anywhere on the globe.

As a sales cooperative, VBA is the market where approximately 1125 buyers, 3144 members of the cooperative and over 6350 producing growers of flowers and decorative plants meet in a year (2003).

The pattern of organization is at the same time simple, effective and efficient. A model like this can be taken into consideration, of course at a different level of organization, for the organization of the market of products from Romania, both for traditional, retail markets and for modern markets. The modern markets must appear in the Romanian economy too, and must fulfill its primordial role – that of distribution of agricultural products at convenient prices for both the producer and the buyer. In order to achieve this, first of all viable cooperatives have to exist and function in all sectors of agriculture in which we have a tradition in production and consumption. These modern forms of the agricultural products market have to appear as a necessity, not vice versa.

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STUDIA UNIVERSITATIS BABEŞ-BOLYAI, OECONOMICA, L, 1, 2005

TWO CONCEPTS AND THEIR INTERACTIONS: OPTIMUM QUALITY COSTS AND ZERO DEFECTS

CĂTĂLIN AFRĂSINEI*

ABSTRACT. Two Concepts and Their Interactions: Optimum Quality Costs and Zero Defects. What is optimum quality? The article points out two concepts about how to reach an optimum quality. There are two different approaches: optimum quality means that level of quality where total cost of it reaches the lowest possible level or optimum quality means zero defects. A comparative description of them, their apparent differences can be seen in the following. Another idea presented here can be resumed like this: a program of continuous improvement does not necessarily introduce increased costs as the quality level approaches 100%.

When we talk about quality, there are two main cost categories: directly generated by it and as a consequence of lack of quality. If there is no quality, the level of *failure cost* is very high. In order to eliminate the failure costs, it is necessary to increase the level and intensity of appraisal and prevention activities which generate another category of costs. Both costs could be considered as quality costs and together create the *total cost of quality*. Failure costs decrease while appraisal plus prevention costs increase. This apparent tradeoff suggests that an optimum quality level exists. The attempt to improve quality above this level will increase total cost and decrease financial performance. Proponents of this view argue that trying to reach zero defects (ZD) through a program of continuous improvement is not in a company's best economic interest. It is known that “zero defects” concept means to produce all the products or services with no defects that means zero failure costs and 100% level of quality. J.M. Juran discusses the concept of optimum quality in *Quality Control Handbook.*[1,2] Figure 1 shows his model for optimum quality costs. Juran also defines three quality zones relative to the point of minimum total quality costs. The "zone of improvement" lies below the optimum quality level, while the "zone of perfectionism" lies above it. Between them, in the area of the minimum, exits the "zone of indifference." The zone of perfectionism is the subject of discussion for proponents of zero defects. From Juran’s point of view the optimum quality costs includes an optimum combination between failure costs and appraisal and prevention costs. *It means that optimum quality accepts a level of failures (defects)*. Furthermore, he identifies the boundary of the zone of perfectionism as lying, typically, at a quality level where failure costs amount 40% of the total quality cost. This translates into a defect level only half that which exists in the zone of improvement. Of course, these limits and numbers could be subject of discussions and controversies anytime.

The idea is that 100% level quality is a very costly ambition, according to Juran’s idea, and one of the most important criteria for any common consumer is

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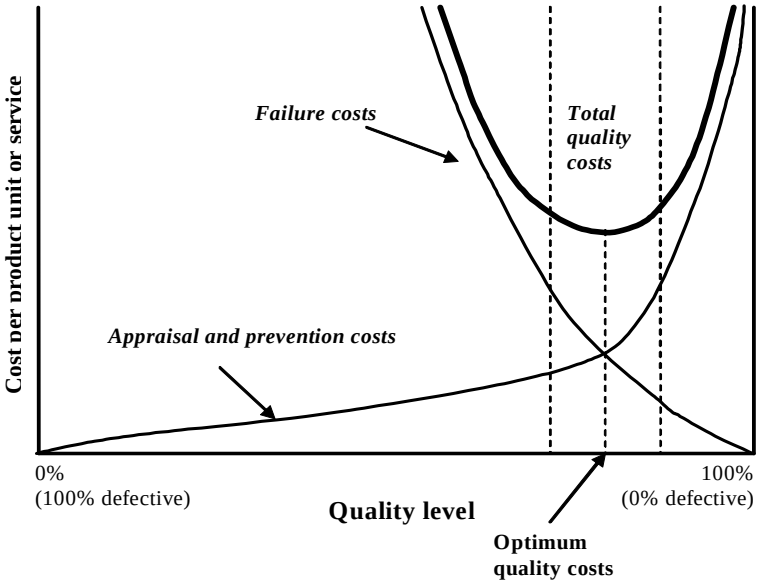
product or service final price that has to be paid. In fact, here is a longer discussion about the total cost of a product/service from consumer point of view: cost of acquisition plus cost of utilization or maintenance after warranty expiration. These costs are directly dependant to initial product/service quality:

- lower quality normally means lower acquisition cost but maybe higher post-warranty costs:
- higher level of quality means higher price for sure but less or zero post-warranty costs.

Figure 1: Juran's model of optimum quality costs



Source: J.M.Juran – „Quality Control Handbook", Third Edition (New York: McGraw Hill, 1979), p 5-12

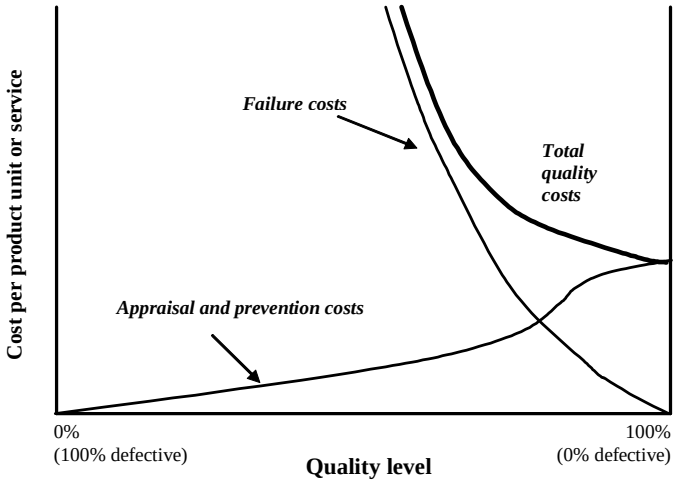
Coming from anyone other than Juran, this apparent heresy might go unnoticed. This approach seems to be in opposition with "zero defects" concept. We can ask ourselves: are the ZD movement and the concept of continuous improvement wrong? Or can these two apparently contradictory views be reconcilated? To answer this question, let's take a look to the mathematics of optimization:

Let: f(q) = Total (internal + external) failure costs
p(q) = Total (appraisal + prevention) prevention costs
T(q) = Total quality cost = f(q) + P(q)
q = quality level (0 to 100% good product)

Then, T(q) is minimized when dT/dq = 0. The minimum value of a function is determined by the point at which its slope *is* zero, or using calculus, when its first derivative equals zero.

In other words, at the point of minimum total quality costs, an *additional* monetary unit invested in prevention will produce exactly one monetary unit of reduced failure costs. Below the optimum, this incremental monetary unit spent for prevention provides more than one monetary unit value of decreased failure costs. Above it, the opposite is true.

Figure 2: Optimum Quality Level equal Zero Defects



There are two other crucial lessons to be learned:

1. Optimum quality costs depend on incremental, not total, elementary costs. At the optimum, nothing in general can be said about the relative levels of prevention and failure costs.

2. There is no mathematical requirement that the optimum occurs at q < 100%. There may be no optimum in the range of q = 0 to 100%. There might be a minimum rather than an optimum, and it could very well be at q = 100%. Figure 2 shows an example.

The optimum (or more correctly, the minimum) quality cost could lie at zero defects (q =100%) if the incremental cost of approaching ZD is less than the incremental return from the resulting improvement. Juran asserts that "prevention costs rise asymptotically, becoming infinite at 100% conformance."[3] This implies that the incremental cost is also infinite. Since the incremental return is not, it follows from his assertion and the above mathematics that the optimum lies below 100%. The question now is, "Does it really take infinite investment to reach zero defects?" Zero defects advocates promote continuous improvement. This is the continuous effort to totally eliminate all forms of waste (the Japanese call it "muda"), including reworks, delivery losses, unproductive time, over-design, inventory, idle facilities, safety accidents and so on. The Japanese word for continuous improvement is "kaizen." Figure 3 compares this method to an alternative improvement process-innovation. This comparison was first made by Masaaki Imai, president, The Cambridge Corporation, Tokyo, Japan. While innovation is characterized by costly major events, kaizen represents inexpensive and almost imperceptible continuous improvement.

	Kaizen	vs.	Innovation
FOCUS	Design, Production and Marketing		Science and Technology
TARGETING	Broad: Quality, Cost safety, Efficiency product/service development		Narrow: Feature, Technique
EXPERTISE	Conventional know-how		Leading edge, Breakthrough
CAPITAL NEEDS	Very modest		Major investments
PROGRESS	Small steps		Big jumps
RESULTS	Continuous		Spontaneous
VISITILITY	Not dramatic		Very dramatic
INVOLVEMENT	Everyone		Selected few
COOPERATION	Group activity		Individual effort
RECOGNITION	Effort, process		Effort, results
	EVOLUTION		**REVOLUTION**

Figure 3. Two different improvement approaches

One example was the reduction of dip soldering failures at Yokogowa Hewlett-Packard (YHP), shown in Figure 4[4]. For a little more than two years, the continuous improvement process on average produced a 50% reduction in the failure rate every 3.6 months. The process eventually slowed, probably due to equipment limitations. Interestingly, that equipment had been discarded as obsolete by a sister plant in the U.S. It would not be at all surprising to find that the equipment had become obsolete because of an innovation that resulted in improvements of a factor of *only* two or three.
What was the incremental cost? What was the incremental return? A detailed cost analysis could probably capture all of the costs and benefits, but the results can be guessed. The incremental costs are essentially zero. Why? At a minimum, there are the labor costs associated with the time spent working on the improvements. But these were not incremental or increased costs. They were fixed costs based on a process that encourages everyone to spend about 5 to 10% of their time working on improvements.
What if less time was spent? Evidence suggests that this would result in backsliding (Figure 5)[5].

