

The unanthropic context

“Economic theory accepts solutions to the problems which are specific to a type of life without intelligence, where the mechanical vision functions in an unanthropic context built on relationships in which the human factor is reduced to a consumable, or at most an ingredient to the capital’s appetite for yield.”

The strong argument for the reconstruction of Economics is provided by the problem of the crisis, which in rational terms of time, amplitude and cause remains unsolved. Even though it is primarily considered as a miscalibration of market functionality, the crisis persists and keeps extending across all the systems of human action. The delicate part of the problem is that the mechanical perspective in structuring the vision, belonging to a somewhat pragmatic take on reality, points to the – at least from experiential knowledge – possibility of carelessly removing the defect.

It is known, however, that the mechanisms which can be repaired are those whose principles of construction and functioning are theoretically explained. The lingering and insinuation of the crisis beyond the usual limits of time and space clearly indicate that there is a severe deficit of knowledge on the configuration and functioning of economicity. Otherwise, an intervention could be made in order to restore the parameters and conditions of the generic recipe. The libertarians’ recommendation to wait for all the problems to solve themselves, calculating in advance the costs for the duration of the disorder – or in other words comparing the effects to the sense of rationality, is a bad joke.

Thus, epistemologically, the defect originates in the way the economicity is perceived as a mechanism which cannot be overloaded in order to increase its yield. The understanding of economic behaviour is done in the terms of the technology of wealth, which enjoys beneficial periods in its use, but also breaks caused by lack of energy and by wear. The crisis is the direct expression of the over-revving of the economic mechanism in order to obtain wealth increase in

the short-term. It amplifies the creation of added value through speculative means. The deviant configuration of the economic mechanism can be observed in the non-rational, even violent, redistribution of wealth. This is how the economic crisis ends up being a structural social crisis.

In the wake of this concept, the crisis is a cyclic event: it comes and goes repeatedly, its periods defined by the context of business, with a well-defined intensity and volume. The fatalism of the crisis is part of the intellectual background, motivated by the *laissez faire* principles.

Ontologically though, the defect proves much more complex. The institutional structure of the monetarily centred global economy and the functional horizon ruled by the maximal principles of the market's self-regulation imply the over-revving of the mechanisms of economicity. In these conditions, the exit from the crisis has the recipe for administering crisis overdoses. Public debt for instance, destined to satisfy the appetite for the on-the-edge functioning of the monetary system, activates the main channel for the expansion of the crisis. There is no doubt that in this model, the softening of the principle of self-regulation is tolerable as long as this favours the transfer of the costs of the crisis from the markets to the public budgets.

Self-regulation is the most spectacular innovation to come out of the neomonetarist vision because it absolves the markets from the burden of the costs associated with the over-revving. So a reality emerges, at the fringe of economicity, from which stems the evolution towards the sublimation of the crisis of the markets and the activation of the crisis of the states. It must be pointed out that the theory of market self-regulation is a sophisticated variant of the Machiavellian principle of *the end justifies the means*.

The complexity in the break-down of the mechanisms of economicity comes from the authoritarianism of the theory, which is insured by corporatism through a pact with the state administrations. The visible form of this pact is the circularity of the representation at the level of governance systems. This allows the concept of the functionality of the markets to cover, with an explicative layer well maintained through publicity, a few degrees of corporatist liberty where the responsibility of the states towards the social finality of economicity is being hijacked through excessive debt accumulation. More or less consolidated, the neomonetarist corporatism works in the long-term to maximize the function of yield; the short-term successes are unimaginable peaks though, rolling the speculative appetite like a ball of snow. In fact, it is still a game of resource control, this time in an all-encompassing formula which includes that which is due to the future generations.

The mainstream theory – the corporatist capitalism – established the prevalence of capital over work, of markets over states and of the economy over society. From a unifactorial point of view, the theory is perfect, as it satisfies

the interests of the capital in their integrity. But contextually, it is the placenta in which the catastrophe takes shape. Essentially, the economic theory accepts solutions to the problems which are specific to a type of life without intelligence, where the mechanical vision functions in an unanthropic context built on relationships in which the human factor is reduced to a consumable, or at most an ingredient to the capital's appetite for yield. In reality, the human factor is completely dependent on the impulse, in terms of limiting the prevalence by conforming to the rule of power. The monstrosity is evident, but it operates unhindered because it is yield-oriented with regard to the expectations of materiality.

Under the pressure of unidirectional ideas, the behavioural patterns redefine their models. Frankly speaking, the gravitational law of the materialist universe ties order to wealth, disregarding the distance from the resources. The subtle force of the actional concordance is the illusion. The construction of the economy respects the need for reproducing the illusion by proclaiming wealth as the ideal. That is why the projection is one of living through representatives.