After 20 months of continuous improvement (at an improvement rate of 50% each 5.1 months) and a reduction in scrap, the problem was declared solved and all efforts toward further improvement abandoned. The result: the gains could not be held, and the scrap rate increased until the continuous improvement program was reinstated. Quality is not a stable property. Without constant effort from everyone, the organization naturally drifts toward poor performance: higher cost and lower quality.
If the incremental labor costs are indeed zero, what about capital costs required for these improvements? Again, they are probably negligible. Kaizen-type improvement is usually the result of better methods or small equipment changes or additions.

The direct incremental benefits of continued improvement are clearly small. However, there are some major cultural advantages: organizational pride, reputation, spillover into other areas, and experience in problem solving, to mention a few.

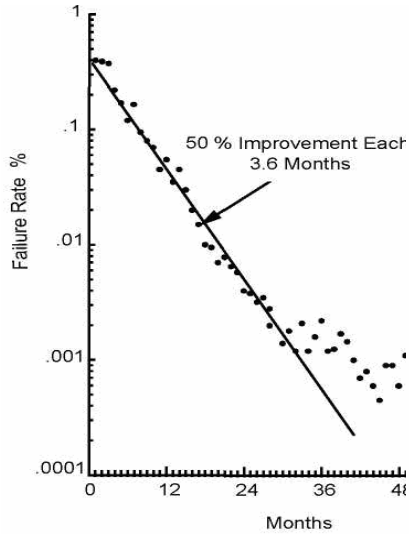


Figure 4. Example of continuous improvement

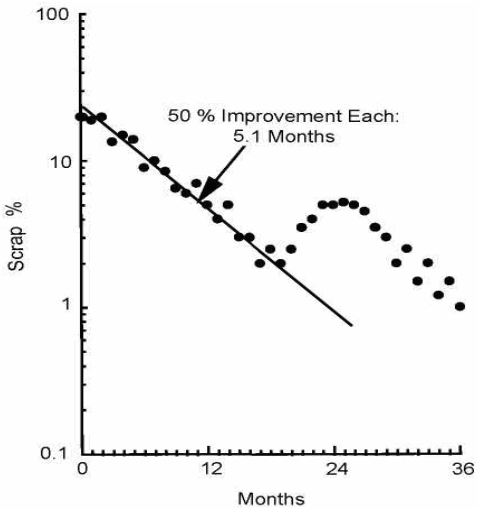


Figure 5. Failing to hold the gains

The correct way to view quality cost optimization is on the basis of incremental economics. However, as ZD is approached, it becomes harder to quantify any increased costs or benefits as less tangible issues enter the equation. A program of continuous improvement does not necessarily introduce increased costs as the quality level approaches 100%. *Any benefit at all* could produce a minimum quality cost at zero defects. The apparent contradiction therefore disappears once the underlying economics of both concepts are clear. Perhaps the best test of this view is the competitive performance of firms that believe in continuous improvement and zero defects. That group includes not only Toyota and Sony, but also IBM, Hewlett-Packard and an ever-increasing number of successful firms.

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STUDIA UNIVERSITAS BABEŞ-BOLYAI, OECONOMICA, XL, 1, 2005

ANALYSIS OF THE INSTITUTIONS OF HIGHER EDUCATION MACROENVIRONMENT

MIHAI-FLORIN BĂCILĂ*

ABSTRACT. Analysis of the Institutions of Higher Education Macroenvironment. An analysis of the external environment is undertaken to discover the evolving opportunities and threats that need to be addressed by the university. The macro-environment analysis examines the broad range of environmental issues that may affect the university. The essential purpose of macro-environment analysis is to provide managers with a clear and detailed understanding of their current and future environment.

The environment where the institutions of higher education are developing their activities is increasingly unstable and competitive. To be able to cope with these changes and challenges successfully and develop the opportunities which may arise, the managers of the institutions of higher education must understand that the marketing activity is a basic requirement for the institutions they are running to survive and develop on the educational market.

The managers of these institutions must understand that marketing information, which is the basis of marketing intelligence, play an important role in the marketing process. Therefore, the setting up of an informational marketing system able to supply important information from the marketing environment of the educational institution, from its client (students, parents, companies, the state), from the educational institution and its public, brings about the possibility to develop a successful marketing activity.

The macroenvironment analysis is extremely important as the changes of environment require the setting forth of a new strategy to be able to cope with them successfully. The Marketing Intelligence System and the Marketing Research System play a central part in this activity.

Two macroenvironment attributes are particularly important for the consequences they may entail as far as the educational institutions are concerned. Firstly, the macroenvironment is *constantly changing.* The period after 1989 was characterized by frequent legislative change, an increase in university autonomy, the unprecedented development of informational and communication technologies (the use of computers in the teaching process, teleconferences, the advent of several virtual universities etc.) the increase of unemployment, and the need to retrain and re-specialize the unemployed, the disappearance of several professions concomitantly with the emergence of new ones etc. All these changes brought about some problems but also some opportunities for the institutions of higher education.

The institutions of higher educations, as well as the other organizations and companies, are currently conducting their activities in an extremely dynamic

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environment. As a result of the speed and dimension of these changes in the environment, the institutions of higher education cannot view each successive change as a separate event which could be studied individually to maximise the advantages it brings and minimise the undesired effects it may bring about. Jim Knight said that ”Change is now a constant condition within which all organisations must learn to operate or risk significant if not total fail.” [4, p.8]

Each institution of education operates in a complex environment undergoing a rapid change. This is why, each institution must permanently monitor the external environment and adapt to it in order to survive and improve its position in the environment.

Each institution of higher education must build a strategy to adapt to the dynamic environment. There’s no such thing as a universally applicable strategy in this sense and each institution of education must find the best solution for its situation, possibilities, objectives and resources. An institution of higher education must be aware all the time of the macroenvironment forces and tendencies to be able to adjust itself to the external environment dynamics.

Secondly, the macroenvironment forces *are largely outside the control and influence of educational institutions.* So, macroenvironment has a greater impact on the institution of education than the latter could ever influence it. Yet, these can influence the macroenvironment (the scientific researches performed by the institutions of higher education led to scientific discoveries that had a great impact on society and caused important society changes). As the institutions of higher education had a reduced direct influence on the macroenvironment, they must identify and adapt to these macroenvironment tendencies.

Presently, the universities in our country perform their activities in the following context:

- an increasingly hostile and competitive internal (74 accredited in the country) and international (foreign universities’ extensions opened in the country, high school graduates’ possibility to immediately further their studies abroad) environment;

- a decrease in the school population as a result of birth rate decrease from 1991 – prognosis (16% - 2006; 20% - 2012; 40% - 2016);

- decrease of general budget- prognosis (10% - 2006; 20% - 2012; 33% - 2016) under the conditions of maintaining the GDP current allocation percentage.[8]

The role of the university is changing in response to a world that is becoming more economically and socially interdependent, international in scope and purpose, and where the “half-life” of knowledge is shrinking dramatically. The traditional view, that universities could train students, in three to six years, who shall later work for a lifetime in a single working place is no longer real. Nowadays, most of the young people will have to change their career three or four times during the years of employment. Every career change shall impose the acquisition of new knowledge and skills. To ensure that society shall continue to see universities as places where knowledge is created and disseminated, the institutions of higher education must look for new means of providing high quality educational opportunities to life-long learners.

The setting up and development of new technologies and the speeding up of knowledge generation fostered the development of new scientific fields which have never existed before. As a result of globalization, there’s a tendency of increasing the national diversity within the institutions of higher education. The high

level of students' heterogeneity forces the institutions of higher education to accomplish two essential functions in the future. First of all, the institutions of higher education must be tolerance and integration communities; they must assume their leading role which should help society to settle the tensions entailed by a greater cultural diversity. Secondly, the universities must create learning environments to allow student to learn within a multicultural context. [9]

Most of the institutions of higher education scan the macroenvironment but they perform this activity as an informal one. For instance, the managers of higher education institutions can read the local newspapers, national magazines, journals to identify the new environment tendencies of the institutions they are running. Thus, these managers can read about the tendencies in environment evolution which occurred in a different area and they appreciate what their effect would be if they manifested also in the area where their institution of education operates. Other times, these tendencies can be acknowledged as a result of the discussions with the managers of other institutions of higher education.

Nevertheless, some macroenvironment information is not published in press and the relevance of information can be doubtful, or this information may be missed by the managers of the institutions. As a result, a threat or an opportunity can appear before the managers of the institutions notice it and thus they will not be able to develop a proper answer to yield profit or avoid the threat.

This is why it is necessary to perform a formal activity to scan the macroenvironment to identify in real time the opportunities that appear and disappear more and more rapidly and the threats that occur more and more frequently. An institution of higher education must be very well aware of the environment where it operates in order to be able to acquire an anticipative – active behaviour, to exert an influence as strong as possible on the environment where it is located.

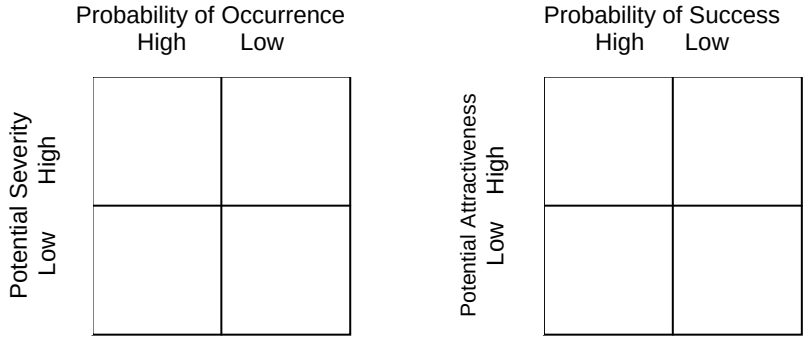
As a result of scanning the macroenvironment, the managers hope to identify the macroenvironment forces that are expected to have the greatest impact on the institution of education. These forces are either threats or opportunities.

An environmental threat is a situation or cause generated by an unfavourable tendency or force or an environment disturbance that would lead, in the absence of a proper and prompt marketing answer, to the deterioration of the institution's position in the environment, on the educational market. [5, p. 124]; [6, p. 22]

Threats are evaluated according the probability of occurrence and the dimension of their impact on the institution, as well as by means of the "Severity / probability" matrix (see figure 1). A major threat has two particularities: (a) it can affect substantially the institution capacity to function or can threaten the very existence of a program and (b) it has a high occurrence probability. There's no institution of higher education free of such environment threats and this is why the management board of each institution of higher education should be able to identify them to find the proper solution.

For instance, the individuals who were in charge with drawing up the strategic plan of the "Babeş-Bolyai" University of Cluj-Napoca consider that the environment in which this institution is operating contains the following threats:

- the legislation, the centralised and non-stimulating policies
- the tendency to reduce the university autonomy;



a) "Severity/probability" matrix b) "Attractiveness /probability" matrix

Figure 1. Threat and opportunity matrices

Source: Kotler, Philip, Karen, Fox (1995), *Strategic Marketing for Educational Institutions,* Second Edition, Prentice-Hall, Inc., New Jersey, p. 125 şi Paina, Nicolaie, Pop, D. Marius (1998), *Politici de marketing,* Editura Presa Universitară Clujeană, Cluj-Napoca, p. 22.

- the decrease of birth rate (the population of school age) ;
- the chronic budget underfunding generated by the state of the economy and the exacerbated proliferation of new universities;
- the poor motivation of the personnel in the general national environment, unfavourable to development;
- the competition with the Western educational systems;
- the educational system will probably enter the service system, as part of GATS, subject to market competition.[8]

An institutional marketing opportunity is an attractive area for relevant marketing action in which a particular institution is likely to enjoy a competitive advantage. [5, p. 124]; [6, p.21] The differential advantage starts at the moment when the distinctive competences of the educational institution allow it to develop, in an easier and better way, as compared to the competitive educational institutions, the necessary conditions to make the best of on opportunity. For instance, we can consider as an opportunity for a faculty of economics the existence of an industrial park in the city it runs its activity, or, in the case of a faculty of biology, the existence of a natural reservation in the vecinity.

Opportunities are evaluated according to their probability of success and their potential attractiveness by means of the "attractiveness / success possibility" matrix (see figure 1). A major opportunity has two features: (a) a strong potential to contribute to the institution's reputation and financial strength and (b) has a high probability of success.

The "Babeş-Bolyai" University of Cluj-Napoca has the advantage of the following opportunities in the environment it operates:

- the society in transition and the developing NGO sector;

- university centres and institutions already existent;
- the university's positive image at national and international level;
- the geo-political context where Romania is situated, Romania's expected integration into EU in 2007;
- highly qualified human resource for expertise activity, technological consulting and transfer;
- the existence of post-graduate studies (doctoral post-doctoral schools);
- Life-Long Learning;
- the existence of the Institute of Interdisciplinary Experimental Research. [8]

By superposing the opportunity and threat matrixes, we can obtain the characterization of the "state" and the position of the educational institution in the environment it operates. The most favourable situation implies the existence of a high number of major opportunities and threats that have a minor impact and a reduced probability to occur.

Garcia Garrido identified the following tendencies which manifest in the current system of higher education:

- The massification and generalization of higher education. This tendency is in contradiction with the major reason of university existence (*raison d'être*), the education of certain elites in the field of sciences and arts. Educational policies try to achieve the compatibility between the massification process and candidates' selection by considering some of their abilities;
- The increase in the number of women students and teaching staff in higher education;
- The increase in the complexity of the management board of the institutions of higher education;
- The increase of interest in distance-learning;
- The scientific researches in the last one hundred years has led to an increase in the appreciation enjoyed by universities;
- The use of modern technologies in the teaching process, the increase in the specialization degree and the possibility of a vocational training;
- Deculturalization of the university;
- Growing lack of interest in the ethical purpose of higher education;
- University financing from several sources (budget allocations, the obtaining of some research contracts, donations, the development of intellectual property rights, taxes, grants, etc.);
- The advent and development of private and trans-national education;
- The increase in the autonomy of the institutions of higher education. [3, pp. 54-58]

Macroenvironment investigation and analysis allow us to identify its opportunities and threats on short, medium and long term. The institutions of education must set up formal systems by means of which to identify, evaluate and respond to the environment threats and opportunities. The institutions of higher education should try to approach the major opportunities in the environment and avoid major threats.

As a conclusion, the institutions ignoring the environment trends and forces shall assume the risk to fail. In fact, scanning the present environment is not enough, anticipating the further evolution of the environment is also a must to be able to

predict how the future will look like and thus formulate proper objectives. These objectives will help to set forth an adequate strategy by means of which these goals shall be achieved and design a structure to support the strategy implementation.

This is hard to achieve, as the environment is rapidly changing, and this is why the educational institutions are expecting things to happen.

The identification of events and tendencies operating within the macroenvironment must be followed up by the identification of the impact these might have on the educational institutions and designing a proper answer to maintain and even improve the position held by that institution on the educational market.

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COMPOSITE METHODS FOR BRAND VALUATION

OVIDIU MOISESCU*

ABSTRACT. Composite Methods for Brand Valuation. This paper tries to identify some basic elements regarding the composite methods for brand valuation, the models used and the quantitative and qualitative dimensions, which are taken into consideration. The paper emphasizes two worldwide used models when it comes to brand valuation: the Interbrand and the A.C.Nielsen approach.

Nowadays, brand valuation is a common activity in almost every company. Especially during the 80's, several formal methods for evaluating this intangible asset have been developed by large marketing consultancy firms, which had identified the great importance of this mysterious element, usually recorded in financial reports in the category of "goodwill".

Brand awareness has always been perceived as an important source of value in business. Accounting uses the term of "goodwill" to identify the added value which is not due to tangible assets, brands and brand awareness being so included in a large heterogeneous group of intangibles.

In the second half of the last century, mergers and acquisitions as well as the evolution of the capital market (transactions of larger value then the tangible assets involved) emphasized that a good business must be taken into consideration beyond its tangible elements and that intangibles may generate a great part of the value of a business. The brand has been overcoming other intangibles during the last decades, being a tremendous value generator in many industries. Therefore, identifying and extracting it from the large amount of "goodwill" (licenses, copyright, know-how and other intangibles) has become a necessity [1,2,3,4].

The first models for quantifying brand value were based on the analysis of some certain quantitative financial dimensions of the brand (sales, profits etc.) and of the company (capital market value, financial structure etc.) which were aggregated into a global monetary value through classical financial methods [6].

Later, marketing specialists approached brand valuation starting from qualitative dimensions related to image, awareness and consumer behavior in relation with the brand, generating behavioral methods that supplied global non monetary values of brands [5].

Still, only during the 80's the necessity became obvious to every specialist: the approach must integrate all the aspects related to the brand (quantitative financial and qualitative behavioral) and there must be a global determined monetary value to reflect the real value of a brand.

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That was the period during which the composite methods for brand valuation appeared, some of them becoming world wide accepted such as those of Interbrand, McKinsey, A.C.Nielsen, GfK. Even in Romania, during the last years, marketing consultancy firms with brand valuation services in their offer have made their appearance (Brandient, Daedalus and others). Each of these specialized companies usually creates its own composite method for extracting the value of a brand from a multitude of variables taken into consideration so as to reflect this value as realistic and complete as possible.

The next pages of this paper shall analyze the world's most adopted and accepted composite methods for brand valuation – Interbrand's and A.C.Nielsen's.

Interbrand's Method

Interbrand considers that the value of a brand consists of a price that could be obtained by selling the intangible asset evaluated, considering the actual market conditions. Due to this hypothesis, Interbrand's method assumes three steps.

The model uses a scoring system (point-based valuation) founded on seven groups of factors that bounds a number of 80 specific criteria considered important to the value of the brand. In the first step the brand value criteria for each group of factors is assigned a certain point score (table 1).

Table 1

Interbrand's brand value criteria and their weighting [1,3,4,7]

Group of factors	Weighting	Brand value criteria
Brand leadership	25%	Market share, market position, relative market share, market segment, structure, future aspects, etc.
Brand stability	15%	History, current position, future development
Market	10%	Structure of competition, value, volume, trend – market dynamism, prospects
International reach of brand	25%	History of international evolution, presence on foreign markets, perspectives
Brand trend	10%	Development sales volume and market share, competitive trend, development plans
Marketing support	10%	Advertising activities, sales promotion, future strategy
Legal protection of brand	5%	Rights to name, registration, etc.

Brand leadership. A brand with a leader position in its market is more valuable and stable than a brand with a lower market share because the leadership provides influence in the market, the capacity of imposing some prices, a higher degree of control considering distribution channels and a stronger resistance to competitors' attacks.

Brand stability. Brands that have been consolidating their positions for a long period of time or which benefit from a high degree of customer loyalty obtain a higher point score in this field.