Marin Dinu

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Integrated marketing communication in tourism – an analysis. Case study: Muntenia and Oltenia

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Abstract. *The multitude of factors interfering in the process of image formation and the way in which they act in a unique combination, similar to a genetic code for a consumer, influences the image study of a tourism destination in the direction of becoming a complex process. In the marketing activity of each destination, the analysis of the importance of destination's resources represents an essential step, however, as the multifaceted tourism product presents (in combination with, as well as through other policies – price, distribution etc.) a strong diversification, the distinction between the real, objective situation of the destination's resources and the lack of their communication, on the one hand, and the distinction between the real situation and the way in which the resources are “presented” (in the direction of maximising or minimising them), on*

the other hand, can constitute a barrier in the path of formulating and/or fulfilling the marketing objectives and, respectively, the communication ones. In this context, in the authors' opinion, in aid of a positioning strategy as accurate as possible – starting point in the integrated marketing communication strategy, a radiography of the tourism resources, their place and their reflection, in relation to those communicated through the different promotional instruments (examples, books, guides, online tourism agencies, social media etc.), is permanently imposed, all the more in the case of a macrodestination like Romania, and should be carefully monitorised.

Keywords: communication; integrated marketing communication; promotion; Muntenia and Oltenia.

JEL Codes: M31; L83.

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Introduction

The communication of the elements of a tourism product to the target public represents a difficult task (mainly because of its complexity); this fact applies even more to Romania – as a macrodestination, which allows practicing the majority of the types of tourism, addressing implicitly to a large number of market segments with different necessities and sophistication degrees of desires and preferences. Thus, based on a complex buying decision process, it is necessary that the elements of the tourism product are communicated through a large number of promotional instruments, in the same time, relevant for the consumers, with which they should have contact from the moment they wish to visit a destination, until the end of the consuming act (including purchasing souvenirs, promotional objects, which may act as a stimulus for repeating the touristic experience). In the case of Romania, as a macrodestination, it is necessary that the marketing communication actions have a unique concept at the basis, integrated and subordinated to its marketing objective, so as each microdestination should have an image as consistent and coherent as possible.

Conceptual frame

Integrated marketing communication represents the planning, creation, integration and implementation of all contact points which a consumer has with a certain brand, as potential distribution channels, for messages which may influence directly or indirectly the purchasing process (Shimp, 2010, p. 10). Therefore, it is important to study the specificity of the communicated information through each channel, also correlated with the interests of the annunciator (for example, information, persuasion etc.). The information volume regarding the component elements of a tourism product (for example, natural, cultural resources etc.) is directly proportional to its complexity, the potential customer being able to register information from a diversified range of means, in the domain of marketing, and also in other domains (for example, geography, history, biology, religion etc.). The latter are difficult to analyze or control because of the experiences acquired by the potential consumer during the lifetime, being able to be “marked” partially or totally by culture, social class, reference group, role and status of the consumer in the society. Nevertheless, the sources from the marketing area may reveal information that reach the consumer more accurately, indicating, depending on the consumer’s means of “filtration”, the main lines of the integrated communication policy for a destination, policy attained by the “efforts (of all involved supporters), that have a certain communicational capital, which pursues to capitalize it within some coherent steps – on a commercial plan, as well as on a corporative plan,

so as to favour the reaching of the objectives provided in the marketing plans” (Popescu, 2003, p. 26).

Such a rigorous analysis, in which a large range of communication channels is taken into account, has as key-point the common elements of the presented information, especially the differences of structure, but also of nuance. The more pronounced these differences are, the more the complete image shall diminish, so that consumers will tend to retain a limited volume of information concerning the destination (not necessarily representative from a marketing point of view), but which they consider to be representative for the purchase of the tourism product/of the tourism destination. This information will reflect exactly in the destination’s positioning elements; that is why their dilution or annexation to information less representative may damage the image formation – part of the mental process – and it can even influence a possible purchase of a tourism product/destination.

Operational frame

The analysis of the communication instruments used for the promotion of the two tourism destinations, Muntenia and Oltenia, has been achieved, according to Philip Kotler’s theory, starting from the three problems that need to be solved by a communication strategy, namely: the strategy of the message, the creative strategy (the efficient way by which the message is sent) and the source of the message (Kotler, Keller, 2012, p. 484). Therefore, the mix of the marketing communication has been analyzed, starting with advertising, illustrated in this case by the analysis of the advertising materials (circulation brochures); of main interest are the promoted resources of the two analyzed destinations, Muntenia and Oltenia, the means by which they have been promoted and their variation, within advertising, and also in the case of the other elements of communication (adaptation after Kotler, Keller, 2012, p. 491). From the existent materials, the most representative brochures have been selected⁽¹⁾, namely: *General Brochure 2012, Cities from România, Nature and Cultural România* brochures, following the analysis of the promoted destinations of each region, from the point of view of attractions presented as elements of the tourism product, and implicitly, of the practiced/practicable types of tourism.