Market. A brand in a stable, growing or high entrance barriers market shall be better scored here.

International reach of brand. Brands operating in international markets are more valuable than national or regional brands.

Brand trend. The trend of some brands to adapt to actual and relevant needs and desires of consumers shall obtain a higher point score.

Marketing support. Brands, which have benefited from large amount of investments and those who have been strongly promoted and advertised, are more valuable than those who have not. Regarding this aspect, there is to consider the quantity as well as the quality of the marketing support.

Legal protection of brand. A rigorous and profound international protection of a brand is essential for maintaining value, the possibility of illegal copying having destructive effects on the image of a brand, the owner of the brand losing control of the brand management process.

Each group of factors is evaluated through a point-score between 0 and 100, the final score of the brand being obtained by combining and weighting them according to their significance of each group. The final point-score obviously between 0 and 100. The weights of the criteria have been established by Interbrand in an objective way statistically considering a sample of brands that have been sold. Interbrand relies on longstanding market experience and empirical ex post studies showing correlations between the prices found to have been realized during company mergers or acquisitions and reconstructions of brand strength.

In the second step, the point score of the brand – a standardized index value ranging from 0 – 100 – is converted into a multiplier using a transformation function. The transformation is expressed as a special, S-shaped brand index curve that depicts the relationship between brand strength and the brand multiplier (figure 1).

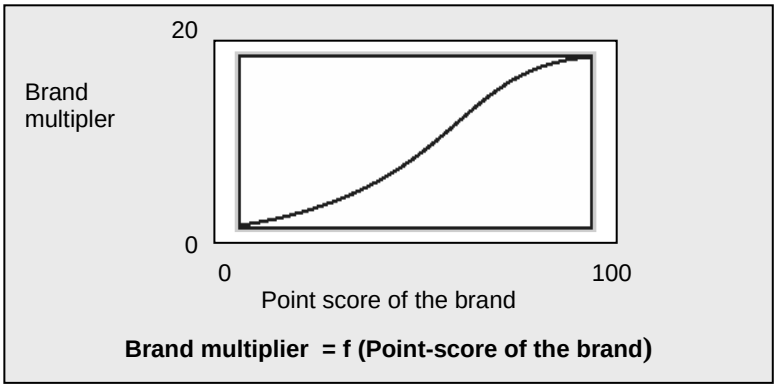

Figure1. The Interbrand's transformation of brand score into brand multiplier [1,3,4,7]

The correlation identified between prices realized during mergers or acquisitions and brand strength allows the brand index curve to be ascertained inductively, yielding a multiplier value ranging from 0 to 20.

In the third step, average earnings multiply the resulting multiplier value after taxes for the last years to determine monetary brand value. The brand value is actually the potential price that could be obtained in the case of selling the brand.

The average earnings after taxes that are taken into consideration are weighted so as more recent profits should play a more significant role in determining the average.

Currently, Interbrand assesses periodically multinational brands with strong international presence, that obtain at least 20% of their sales figure abroad [9].

AC Nielsen's Method

AC Nielsen considers brand value as being represented by the sum of future brand earnings, estimated for a long term and discounted for an estimated useful life of the brand which is considered to be indefinite. The capitalization factor taken into account depends on the long-term interest rate on the international capital market.

The method consists in simultaneously evaluating all the brands competing in one product category and sometimes market segment. Starting from this concept, the method involves five steps.

The first step, like in the Interbrand model, is built around a scoring model – a brand balance sheet. The balance sheet relies on several criteria groups that are deemed good indicators of brand value. Each factor is assigned a point score between 1-1000 for each brand assessed and then all the partial scores are weighted into a final brand score considering a specific level of importance. The exact procedure for scaling and weighting data is not, however, explained by AC Nielsen for reasons of competition.

The criteria taken into consideration by AC Nielsen are the following [4,7]:

- The market share
- The relative market share
- Product's estimated market growth rate (development potential)
- The brand's estimated market growth rate (development potential)
- Brand awareness and brand advertising recall
- Brand loyalty
- Brand distribution (dimensions and structure of the channels)
- International presence of the brand
- Local, regional and international legal brand protection

In the second step, a relative strength of each brand is determined considering the sum of corresponding brand balance sheets for all brands:

Relative brand strength = Score of brand / Sum of all brands' point scores

In the third step, estimates of market value and net operating margins are made to compute the annual market earnings potential, basically considering the total market value of the product category (sales volume) and the earnings rate of the industry (relative to sales):

Annual market earnings potential = Sales volume in the product category x Earnings rate of the industry (relative to sales)

The fourth step consists in determining, for each measured brand, an annual brand value as being equal to the potential brand earnings during a reference year. AC Nielsen's concept is based on a statistical analysis of correlations between reconstructed point-scores of brands during their previous years of existence and the earnings quotas obtained relative to the total earnings of the product category market. The analysis proved a strong correlation between the relative brand strength

(expressed above) and the annual brand earnings potential, expressed through the value share of a brand relative to that of the overall market (product category).

Brand value share = Relative brand strength x Annual market earnings potential

In the fifth step, the monetary value of the brand is calculated using an income approach. This entails calculating brand revenues from total sales in the industry (product category), finally applying a discount factor (basically long term capital market interest rate). The earning-capacity value is seen as an expression of brand value:

Brand value = Brand value share x $\sum [1/(1+d)^i]$ = Brand value share x (1/d),where d is basically the interest factor

AC Nielsen's evaluations are based on the market analysis of 30 countries grouped in six regions (Asia-Pacific, Northern America, Europe, Middle East, Africa and Latin America), countries which presently represent 90% of the global sales. Currently, the consultant only evaluates multinational brands with international presence in all the six regions and have sales of at least 1 billion usd from which a minimum of 5 percent abroad [8].

Discussion and Conclusions

It is unrealistic to pretend that the brand value criteria chosen by Interbrand or AC Nielsen cover all the aspects related to the value of a brand. Actually, Interbrand did not make the residual factors and their influence on the results public, but still, they sustain that the criteria system chosen explains fairly enough the brand value.

Another criticism regarding these methods outlines the difficulty of assigning the right point scores in the case of many of the criteria taken into consideration. For example, a brand's market share might differ a lot from a geographical market to another so the global score of a brand relative to this aspect should be an average but still possibly not representative from a statistical point of view.

A decisive weakness is the strong influence of subjective components. The criticism applies above all to the selection and weighting of factors for determining brand strength, the arbitrary scale system for the multiplier and the estimates necessary to determine brand earnings.

The use of some input factors such as marketing support must also be viewed critically as a direct correlation between purely quantitative values such as advertising spending and brand value appears questionable to assume. It is also unclear whether the customer-related factors relevant to brand valuation are sufficiently operationalized and integrated.

In addition, if talking about the AC Nielsen method, the assumption of constant net operating margins and perpetual life cycle of brands must be seen critically, though both areas could be modified relatively easily.

Overall, it can be said that the data used are mainly estimated values, so that the resulting monetary brand value must also be viewed as an estimated or trend value.

Unfortunately, considering financially oriented, behaviorally oriented and composite methods, we might conclude that these models have not yet led to the

development of a comprehensive brand valuation approach. No complete model to establish brand equity by combining financially oriented and customer-oriented approaches has yet emerged.

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STUDIA UNIVERSITATIS BABEŞ-BOLYAI, OECONOMICA, L, 1, 2005

INTERNATIONAL TRADE AND GROWTH-EMPIRICAL EVIDENCE

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ABSTRACT. International Trade and Growth-Empirical Evidence. The positive empirical association between trade and growth is a topic of disagreement among economists. This paper briefly surveys the literature and points out the main conclusions of some important studies. While there are some serious methodological challenges and disagreements about the strength of the evidence of the relation, the most plausible conclusion is that trade induces an increase in growth.

1. Introduction

Studies trying to identify the relation between trade and economic growth were confronted with many difficulties. First of all, the selection of countries empirical studies were performed for depends a lot on the availability or non-availability of statistical data, especially in the case of developing countries. It proved to be quite difficult to put together theories of economic growth and theories of international trade and confronting them with empirical analysis. We consider that openness indicators are subjectively constructed and insufficiently correlated, because a high number of explicative variables are very difficult to quantify.

In spite of these difficulties, the empirical literature established, during the seventies, respectively eighties, that a positive relation exists between international trade and economic growth. This paper presents an overview of some studies that were based especially on regressions. We consider that regressions represent a useful complement to theoretical papers. Without any doubt, theoretical and historical papers are rich in details, but this richness is nothing but a weak generality, lacking a rigorous control of the factors involved. Regressions have the general advantage of eliminating this lack.

2. A classification of empirical studies and their implications

After performing an overview of the literature related to the subject, we considered that it would be convenient to classify the contributions in two parts, correlated one to the other:

a) Multi-country studies, mostly oriented upon the relation between the degree of openness and economic growth, many of them being the syntheses of large-scale projects

b) Studies that investigate the relation between exports and economic growth

From each category, we selected a few studies that are referred to in almost all recent papers, focused on the relation between trade and growth. Our study also intends to approach the critics of these studies. The detailed analysis goes below.

a) Studies from the first category treat the relation between international trade and economic growth under the normative aspect, trying to identify the impact of commercial policies on the economic growth rate of countries. Very well known

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authors had important contributions in the field, by constructing various indicators for measuring the commercial openness of a country.

Balassa [1, p. 23-35] summarizes a large World Bank project, which is focused on 11 countries, during 1960-1973. In this study, the author tries to see whether the stimulation of exports determines a real growth of exports and then he determines the effects of expansion of exports on economic growth. In the first phase of his analysis, Balassa uses two indicators for quantifying the incentives of exports, which are the rate of growth of exports of manufactured products and the changes in the rate of exports output in the manufactured sector. He concluded that these variables were consistently higher in those countries, which followed sustained policies of promoting exports. In the second phase of his analysis, Balassa used simple coefficients of ranks and regressions between countries. The conclusion was that external orientation, represented by a high rate of exports, has some positive implications on economic growth. Fontaigné and Guerin [7, p.137] identified the limits of Balassa's study in the fact that the author arbitrarily defines the incentives of exports and he does not take into consideration the role of the exchange rate in explaining the performance of exports.

Michaely [12, p. 49-53] used temporal series in order to construct a subjective index of liberalization of trade for 19 developing countries. This index was not comparable between countries and thus it could not be used in order to empirically investigate whether different degrees of liberalization can explain differences between countries in what economic performance is concerned.

Krueger [9, p. 63] observed that especially since 1960, some developing countries, which had eliminated commercial barriers and other controls over economic activity, were obtaining a significant and sustained rate of economic growth. In explaining performances between countries, the author spoke about the important role of the technological factors, which imply dynamic effects. International trade permits the obtaining of dynamic gains through the exposure of internal production to external competition, allowing the specialization of countries in different branches of industry and different stages of production.

Dollar [4, p. 523-544] estimates a distortion index in real exchange rate for 95 developing countries. He uses the index for determining whether a country is either outside-oriented or inside-oriented. The conclusion of his study is that outside-oriented countries are growing faster. The study became important due to the rigorous measure of distortion in real exchange rate and concentration on developing countries.

Edwards [5, p. 31-57] estimated the impact of international trade on economic growth, using nine indexes of openness proposed in the literature. All openness measures showed a positive correlation between openness and economic growth.

Levine and Renelt [10, p. 323-339] test the robustness of growth determinants, proposed by the literature, among which we mention the following ones: the level of school enrolment, foreign direct investments, population and so on. They draw the conclusion that external trade indirectly affects economic growth, through investments. Countries, which practice low trade barriers, invest more and grow faster. This result can also be found in different specifications and in different indexes of measuring openness.

Ben-David [2, p. 57-65] shows that open economies converge and that trade agreements with the EU determined convergence among members. Although in the empirical literature dedicated to growth, it is well known that economies do not experiment the classical convergence predicted by neoclassical models of economic growth, in his study, the author proves that the economies that converge, are only those integrated into the world economy through international trade.

Critics on these studies suggested that they did not manage to construct an objective indicator in order to measure trade orientation. In fact, this thing is not possible, given the fact that the classification of countries in closed and open ones implies a variety of commercial policies. In this category we can find studies, which took into consideration the rate between the sum of exports and imports and the GDP as a relevant indicator for openness, or between exports and GDP. The indicator does not reveal details about barriers, but effectively measures openness through the percentage of trade of the GDP. Of course, this indicator has been criticized of subjectivism because it does not take into account the size of nations or the fact that in countries with small incomes, it could happen that the extent of the indicator is large enough, without being relevant.

b) A large-enough number of studies were dedicated to the relation between exports and economic growth, identified in many situations with the growth of output. In what the relation between exports and economic growth is concerned, the literature in the field focuses on testing the robustness of the positive relation between exports and growth. Studies from this category provide a theoretical base for empirical calculus, through considering exports as an additional factor of production, included into the typical form of the neoclassical production function of an open economy. The reason for adding export as a third factor is based upon the possible positive externality and upon the effects of technological diffusions generated by exports. In this context, the majority of these studies use regressions starting from the neoclassical production function with the following form:

$$Y = f(K, L, X) \tag{1}$$

where

- *Y* is the level of output; in fact, it is the GNP from which exports are extracted, taking into account that exports are part of the GNP
- *K* is the capital stock, with growth approximated by the level of investments, *I*
- *L* is the labour force
- *X* are the exports

Regressions had the following form:

$$\hat{Y}_j = \beta Z_j + \beta_{n+1} \hat{X}_j \tag{2}$$

where

- $\hat{Y}_j$ is the rate of the real growth of the GDP or of the output
- *X* is the rate of the real growth of exports, or of exports and imports as well
- *Z* is a vector of additional variables, usually containing the rate of growth of the employed population, as well as the percentage of investments in the GDP

Michaely [12] started his analysis considering a sample of 41 countries, divided into two sub-samples: the first one, composed by countries with low-income and the second one formed of countries with medium income. The author made a correlative analysis of ranks between the growth of the GDP and the growth of exports as part of the GDP. In this case, the specification of his model was the following:

$$Y_j = \beta Z_j + \beta_{n+1} \frac{X_j}{Y_j} \hat{X}_j \quad (3)$$

We consider this approach to be suspicious because, exports being considered a part of the GDP, this fact can induce a positive sign of the coefficient that expresses relation between trade and growth. On the other hand, the author concluded, after solving the regression, a strong and significant correlation exists between the growth of the GDP and the growth of export, at a level of significance of 1% in medium income countries. For countries with low income, correlation was positive, but insignificant. He also stressed that growth is affected by the performance of exports only after the country undergoes a minimum of development.

Tyler [13, p. 121-130] worked on a sample of 55 developing countries. The sample covers 55 middle-income developing countries, eliminating from the analysis the lower income developing countries, defined as having the GNP per capita of US $ 300 or less in US 1977 dollars. From the 55 selected countries, 6 were oil exporters, belonging to the OPEC. For some of the analysis, they have been omitted from the sample. The rationale of omitting the poorest countries is that some basic level of development is necessary for a country to mostly benefit from export-oriented growth, particularly involving manufactured exports. The major economic performance variable analysed is the annual average rate of the GDP during 1960-1977. The Pearson and Spearman rank correlations between the GDP growth rates recorded positive values, at a level of significance of 1%.

The same paper also studied the bivariate relationship between the GDP growth rate and the proportional change in the country's net barter terms of trade. The literature associated with the Prebisch-Singer thesis emphasizing the importance of a country's terms of trade would hypothesize a positive relationship, which means that an improvement in terms of trade is associated with high growth rates. The analysis of Tyler, undertaken on an ordinal basis, does not support this hypothesis. He found that there is no readily apparent relationship between terms of trade changes and economic growth performance. This fact suggests that, rather than expressing excessive concern over terms of trade movements, policy makers in middle-income countries would do better to implement policies to increase export growth. The correlations found by the author reported bivariate associations not incorporating the effect of other variables. At this study, we also remarked that the author tries to make a more rigorous approach in order to explain the growth of the GDP, which involves the specification and estimation of a model seeking to explain such growth. The starting point was a Cobb-Douglas production function incorporating three productive factors, such as:

$$X_i = AK_i^{\alpha} L_i^{\beta} E_i^{\gamma} \quad (4)$$

where

- X_i : the GDP of country *i*
- *A* : a technological constant
- K_i : the capital stock services of country *i*
- L_i : the labor force inputs of country *i*
- E_i : the exports of country *i*

The third factor, exports, has been included on the basis that there are scale effects and externalities associated with export production and sales. For example, because of export market competition, non-exported products may come to be produced more efficiently as well. With increased international specialization along comparative advantage lines of developing countries, they can attain a wider use of abundant labour resources and a full-extent use of the existing capacity. Moreover, following the law of international comparative advantage, the country's exports should probably grow faster than otherwise. Tyler also used the time dimension by expressing all variables as functions of time. By differentiating the equation (4) and dividing it through (4), the relative growth of exports is expressed by:

$$\dot{X}_i/X = \dot{A}/A + \alpha\left(\dot{K}_i/K_i\right) + \beta\left(\dot{L}_i/L_i\right) + \gamma\left(\dot{E}_i/E_i\right) \qquad (5)$$

We think that this formalization is very important, because the differences between economic growth rates among countries are explained in terms of proportional growth of capital, labour force and exports, over the whole considered period. The author also tries to find the results after replacing total exports with manufactured exports as follows:

$$\dot{X}_i/X = \dot{A}/A + \alpha\left(\dot{K}_i/K_i\right) + \beta\left(\dot{L}_i/L_i\right) + \gamma\left(\dot{E}_m/E_m\right) \qquad (6)$$

The coefficient of exports was found positive and statistically different from zero. The statistics *t*, respectively the value in brackets in table 1, has values high enough to express the significance of the parameters. The determination coefficient of 0,685 implies that about 69% of the variance in the inter-country GDP growth rates can be explained by the rates of growth of capital formation, the labour force and total exports. For their part, a 1% increase in the rate of growth total exports is associated with an increase of 0.057 of 1% in GDP growth. Similar results are being yielded when incorporating the exports of manufactures into the model instead of total exports. Under the assumption of the Hicks-neutral technological progress, the constant in our regression estimates represents an estimate of annual average technological progress. We can notice that in all estimates, the technological progress has indeed been important in the middle- income developing countries. Since the technological change parameter estimates decrease in the equation with the export growth of manufactures included, the conclusion was that the manufacturing export activity is accompanied by greater technological progress. The final conclusion of the author was that, in developing countries, exports have a significant impact on economic growth, that technological

progress is important and that countries should insist on economic policies of promotion of exports. Table 1 depicts the results of regressions considered by Tyler.

Feder [6, p. 59-73] developed a two-sector model: one producing export goods, and the other producing for the domestic market. The sample chosen by the author contains middle-income countries as well as low-income countries. The conclusions of his study were that those countries, which adopted policies oriented to encourage exports, benefited of an allocation of resources closer to the optimal level and to a higher rate of economic growth. Instead of an aggregate national production function, each of the output of the two sectors is a function of the factors allocated to the sector. In addition, the output of the non-export sector is dependent on the volume of exports produced. The regression considered had the expression of equation 7.