Therefore, regarding Muntenia region, the most promoted city – Bucharest, also called “Little Paris” and the “city of contrasts” due to its architecture – is mainly presented as being a *cultural, urban destination* owing to the buildings and important monuments (for example, The Old Princely Court, Palace of Parliament, Village Museum, Romanian Peasant Museum, History Museum, “Grigore Antipa” Museum etc.) and parks (Cișmigiu and Herăstrău) with a historical past. For a clearer positioning, each of these

attractions is presented as being a landmark or a superlative in relation to reference attractions from the same category (for example, Village Museum is presented as being the largest museum of this type in Europe, the Palace of Parliament as being a building with the stature similar to the Pentagon, the Art Museum as being the host of Brâncuși works of art, the Antipa Museum, the one having the largest exponent, a prehistoric elephant of 4.5 meters, Herăstrău as being the largest park of Bucharest and Cișmigiu as being the oldest park in Bucharest, whose architect had designed the Imperial Gardens of Wien as well). Through these elements, the city of Bucharest is described, and thus located, through the similarities and differences related to other European capitals, well-known as tourism destinations. The borders of the destination are extended by the presentation of the surroundings of the city, with attractions for the cultural tourism (for example, the palace built in Brâncovenesc style located in Mogoșoaia, the Monasteries of Snagov, Pasărea, Căldărușani – with their rich collection of medieval art and Cernica, well-known for the pilgrimage to Saint Calinic) and for its active tourism (for example, Snagov Lake).

Comana, the “Hidden Delta” close to Bucharest, is presented as a cultural and ecotouristic destination, while in Comana Natural Park, the endemic flora at the national level can be found, as well as floristic reservations which are unique in Romania. Another well-represented destination from Muntenia is Valea Prahovei; in all the brochures, the main cultural objective is Sinaia with Peleş Castle – a masterpiece of German Renaissance, followed by Sinaia Monastery, which includes the first religious museum in Romania, built by the end of 19th century and the Casino – a symbol of the city. Valea Teleajănelui is presented as a cultural, mountain-based and health destination, by means of three of its most important localities: Vălenii de Munte, Cheia and Slănic Prahova, where there is the largest salt exploitation center. Bucegi Mountains and Bucegi Natural Park are represented as being speleology, ecotouristic and active-tourism destinations because of their natural attractions/natural patrimony (for example, the chamois, brown bear and lynx).

In Dâmbovița county, Târgoviște city, presented as the oldest princely residence, according to the brochures, is the main tourism destination, with its most important attractions, among which: the Royal Court, Chindiei Tower and Sf. Vineri Church, that outline the practice of cultural, religious and urban tourism. Buzău county, destination for the active, gastronomic tourism and ecotourism (main gastronomic elements: Pleșcoi sausages and Fetească Neagră) is represented by Mud Volcanoes, with its sulfurous soil, rich in salt, with rare species of plants protected by law.

In Argeș county there are presented – as practicable types of tourism – speleology tourism in Dâmbovicioara Cave, cultural tourism on Transfăgărășan, at the Curtea de Argeș Monastery and at Poienari Fortress, marked, in

brochures, by the legend of master Manole, respectively by the historical figure of Vlad Țepeș. The mountain-based tourism, ecotourism and rural tourism are represented by Făgăraș Mountains, with the highest peak in Romania and the National Park Piatra Craiului, where the unique endemic flora can be found as well as species from the red list of the International Union for Nature Preservation. Therefore, in the case of Muntenia, certain combinations of types of tourism exist, as a consequence of the diversified needs of the consumers and as a premise for a complex tourism product, among which Prahova county – as destination for the cultural and mountain-based tourism – and Buzău and Argeș counties – for active tourism, ecotourism and cultural tourism.

Muntenia, represented in detail in the *guides*, has as main microdestination Bucharest, “*bridge between the Orient and Occident*” (*Michelin Guide*), city to which a large volume of information is assigned, from the area of tourist attractions, itineraries (with the main areas of interest: Old Bucharest – Civic Center, Revolution Square, University Square, Grădina Icoanei District, the great boulevards, the historical center, Calea Victoriei, Cișmigiu and Herăstrău Parks), and many historical landmarks gravitating around the figures of Bucur, Vlad Țepeș and Ion Mincu. Although the detailing degree is relatively low (for example, the presence of a single promoted event, George Enescu Festival), it emerges from the information presented in the brochures the fact that the destinations represent real “structures”, in which the combination of natural and socio-cultural resources render the combination of the types of tourism, and, implicitly, offers complexity and relevance to the destination.

Valea Prahovei, a destination with mixed forests, spectacular mountains associated to “*romantic souls and adventurous explorers*” (*National Geographic Guide*), is also carefully presented in guides with itineraries containing: Câmpina, Sinaia, Bușteni. Târgoviște is presented as a cultural city, with a Wallachian architecture from the 16th century and an appealing panorama of the city, as well as of the surrounding rural area, with the main attractions: the Royal Court, the Royal Church, Chindiei Tower, Sf. Vineri Church, Bălașa House, Art Museum, Stelea Monastery, Stelea Galleries, while Curtea de Argeș is depicted as the former capital of Muntenia with a mixture of styles – Romanian, Oriental, Byzantine, Caucasian, Balkanic, Occidental, with limestone walls, in Byzantine style, dominated by the figure of Neagoe Basarab and by the legend of master Manole.