Table 1

Inter-country regression analysis of the GDP growth rates for middle-income developing countries, 1960-1977

Eq.	No. of obs.	Constant $\dot{A}/A$	Capital K	Labour force	Exports	Manufacture exports	Determination coefficient R^2
(4)	41	1,997	0,254 (5,921)	0,981 (2,576)	0,57 (1,694)	0,045 (2,227)	0,685
(5)	37	1,745	0,236 (5,272)	1,014 (2,704)			0,714

Source: W.G. Tyler, Growth and export expansion in developing countries, Journal of Development Economics 9 (1981) 121-130, North-Holland Publishing Company

$$\hat{Y} = \beta_1 \left(I/Y \right) + \beta_2 \hat{L} + \beta_3 \hat{X} \frac{X}{Y} \qquad (7)$$

- I represents the investments
- Y output
- L labour force
- X exports

Incorporating exports, respectively externalities provided by the export sector, as an explicative variable, gave the following form of the regression considered:

$$\hat{Y} = \gamma_1 \left(I/Y \right) + \gamma_2 \hat{L} + \gamma_3 \hat{X} \frac{X}{Y} + \gamma_4 \hat{X} \qquad (8)$$

Coefficients β_3 and γ_4 recorded positive values, significant from the statistical point of view as: $\beta_3 = 0.4$ and $\gamma_4 = 0.13$. This means that, on average, there are substantial differences between the marginal productivities of factors from the two sectors. These differences are due to the fail of entrepreneurs of equalizing marginal productivities of factors, on one hand, and on the other hand, to externalities. These externalities are generated because the export sector produces positive effects over the productivities of the other sector, which are not reflected in the market price. The results of this phenomenon are found in the fact that social marginal

productivities are higher in export sectors and that economies which allocate resources to this sector will gain more than those which are oriented on the sector dedicated to the internal market.

Kavoussi [8, p. 241-250] expanded the sample chosen by Feder to 73 low and middle-income countries, excluding oil exporters, dealing with the period between 1960-1978. The regression equation used by the author was:

$$\hat{Y} = \beta_0 + \beta_1 \hat{K} + \beta_2 \hat{L} + \beta_3 \hat{X} \quad (9)$$

The objective of his analysis was to examine whether there is a positive correlation between $\hat{X}$ and $\hat{Y}$ for low-income countries as well. The result was that were that the strong expansion of exports is correlated with a good e $\hat{\beta}_3 > 0$ and that it was significant for the whole sample. The theoretical conclusions conomic performance, both for middle-income countries and for low medium income countries. The rate of capital and improving factor productivity contribute to economic growth.

The growth of exports can have a stimulating effect over the whole economy materialized in an advanced technology and in externalities. Externalities can appear in open economies as a cause of international exposure. Pressures due to competition reduce in many cases the inefficiency of exports, having as a result the adoption of more efficient technologies in the sector of exported goods, and encouraging the innovation process. Following the specialization, it is possible to integrally exploit the scale economies. Balassa [1] (in the same study from the first category) worked on a sample of 44 developing countries, during the period 1960-1973. His sample contained countries with different degrees of openness. For example, countries such as Korea, Taiwan or Singapore or countries such as Israel or Yugoslavia were outward-oriented at the beginning of sixties and then they decreased the level of openness during the seventies. He also considered countries that became open only at the end of the considered period (Argentina, Mexico, and Brazil) and also countries, which were inward-oriented, like India or Chile. The objective of Balassa's study was to estimate a production pseudo-function in order to identify two empirical relations for validating the exports-led growth hypothesis. The economic growth rate is explained, in his study, by the growth rate of investments, the demographic growth rate and the export growth rate.

The author also tested the impact of export proportion in incomes over the output rate of growth. Balassa's results confirmed the empirical correlation between exports and economic growth. This coefficient was found between 0.15 and 0.22 and R^2 between 0.33 and 0.44.

It is important to notice that these studies have never identified the existence of a negative relation between exports and economic growth, not even in the case of less developed countries. The problem that appeared consisted in determining the minimum level of economic development that countries have to achieve in order to benefit from a positive effect of exports on growth.

In what critics of these studies are concerned, we would mention that they do not imply the causality relation between international trade and economic growth. The obtained empirical results do not permit to observe the phenomenon in its dynamics, while information is not incorporated in the model following the order in which statistical

observations are happening. If the same statistical observations included in the model are inversely generated by an economic process, the conclusions would be the same.

3. Conclusions

It would seem very difficult to contest the robustness of found results. It would seem proper to state, after reviewing these studies, that the empirical results confirm the exports-led growth hypothesis. Our paper aimed to overview some of the important contributions in the field. The survey undertaken by us represents a very important point of departure for our future research on the relation between growth and trade in Romania. Our intention is to develop a study that could be included into the second category, also trying to imply causality tests based on time series.

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BALANCED SCORECARD –STRATEGIC MANAGEMENT SYSTEM

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ABSTRACT. Balanced Scorecard – Strategic Management System. Balanced Scorecard is more than just a measurement system, is a management system that can channel the energies, abilities, and specific knowledge held by people throughout the organization toward achieving long-term strategic goals.Organized around four distinct perspectives – financial, customer, internal, and innnovation and learning, the Balanced Scorecard provides a balance between short and long term objectives, between financial and nonfinancial measures and between external and internal performance perspectives.

The concept was developed in early 1990s by R.S. Kaplan şi D. P. Norton in a study –„Measuring Performance in the Organization of the Future ", at Harvard Business School. The study was motivated by a belief that the existing performance measurement instruments, based on financial accounting measures, were becoming obsolete.Thus the Balanced Scorecard concept organized around four distinct perspectives- financial, customer, internal, and innovation and learning was developed.This system provides a balance between short and long- term objectives, between financial and nonfinancial measures, and between external and internal performance perspectives.

Over the past decade, the Balanced Scorecard(BSC) has become a widely advocated management tool associated with "best practices." As a management tool, the BSC provides an enhancement to the traditional management planning and control system by looking beyond financial measures to incorporate non-financial measures.

A recent Bain & Company survey of more than 708 companies on five continents found that the BSC was used by 62 per cent of responding organizations, a higher adoption rate than some other well-known management tools like Total Quality Management, Supply Chain Integration or Activity Based Management. These organizations ranked BSC 8th overall in satisfaction. More than 50 per cent of Fortune 1000 firms have used it in some form [2, p.1].

The Balanced Scorecard provides managers the instrumentation they need to navigate to future competitive success. Today, oragnizations operate in complex environments so that an accurate understanding of their goals and methods for attaining those goals is vital. The BSC translates an oragnization's mission and stategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system.The Balanced Scorecard retains an emphasis on achieving financial objectives, but also includes the performance drivers of these financial objectives. The BSC enables companies to track financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they need for future growth.

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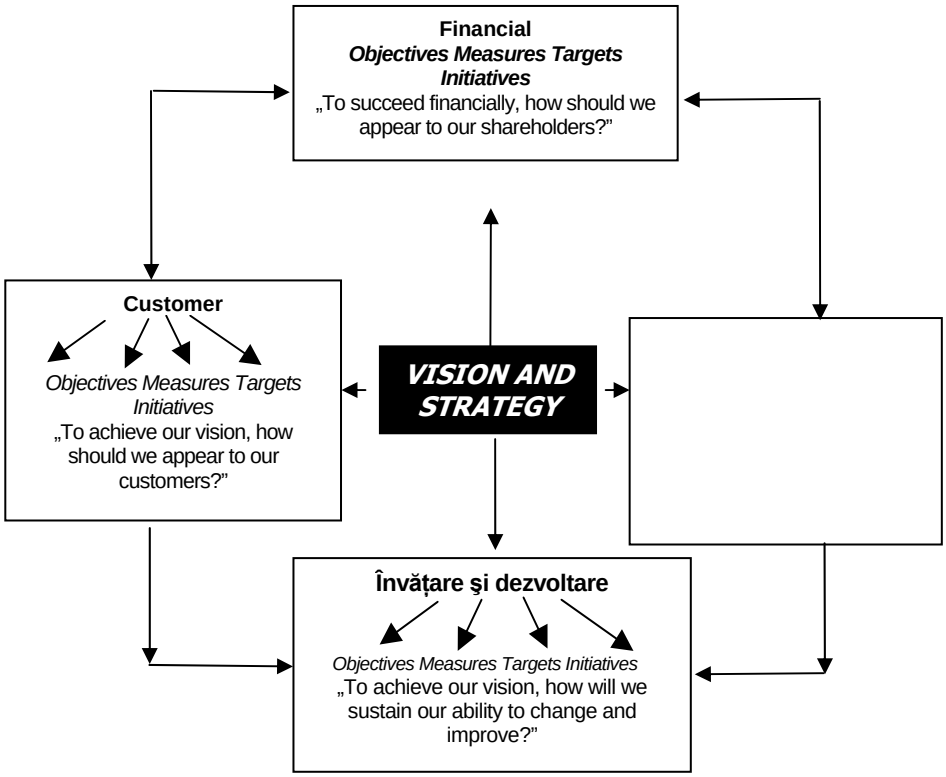
The BSC complements financial measures of past performance with measures of the drivers of future performance. The objectives and measures of the scorecard are derived from an organization's vision and strategy. The Balanced Scorecard expands the set of business unit objectives beyond summary financial measures. Corporate executives can now measure how their business units create value for current and future customers and how they must enhance internal capabilities and the investment in people, systems, and procedures necessary to improve future performance. The Balanced Scorecard captures the critical value creation activities created by skilled, motivated organizational participants.The BSC retains, via the financial perspective, an interest in short-term performance, but it also reveals the value drivers for superior long-term financial and competitive performance.



Source: R.S. Kaplan, D.P. Norton," Translating Stategy into Action-The Balanced Scorecard",1996,p.9

Many companies already have performance management systems that incorporate financial and nonfinancial measures.These organizations are using their financial and nonfinancial measures only for tactical feedback and control of short-term operations.

The Balanced Scorecard emphasizes that financial nonfinancial measures must be part of the information system for employees at all levels of the organization. Front-line employees must understand the financial consequences of their decisions and actions; senior executives must understand the financial success.

The objectives and the measures for the Balanced Sorecard are more than an ad hoc collection of financial and nonfinancial performance measures; they are derived from a top-down process driven by the mission and strategy of the business unit. The BSC should translate a business unit's mission and strategy into tangible objectives and measures. The measures represent a balance between external measures for shareholders and customers, and internal measures of critical business processes, innovation, and learning and growth.

The Balanced Scorecard is more than a tactical or an operational measurement system. Innovative companies are using the scorecard as a strategic management system, to manage their strategy over their long run. They are using the scorecard to accomplish critical management processes:

1. Clarify and translate vision and strategy
2. Communicate and link strategic objectives and measures
3. Plan , set targets, and align strategic initiatives
4. Enhance strategic feedback and learning [5,p.10].

1.Clarify and translate vision and strategy

The first step is to translate the business unit's strategy into specific strategic objectives. This is done by the senior executive management team. To set financial goals, the team must consider whether to emphasize revenue and market growth, profitability, or cash flow generation. For the customer perspective, the management team must be explicit about the customer and market segments in which it has decided to compete.

With financial and customer objectives established, an organization then identifies the objectives and measures for its internal business process. Such identification represents one of the principal innovations and benefits of the scorecard approach. Traditional performance measurement systems even those that use many nonfinancial indicators, focus on improving the cost, quality and cycle times of existing processes.

The Balanced Scorecard highlights those processes that are critical for achieving breakthrough performance for customers and shareholders.Often this identification reveals entirely new internal processes that the organization must excel at for its strategy to be successful.

The learning and growth objectives reveal the rationale for significant investments in reskilling employees, in information technology and systems, and in enhanced organizational procedures. This investments in people, systems and procedures generate major innovation and improvement for internal business processes, for customers, and, eventually for the shareholders.

Because the scorecard is developed by a group of senior executives , as a team project, the scorecard creates a shared model of the entire business to which everyone has contributed. It creates consensus and teamwork among all senior executives regardless of previous employment experience or functional expertise.

2.Communicating and link strategic objectives and measures

The Balanced Scorecard strategic objectives and measures are communicated throught the organization via company newsletters, bulletin boards, videos and even electronically through groupwareand networked personal computers.

The communication serves to signal to all employees the critical objectives that must be accomplish if an organization's strategy is to succeed. Some organizations attempt to decompose the high-level strategic measures of the business unit scorecard into specific measures at the oparational level. Once all emplyees understand high-level objectives and measures, they can establish local objectives that support the business unit's global strategy.

At the conclusion of the communication and linkage process, everyone in the organization should understand the business unit's long term goals, as well as the strategy to achieveing business unit objectives. All organizational efforts and initiatives will be aligned to the needed change processes.

3. Plan, set targets and align strategic initiatives

The fact that most organizations have separate procedures and organizational units for strategic planning and for resource allocation and budgeting is a problem. Creating a Balanced Scorecard forces companies to integrate their strategic planning and budgeting processes and therefore helps to ensure that their budgets support their strategies. Scorecard users select measures of progress from all four scorecard perspectives and set targets for each of them. Then they determine which actions will drive them toward their targets, identify the measures they will apply to those drivers from the four perspectives and establish the short-term milestones that will mark their progress along the strategic paths they have selected. Building a scorecard thus enables a company to link its financial budgets with its strategic goals.

The process of building a Balanced Scorecard (clarifying the strategic objectives and identifying the few critical drivers) creates a framework for managing an organization various change programs. These initiatives- reenginering, empowerment of the employees, time-based management, total quality management promise to deliver results but also compete with one another for scarce resources, including the scarcest of resources: senior managers' time and attention.

Once the strategy is defined and the drivers are identified, the scorecard influences the managers to concentrate on improving or reeingineering those processes most critical to organization's strategic success. That is how the scorecard most clearly links and aligns action with strategy.

The final step in linking the strategy to actions is to establish short-term targets (milestones), for the balanced scorecard measures. Milestones are tangible expressions of managers beliefs' about when and to what degree their current programs will afect those measures.

At the end of the business planning process, managers should have set targets for the long-term objectives they would like to achieve in all four scorecard perspectives, they should have identified the strategic initiatives required and allocated the necessary resources to those initiatives, and they should have established milestones for the measures that mark the progress toward achieving their strategic goals [4,p.84].

4. Enhance strategic feedback and learning

The CEO of an engineering company told us „ With the Balanced Scorecard i can continually test my strategy ". This is exactly the capability tht the scorecard should give senior managers : the ability to know at any point in its implementation whether the strategy they have formulated is working and if not, why [4,p.84].

The first three management processes – translating vision and strategy, communicating and linking, and business planning- are vital for implementing strategy, but they are not sufficient in an unpredictable world. Together they form an important single-loop- learning process. Single–loop in the sense that objective remains constant and any departure from the trajectory is seen as a defect to be remedied. This Single–loop process does not require or even facilitate reexamination of either strategy or the techniques used for its implementation in the light of current conditions [4,p.84].

Many companies tpday operate in a turbulent environment with complex strategies that though valid when they were launched, may lose their validity as business conditions change. In this kind on environment, when new threats and opportunities arise constantly, companies must be capable of what Chris Argyris calls double-loop-learning, learning that produces a change in people's assumptions and theories about cause-and-effect relationships [4,p.84].

Budget reviews and other financially based management tools cannot engage senior executives in double-loop-learning- first, because these tools address performance from only one perspective, and second because they don't involve strategic learning. Strategic learning consists of gathering feedback, testing the hypotheses on which strategy was based, and making the necessary adjustments.

The Balanced Scorecard supplies three elements that are essential to strategic learning :

1. articulates the company's shared vision, defining in clear and operational terms the results that the company, as a team, is trying to achieve;

2. supplies the essential strategic feedback system. A business strategy can be viewed as a set of hypotheses about cause-and-effect relationships. A strategic feedback system should be able to test, validate and modify the hypotheses embedded in a business unit's strategy. By establishing short term goals whithin the business planning process executives are forecasting the relationship between changes in performance drivers and the associate changes in one or more of the specified goals.

3 .the scorecard facilitates the strategy review that is essential to strategic learning.The Balanced Scorecard with its specification of the causal relationship between performance drivers and objectives allows corporate and business unit executives to use their periodic review sessions to evaluate the validity of the unit's strategy and the quality of its execution. If the unit's employees and managers have delivered on the performance drivers (retraining of employees, availability of information systems, and new financial products and services) then their failure to achieve the expected outcomes signals that the theory underlying the strategy may not be valid .

Managers should take such disconfirming evidence seriously and reconsider their shared conclusions about market conditions, customer value propositions, competitors' behaviour and internal capabilites. The result of such a review may be a decision to reaffirm their belief in current strategy but to adjust the quantitative

relationship among the strategic measures on the Balanced Scorecard. But they also might conclude that the unit needs a different strategy. The Balanced Scorecard is valuable for those who whish to create a strategic management system for enabling the process of strategic learning.

The Balanced Scorecard fills the void that exists in most management systems – the lack of a systematic process to implement and to obtain feedback about strategy. Management processes built around the scorecard enable the organization to become aligned and focused on implementing the long term strategy. Used in this way Balanced Scorecard becomes the foundation for managing information age organizations [5,p.19].

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DIRECTIONS IN IMPLEMENTING DATA WAREHOUSING TECHNOLOGIES IN THE FINANCIAL ENVIRONMENT

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ABSTRACT. Directions in Implementing Data Warehousing Technology in the Financial Environment. The permanent growth of the quantity of information and the need for diversification of the analytical skills determined many financial and non-financial institutions to look after permanent solutions of stocking large data sets. This article presents the latest and most frequently applied alternative of implementing IT technology regarding huge information handling, like data warehousing. The development of this kind of innovation is more and more embraced by our native institutions indicating a higher interest in and approach towards the acknowledgement and application of data warehousing technology.

Data warehousing fundamentals

One of the emerging technologies that will have a critical part in supporting a business model is represented by data warehousing. According to W. H. Inmom, father of the data warehouse systems, "***a data warehouse*** is a collection of subject oriented, integrated, historical and non-volatile data, destined for upholding the process of management decision"[3]. Subject orientation means that the focus is targeted towards certain typical subjects for the institution's profile, like: clients, sales, profits etc., excluding unnecessary data for the process of decision support. The integration and the techniques of data cleansing are applied to some heterogeneous sources of data for the building of the data warehouse: relational database, external files, on-line transactions records. The historical feature consists in the fact that data is stocked for information thus providing historical perspective. Data persistence translates into the fact that the data from the warehouse has a permanent feature, it cannot be modified, as the data warehouse supports only two kinds of operations: the initial loading and the access to data[1].

Data warehousing is the process of corporative data integration at an enterprise level into a single repository[2]. The resulting data warehouse could support a variety of decisional analysis functions and strategical operational ones. This data derives from a series of various sources, formats and types, and in general, is consolidated, transformed and loaded into one or many data base management systems, mostly relational ones, in order to facilitate the construction of a wider area of analytical applications.

The data warehouse could consist of a single corporative data base, at an enterprise level, with direct connections to the users and administrator of the system, that is knows as the "top-down" approach, or it could incorporate many smaller systems, known as data marts, that address a specific area of interest inside the global data warehouse, that reflects a "bottom-up" approach. The decision of investing

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immediately in a corporative data warehouse, or slowly developing through data segmentation one or many strategic data marts represents a disputed subject inside the enterprise. The advantages and disadvantages of both systems can be easily underlined.