The region of Oltenia is presented in *brochures* as a rich ethnographic area with natural beauties and ambitious, spirited and humorous inhabitants, marked by the historical figures of Mihai Viteazul, Nicolae Titulescu and Constantin Brâncoveanu, one of the main cultural resources being “Călușul”, a popular dance included on the list of the world material cultural patrimony of

UNESCO. Târgu Jiu (Gorj county) and even Dolj county have as positioning element the works of art of Constantin Brâncuși, while Mehedinți county, with its protected areas, such as “Porțile de Fier” Natural Park and Mehedinți Geopark, contains humid areas, which shelter internationally protected bird species, maintaining the active tourism, speleology and ecotourism. Vâlcea county is also represented by a triad of types of tourism, namely cultural tourism, through Hurezi Monastery – UNESCO monument, Arutela, Cozia Monastery, Măldărăști fortified manors, health tourism – Călimănești-Căciulata resort and ecotourism – Buila-Vânturarița National Park.

Concerning the *guides*, as an information instrument and, respectively, promotion instrument, Oltenia, described as “*having inaccessible cliffs, forested valleys, isolated monasteries, alluring beauty, under the influence of the traditions’ keepers*” (*National Geographic Guide*), was mainly presented through the monasteries, in all studied guides existing religious routes (for example, Cozia Monastery – to the balneotherapy resorts of Căciulata, Călimănești, to Râmnicu Vâlcea or Govora Monastery, mainly known for the printing and iconostasis, Dintr-un Lemn Monastery, Bistrița Monastery, Arnota Monastery, Horezu Monastery – masterwork of the Wallachian princes). The main presented cities are Târgu Jiu, with the most representative component of the tourism product – Constantin Brâncuși and his works of art and Drobeta-Turnu Severin, where Șimian Island, cruises on the Danube and the vestiges of Ada Kaleh Island have been presented. As differentiating elements of the region, the popular architecture has been presented as “trace” of the richness of the 18th and 19th centuries, its essence being rendered by the phrase “*stone and faith*” (*Michelin Guide*). Also, Râmnicu Vâlcea has been presented, insisting on Olt – “*tamed by a series of dams and viaducts, customs and fairs of Oltenia*” (*Rough Guides*) and on the routes towards Călimănești-Căciulata and Cozia-Turnu Roșu, with “*a deep, ribboned and very beautiful gullet*” (*Rough Guides*). Craiova is represented as a cultural destination because of the “*unexpected treasures of the city’s fragmented architecture*” (*National Geographic Guide*).

The guides offer complex information, regarding intuitive routes, maps, insisting on activities and interests, on the history of the city, at the same time, realizing a rigorous segmentation, and on photographs representing reference attractions (for example, the façade of the Romanian Athenaeum or Tismana Monastery in Michelin Guide) or tangibility elements (examples: pretzels and jam of Curtea de Argeș).

Regarding the *online environment*, firstly, there have been analyzed the websites of the tourism offices from abroad. Therefore, referring to the one in Spain, Muntenia region has been represented through the destinations: Bucharest, Sinaia and Curtea de Argeș, in the same time missing from the presentation: Târgoviște, Buzău – intensely presented by the previously

analyzed promotion instruments. The capital – a cultural destination, is described as a place situated on an “endless” plain, with old palaces, modern buildings of steel and glass (description that confirms the aforementioned idea of the “city of contrasts”), discreet, but big and wonderful parks with old trees, modern restaurants, enhancing the Village Museum and George Enescu Festival; its representation rendered by the legend of Bucur, the myth of Dromichetes, the figure of Vlad Țepeș Voivode-Dracula is, to a small extent, in accordance with the main attractions. Curtea de Argeș lends itself to cultural tourism according to the Romanian tourism office in Spain, by mentioning the Byzantine and post-Byzantine churches. In Sinaia, “Pearl of the Carpathians”, presented as winter mountain-based destination, with a century tradition and international atmosphere, many ski tracks with different degrees of difficulty can be found, as well as bob tracks, cable cars, teleski for beginners and advanced ski passionates. For the United States, Sinaia is appropriate for cultural tourism, highlighting the picturesque style containing Peleș and Pelișor castles and creating links between Bucharest, Sinaia and Brașov or Bucegi Mountains, in order to elaborate a tourism product. The capital is seen as a part of an European circuit to Budapest, with visits to museums, events, parks and routes to the monasteries of Northern Moldova and to the Castle of Dracula in Târgoviște, a character which does not exist in documents such as guides and brochures. On the same site, a complex route called “Discover Walachia” is proposed (this being the only source that uses this kind of region division) containing: Bucharest, Valea Prahovei, Natural Park of Bucegi, Târgu Jiu, Slănic Prahova, Craiova, Drobeta-Turnu Severin, Târgoviște, Horezu, Curtea de Argeș, Poenari Fortress, the orthodox monasteries in Byzantine style – Arnota, Bistrița, Cozia, Curtea de Argeș, Govora, Hurezi, as well as Drăgășani, Ștefănești, Dealu Mare and Valea Călugărească Vineyards, Azuga, Cozia and Bucegi parks. For Austria, each destination has a clear description, relating to its positioning (for example, Câmpina – “Rich in oil”, Sinaia – “The place where the kings used to go skiing”, Breaza – “Backpacking and Golf”, Bușteni – “The place for the winter sports dedicated to extreme sportspeople”). Destinations that have not been promoted within other instruments and through other marketing channels are Câmpina, Breaza, Comarnic – so as to combine sport tourism with religious tourism and backpacking, in view of creation a complex tourism product.