As a conclusion, a data mart represents a simplified form of data warehouse, thus it focuses towards one subject or functional area like sales, finance or marketing. Data marts are often built and controlled by a single department inside the institution. Given the subject orientation feature, the data marts store their data in fewer sources: operational systems, the corporative data warehouse, legacy systems. In exchange, a data warehouse merges many subjects, are implemented and controlled by a single corporative organizational unit, as the corporative IT group, and requests data from many data source systems. By extending the comparison, data marts are lower in complexity and smaller in size, so, easier to construct and manage.

Data Warehousing in Financial Services: Requirements and Usage

Data warehouses in the financial services industry are primarily focused on three related areas:

1. *Demographic marketing/segmentation analysis*
2. *Risk Management*
3. *Profitability*

1. Demographic marketing/segmentation analysis

Demographic marketing is the process of breaking down and analyzing customer information by a variety of demographic factors such as age, sex, and socioeconomic status. Segmentation analysis involves categorizing customers based on behavioral and buying patterns, and using the resulting categories as additional attributes on which to base analysis. By breaking down its customer base by demographics and behavioral characteristics, a financial institution can better understand the buying patterns of the market in terms of tangible categories, and can use this information to perform more targeted marketing and sales. One example of the value brought to financial services industry-marketing departments by data warehousing has been its role in delivering cleaner, more comprehensive information, thereby catalyzing the development of more effective demographic, segmentation analysis applications. This in turn has helped drive initiatives for targeted marketing and customer retention, among other things.

2. Risk Management

Risk management covers many types of risk, including credit risk, value/earnings at risk, daylight overdraft risk, trading risk, portfolio risk, and fraud detection. Many banks have realized that an increasing proportion of their net income is derived from their portfolio of assets, liabilities, and off-balance sheet instruments. At the same time, the investment would continue to grow more complex, with increasingly exotic instruments and techniques being applied to manage investment positions.

Because of this increased complexity, financial institutions need to greatly improve their risk management capabilities. They must actively manage, model, and target their investments and minimize their exposure to changing interest rates and other economic risks beyond their control. Due to a climate teeming with mergers, business consolidation, and constantly changing technological possibilities, the finance

or ”treasury” side of the institution has rapidly evolved from functional accountants to active participants in the life and profit of the institution, and managing a multitude of risk factors has become a major part of their job responsibilities. By consolidating and organizing enterprise-wide information into a single repository, data warehouses have enabled these managers to get a broad perspective on all the factors contributing to risk, and have therefore enabled them to better manage exposure to that risk.

3. Profitability

Profitability is generally measured across three dimensions within the financial services industry: unit, product, and customer. These classifications of profitability are interdependent and in most institutions continuously evolving.

Unit profitability is the evaluation of profitability at the branch level. In the banking market, unit profitability has evolved from its early use in simply determining branch and departmental contribution to the corporation, and now includes customer support and customer satisfaction as well. In other words, unit profitability is not simply evaluated as a numeric measurement anymore. Furthermore, with the development of diverse alternative delivery channels, such as ATMs, call centers, home banking, and on-line banking, the concept of channel profitability is beginning to replace the concept of unit profitability, or at least eclipse it in importance. For now, because of geographic associations and regional marketing, many aspects of channel profitability are currently being rolled into unit profitability and channel profitability is not yet widely deployed as a critical performance metric.

Data warehouses have provided the capacity for organizations to simultaneously consolidate corporate information into a single place, while enabling organizations to continue to analyze data within a single branch or across multiple branches either to compare unit profitability at a high level, or to delve into details at the individual branch level.

Product profitability measures product revenue including interest earned, earnings on deposits, fees and more, minus the cost related to delivering a product. Costs include account set up, transaction processing, numbers of customer service interactions per channel, etc. Additionally, costs are tracked by allocating factors such as automation, networks, and personnel, among other things. Data warehouses simplify the analysis of product profitability, because all costs and revenues can be merged into a single pool and mapped to multiple business dimensions (product, time, geography, customer, etc.) from which analysts can perform ad-hoc analyses, or define and run a multitude of standard reports.

Customer profitability is a measurement of how profitable individual customers are. For example, customers who keep $150 in a checking account and do not use any other fee-based services are typically unprofitable customers. This example is straightforward, since banks can’t do much with $150 but still have to track and manage transactions every month for those customers. However, typically it is very difficult to determine the profitability of a customer, banks need to know a great deal of information including how many transactions customers process per month, how often they use physical branches versus automated tellers, how often they switch accounts, etc. This is particularly true for customers who use multiple products.

Data warehouses bring all of this information together. Customer profitability gives banks and other financial institutions a mean of prioritizing customer care,

and of defining service levels. Organizations can adapt their operations so that profitable customers receive more direct mailings, more proactive services, and better access to corporate resources. Customer profitability analysis also provides insights for the institution into what kinds of customers and relationships become profitable so that it knows how to pursue and build these relationships. Finally, incentive programs can be defined to create profitable customers from unprofitable ones.

The application of the data warehousing concepts in the concrete study of the customer profitability in banking

The main area where the marriage of marketing and technology has been successful in the last few years in banking has been the direct/target marketing activity. Bankers discovered what mail order had known for many years that your best customers are the ones you already have. They however did not use this data to cross or up-sell but to profile the existing customers so they could acquire new ones! These innovative banks created the data warehouse before the term was popularized. They could look at their existing customers and review their current holdings, review credit ratings, profile activity and so on. From this, they could create very effective target marketing campaigns to reduce the cost of customer acquisition.

Banks have attempted to get greater customer focus. They recognized that their customers were the key to provide sustained profitability and increasing shareholder value. As new technology became available many banks' central accounting systems moved from being account number based to customer based and they started to build customer information files (CIF). The change to a customer based accounting system kicked off the opportunity for a new use of data warehousing technology. The need of passing the organizing and tracking transactions from the household level to an individual one, determined the implementation of data warehousing projects on a large scale. Customers could now be viewed from a much richer perspective than simple demographics and social measures. The banks could start looking at psychographic tendencies (lifestyle or activities, interests and opinions (AIO's)) and geo-demographic clusters (uses both geographic and demographic data on the basis that 'birds of a feather flock together'). Customers were tracked over time as their usage and purchase patterns changed as did their lifestyles. The banks then began to embrace the concept of customer relationships and the idea that customer loyalty was something to value.

The innovators from this field have still been missing that vital ingredient - customer profitability. "Some form of customer profitability analysis is important to all financial institutions, although the level of detail applied will vary ….." (Julie Mabberley)[4]. For all their success in improving direct marketing response rates and additional product sales there has been little understanding of each customer profitability let alone the profitability of the product set the customer was using. "…Companies should segment their market by level of profitability and identify which groups of customers the company wishes to retain and which are likely to provide the most profitable returns. This will help identify the type and frequency of the marketing activity which should be directed towards the different segments" (Moira Clark and Adrian Payne)[4]. By understanding profitability at a customer level, the bank can deduce important information: fees charged, account balances,

support costs, acquisition/retention costs, channel preferences, and transaction patterns. By having access to the key profit drivers the bank can then create clearly targeted activities to improve profits.

There is an opportunity today given the new technologies like Data Warehousing with analytical extensions to refocus accounting systems to reflect what measures of performance are important to your bank. Traditionally, individual customer profitability measurement has been attempted via the General Ledger[5]. The data warehouse augments these systems in that it can drill down below the aggregated data held on the ledger to the original underlying transactions. When incorporated with statistical cost driver data the warehouse can then reveal profitability in many dimensions e.g., divisional, segment, relationship manager/group, customer, channel and product. To achieve this, a bank could work towards establishing profitability by simply collecting the relevant data for a profitability model as outlined below[4].

- *Loans*: average balance times (interest charged - cost of funds) = Interest Income minus Interest Expense = Interest Margin (by account)
- *Owned Deposits*: average balance times interest earned - return on funds

- by summing, results the Interest Income

PLUS

- *Annual or fixed fees (amount)*
- *Fees per transaction times number of transactions*
- *Fee Percent times account balance*

- their sum resulting in Non Interest Income

MINUS

- Cost of transactions times number of transactions = *Direct Expenses less Indirect Expense*
- Loans and overdraft accounts: weighted average balance times provision rate = *Provision Expenses*

EQUAL

- *Aggregate account profitability* to individual customers or Profit Before Tax

Once you have implemented this on a data warehouse, you can review customer and product/services profitability in numerous ways:

1. *Geographic breakdown* - Branch, region, city, town, village, postal code, channel, relationship manager, plus time stamp etc.

2. *Activity/event breakdown* - Transaction type, account, product, division, area, time stamp etc.

3. *Customer breakdown* - Customer, household, personal, attributes, personal propensities, segment types, lifetime value, and even as a potential loss value etc.

To be able to get from a state of little effective information about profitability to the state outlined above requires working to create a data warehouse based profitability system. A scaleable data warehouse (SDW) solution creates is probably one of the only ways to create the flexibility required to enable FSP managers to finally manage customer profitability over time. The warehouse/data mart (profitability data mart) as the store of historic transactions can be successfully utilized to enable simple revenue/cost apportionment and recognition rules to be applied. Once you

have built a respectable profitability system within your SDW you could consider putting it onto a Data Mart. The DM (data mart) draws its data from the SDW but it is especially tuned in this instance to handle profitability. Once this system implemented, you of course have the benefit of being able to use the derived measure to help drive the business. The SDW also enables
the bank to ask “what-if” type questions and move in to data mining.

Concluding, a bank must segment its customer base according to the profit it derives from customers. It can then take actions that will enable it to incorporate its loyal customer base into the foundation of its own continuously growing competitive advantage.

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