Oltenia has as main elements in the case of Romania’s tourism office in Spain, the fortified buildings and the monasteries – representing a patrimony, authenticity and tradition element for the tourism office in Austria (for example, the existence of routes in which the religious tourism occupies the main place, completed by the balneotherapy and sport tourism – Hurezi Monastery, Monasteries of Northern Oltenia: Tismana, Dintr-un Lemn, Bistrița, Horezu

Monastery, the native village of Constantin Brâncuși – Hobița, Polovragi Cave, Muierii Cave, Cloșani, Ruins from the Bridge across the Danube, Olt Valley, Drăgășani, Drobeta-Turnu Severin, Călimănești-Căciulata, Băile Olănești, Băile Govora, Cerna Valley, Cozia Park, Mehedinți, Buila-Vânturarița Park, Cozia Monastery, Târgu Jiu).

Although the differences between the pieces of information presented by the different tourism offices from abroad refer to the psychographic and behavioural differences between the consumers from each geographic space, this is not a sufficient motive for losing coherence and consistency of the differentiating elements of Romania, and, implicitly, those of Muntenia and Oltenia.

In order to study the online environment which comes in contact with the Romanian public, there have been selected the main online instruments of communication (Orzan, 2013, p. 24), starting from the important sites of the online tourism agencies, newsletters, online publications, blogs, mobile applications and social media, that have been included in the nominations' final picture of the most recent conference approaching the thematic of on-line tourism, namely E-travel Conference, which took place in Bucharest, on 11.04.2013.

Therefore, regarding Oltenia, there have been presented online reservations systems organizing internal routes in Craiova – Paravion Tour, the tourism destination being presented as “Oltenia’s heart” (examples of tourist attractions: Romanescu Park, Art Museum, architectonic monuments), together with Târgu Jiu (the park with the sculptures of Brâncuși), Horezu, Băile Olănești, Călimănești-Căciulata. In addition, here exist tourism attractions as the famous fortified manors – Greceanu, Duca, Bujoreni, Cernătescu, Tudor Vladimirescu, The Lilac Forest of Ponoare, Podul lui Dumnezeu, Muierii and Topolnița Caves and the monasteries (Arnota, Tismana, Hurezi, Bistrița). The tourism packages include some attractions, activities and destinations individually presented, referring to balneotherapy tourism: “A week of recovery in the balneotherapy resorts 2013”, “Balneotherapy decade”, “Băile Olănești, Călimănești-Căciulata, Băile Govora – Easter, 1st of May”, such packages being found also within the mobile solutions (examples, “Hai la băi”, “Easter in Olănești”).

The agencies promote Oltenia, mainly, through Băile Olănești and Călimănești-Căciulata balneotherapy resorts, offering recovery and wellness programs (for example, Perfect Tour agency). The combination of the types of tourism which may be practiced in Oltenia, namely business tourism (Olt and Dolj counties), balneotherapy-mountain-based tourism and relaxation tourism (guesthouses and hotels) is totally different in comparison to the one presented

in brochures (which includes ecotourism and cultural tourism), this inequality indicating an obvious disparity between resources and sources of information!

The online booking systems regarding Muntenia exclusively concern Bucharest, the country's capital, but the main cities presented in the tourism agencies offers are: Pitești, Buzău, Brăila, Târgoviște, Giurgiu, Slobozia, Bucharest – as destinations for the cultural tourism, Pucioasa and Amara resorts for the balneotherapy tourism, Giurgiu, Călărași and Buzău for recreation tourism. The online agencies propose tourism packages for these types of tourism as well (example, Eximtur's offers in Muntenia: week-end, Easter, ski and winter sports, spa and wellness, balneotherapy-mountain-based packages, "A week of recovery", "Balneotherapy decade", "One week in the mountains", "Holiday in the mountains", "Hai la băi", offers created and generally taken over from other specialized tourism agencies/professional associations and Perfect Tour, which promotes Bucharest destination for practicing cultural tourism, also offering packages as "One week of recovery in the balneotherapy resorts 2013" and "One week in the mountains").

By means of *mobile solutions* for Muntenia, Amara and Pucioasa resorts are promoted for balneotherapy tourism and cultural tourism – by listing the cultural institutions and museums from Bucharest (Orange Explorer), types of tourism yet not supported by the Facebook social media (within its framework, only Bucharest, Sinaia and Târgoviște cities are promoted at a very small scale, the only information offered being the one for accommodation)!

Within the *awarded blogs*, there is a single article focusing on Oltenia – as destination for winter sports, which is not supported by other promotion instruments. Cesăvezi.ro site, representing a platform of tourist attractions, promotes the two studied regions, but there is a significant variation between the attractions presented within the site and those previously studied by of other promotional instruments (example, in the case of Muntenia, Bolintin Forest, Costescu Manor, Gâsca Isle, Argedava Fortress, Râușor Dam and accumulation lake, Lăptici Peatery etc., and in the case of Oltenia, Drobeta Roman Camp, Novac's Balk, Săcele balneotherapy resort, Cheile Bistriței, Preajba-Făcăi lacustrian complex etc.).

Regarding the *audio-visual, media instruments*, combined with the online environment, after the message analysis of the only professional documentary regarding Romania, in the authors' opinion, "Wild Carpathia", made by Charlie Ottey (even though it does not directly concern the two studied regions), the conclusion is that, its message, translated into 21 languages and broadcasted in 130 countries, is extremely important, because:

- it is broadcasted by Travel – international television channel, the first record on Youtube network counting over 200,000 visualizations;

▪ the central element of the documentary is represented by the wildlife of the Carpathian Mountains, by the beauty of its sublime landscapes; the main physical resources are represented by unexploited places in wild ecosystems, forests and meadows of untouched daffodils, unaltered flora and fauna, while the social and cultural resources presented (old traditions and customs, rudimentary lifestyle, folk costumes, dances and crafts) reside at the basis of the image that the documentary's creators envisioned.

However, it is important to investigate not only if these elements characterize Romania to a certain extent, by putting its real image in an appropriate frame, but also if they really define it, in tourism terms, as central elements for the construction of its brand! In other words, Romania's induced position – “golden land, wild heaven” – which indicates the active tourism, adventure tourism and cultural tourism – seen unilaterally as being representative as types of tourism for Romania, does not reflect the true unique resources of Romania!

Consequently, under the conditions in which there are no such professional documentaries for the other microdestinations of Romania as well (Muntenia, Oltenia, Maramureş, Bucovina, Banat-Crişana and Dobrogea) the over-dimensioning of the “terrestrial paradise” and of that of the “untouched beauty” from Transylvania inevitably leads to a sub-dimensioning of the country's real image, after a certain period of time of visiting Romania, involving the risk of a sustained „demarketing” of the country, respectively of the component microdestinations and implicitly, of its tourism brand.

Results

In order to test the hypotheses represented by the key-points of integrated marketing communication in the specialized literature, namely the consistency, the coherence of the message and the specificity of the communication channels, its final phase aiming to identify, for each destination of the studied regions, its specificity, expressed by the presented tourist attractions, by the purpose rendered by specific and/or preponderant form of tourism which can be practiced and implicitly, of the targeted segments of consumers, by decrypting the interests residing at the basis of a holiday selection. It is necessary that all these elements are analyzed, envisioning the specificity of the utilised communication channel indicating a certain variation of information; yet, it is necessary that the situation analysis of the communication means at a certain moment should reflect a clear, unitary and powerful image of the destinations and regions.

With respect to Bucharest (the most intensely promoted destination from Muntenia), it can be noticed the fact that the offline means indicate an

exclusively cultural destination, within whose “circuits” are created according to specific areas, covering a large range of tourist attractions, such as historical buildings, churches and monasteries (Table 1). As the guides represent communication means destined to a certain category of potential tourists and namely, those who are passionate about knowledge (presuming to make a buying decision for a planned holiday), they present, within a detailed historical frame, the most numerous indexes regarding the segments of consumers to whom Bucharest addresses, meaning: persons passionate about culture, arts, collectors etc. Furthermore, due to the relevance and integrity of the source, a significant number of the superlatives of the destination is presented by this communication means (examples, “Grigore Antipa” Museum, National History Museum of Romania, Village Museum, Palace of Parliament, Snagov). The cultural tourism product is supplemented in brochures, by practicing active and religious tourism within the surroundings of the city, the visit to Snagov Lake, respectively to Snagov, Căldărușani and Mogoșoaia monasteries etc. Contrary to the principles of integrated marketing communication, through the online instruments, Bucharest destination (not supported at the tourism fairs) is mainly presented as being a destination for spa and events tourism (which may be to a certain extent explainable, considering the dynamic nature and rapidity with which events generally develop), the cultural tourism being presented only as an alternative to these two main types of tourism!

Prahova Valley is also presented in guides and brochures as being a cultural destination, with its main attractions: Peleş and Pelișor castles and Sinaia Monastery (well-represented at the tourism fairs), “supplemented” by Azuga and Bușteni resorts for tourists who have an increased interest for mountain-based activities, destinations where they can practice sport and mountain-based tourism. Covering a large range of activities, the brochures present in Prahova county – Bucegi Natural Park – a destination that is favourable for speleology tourism, in combination with active tourism and mountain-based tourism. These three adjacent types of tourism converge to a compact segment of consumers and form a scale of diversified activities, along with health tourism (Slănic Prahova) and complementary activities that position Prahova county, but also Prahova Valley, among the most representative, complex destinations (exceeding the strict area of mountain-based tourism presented in the online environment) of Muntenia region.

Buzău destination is also presented as being a rural destination (by Tisău, Haleș villages) in guides and in the online environment (where the accommodation services are not specific to the practiced/practicable types of tourism). The active tourism, simultaneously with the ecotourism and the mountain-based tourism (on the background of practicing cultural tourism) may be practiced separately or combined.

Curtea de Argeş combines, by means of guides and brochures, multiple types of tourism such as cultural, religious and speleology tourism, by proposing visits to the tourist attractions: Curtea de Argeş Monastery, Poenari Fortress, Dâmbovicioarei Cave, Sânt Nicoară Church, Transfăgărăşan, tourists passionate about nature having the opportunity to visit Piatra Craiului National Park and Făgăraş Mountains in order to practice ecotourism, rural tourism, as well as mountain-based tourism. The rural tourism in the area of Curtea de Argeş is well-represented in guides by the presentation of Arefu Village, equally having a considerable visibility at the tourism fairs.

Târgovişte city, presented in guides and brochures in a unitary manner, as a destination for cultural and religious tourism (by visiting the museums, Dealu Monastery and the Royal Court), has also a rural importance (represented by Viforâta Village, exclusively presented in the most complete instrument of communication – guides).

In order to highlight the lack of consistency between the two types of communication – online and offline – it should be noticed the fact that important destinations for balneotherapy tourism in Muntenia – Amara and Pucioasa, are not at all mentioned in the written instruments (guides and brochures), even though they have a reasonable visibility at the tourism fairs as well!

In Oltenia, Târgu Jiu is the best-represented destination (by means of Constantin Brâncuşi figure), the region being presented in all the offline communications channels as a cultural destination and supported (as a destination with religious valence) in guides and brochures by attractions such as Tismana Monastery, Horezu, Polovragi, Măldărăşti, Podul lui Dumnezeu, many of these representing superlatives of Romania.

Another destination from Oltenia, considered “complete” in the authors’ opinion, in the offline environment, is Drobeta-Turnu Severin (considered a superlative of Romania, as well), presented in guides and brochures as being a cultural destination, with attractions such as, Şimian Island (with the vestiges of Ada Kaleh Island), Porţile de Fier, Roman Bridge, but also Cazanele Dunării – visible destination at the tourism fairs. However, in the online environment, the cultural potential of the destination occupies a subsidiary place, due to its presentation mainly as a business tourism destination!

Even if it is not promoted in the online environment (important cities such as Craiova, not being presented as having a significant tourism potential, especially for cultural tourism), Oltenia remains a powerful destination in tourism terms, presented to a certain extent as a “hard-set” destination with powerful local brands, due to the differentiating elements on its territory that grant its identity (such as monasteries, which in guides and brochures were highlighted, with the main route: Cozia and Govora monasteries, Dintr-un Lemn Monastery, Bistriţa,

Arnota and Horezu monasteries), contrary to Muntenia – a more “fragmented” destination, with many local identity elements as well.

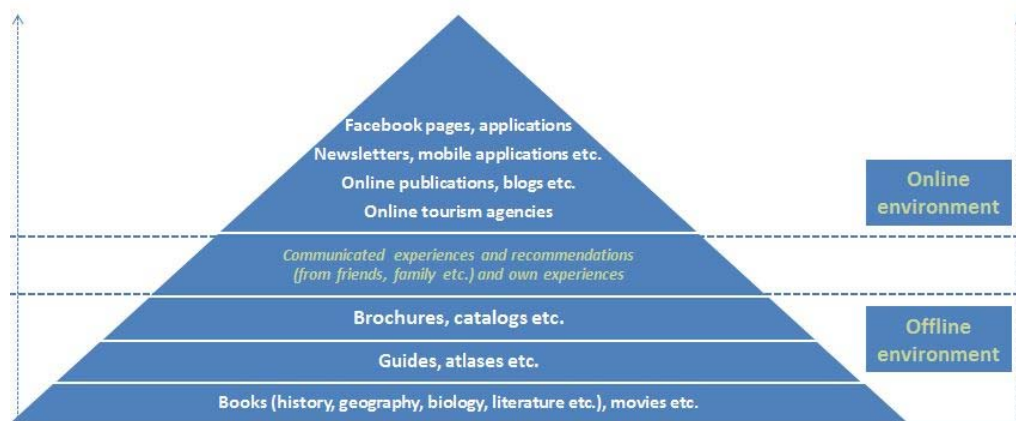


Figure 1. *The hierarchy of information sources, influences and considerations in selecting a destination*

As there is a clear inconsistency between the various information sources, starting from the communication in the offline and online environments, the authors have considered that it is necessary to classify them according to the importance they have within the environment they are part of; thus, starting from the basis of the decision-making pyramid in the case of a tourism product – Figure 1 – the role of information sources such as: history, geography, biology, literature books etc., movies, guides, atlases, brochures and catalogs is to fundament the information, along which – those from other sources, such as online tourism agencies, online publications, newsletters, blogs, mobile applications and Facebook pages and applications – delineate the respective choice.

The main problem of the communication for this region, which transcends the lack of uniformity of distinctive elements, is the deficient representation of primary destinations, important in terms of region resources, such as Băile Olănești (considered in the offline environment, a superlative of Romania). Similar destinations, such as, Băile Govora and Călimănești-Căciulata are placed in a subsidiary background, even though, regarded through balneotherapy tourism perspective, they represent uniqueness elements of the region!

For both destinations, the two offline communication instruments are presented (Table 1), deemed, from the perspective of a vacation selection decision, to be the most important, and which, due to their argumentative profile, impose a continuous “filtering” and “draught”.

Table 1

Synoptic table of the written communication means (guides and brochures) of the tourist attractions and types of tourism from Muntenia and Oltenia destinations.

Muntenia	Oltenia
Offline environment	
Guides	
<i>Bucharest</i>	<i>Oltenia</i>
<p><i>Tourist attractions:</i> historical buildings, churches, monasteries, parks <i>Types of tourism:</i> cultural, religious, urban tourism <i>Segment of consumers:</i> art collectors, children, people who are passionate about sports and pilgrimages (Michelin Guide, Le Guide du Routard, National Geographic Guide, Rough Guides)</p> <p><i>Tourist attractions:</i> surroundings of Bucharest – Mogoșoala, Căldărușani, Snagov Monasteries <i>Types of tourism:</i> religious, cultural, urban tourism (Michelin Guide, Le Guide du Routard, Rough Guides)</p>	<p><i>Tourist attractions:</i> monasteries (Cozia, Govora, Dintr-un Lemn, Bistrița, Arnota, Hurezi, Tismana), Brâncuși (Târgu Jiu), Vaideeni, Polovragi – Polovragi Cave, Muierii Cave, Baia de Fier <i>Types of tourism:</i> cultural, active, religious, speleology tourism (Michelin Guide, National Geographic Guide)</p>
<i>Ploiești, Teleajăn Valley</i>	<i>Craiova</i>
<p><i>Tourist attractions:</i> museums, Slănic Prahova <i>Types of tourism:</i> cultural, health tourism (Michelin guide, Rough Guides)</p>	<p><i>Tourist attractions:</i> Art Museum, Romanescu Park <i>Types of tourism:</i> cultural, urban tourism (Michelin Guide, National Geographic Guide, Rough Guides)</p>
<i>Valea Prahovei</i>	<i>Târgu Jiu</i>
<p><i>Tourist attractions:</i> Sinaia - Peleş Castle, Bucegi Mountains <i>Types of tourism:</i> cultural, mountain, active tourism, ecotourism (Michelin Guide)</p> <p><i>Tourist attractions:</i> Sinaia – Quota 1400, Azuga, Bușteni <i>Types of tourism:</i> cultural, mountain-based, sports tourism (National Geographic Guide)</p>	<p><i>Tourist attractions:</i> Brâncuși ensemble, Tismana Monastery, Horezu, Polovragi, Măldărăști, Podul lui Dumnezeu <i>Types of tourism:</i> cultural tourism, ecotourism (National Geographic Guide, Rough Guides)</p>
<i>Târgoviște</i>	<i>Drobeta-Turnu Severin</i>
<p><i>Tourist attractions:</i> museums, Dealu Monastery, Royal Court <i>Types of tourism:</i> cultural, religious tourism (Michelin Guide, Ghidul National Geographic, Rough Guides)</p> <p><i>Tourist attractions:</i> Viforâta Village <i>Type of tourism:</i> rural tourism (Michelin Guide)</p>	<p><i>Tourist attractions:</i> Șimian Island, museums, Porțile de Fier, Roman Bridge, Ada Kaleh <i>Type of tourism:</i> cultural tourism (National Geographic Guide, Rough Guides)</p>
<i>Buzău County</i>	
<p><i>Tourist attractions:</i> Mud Volcanoes, Ciolanu and Colți monasteries, Tisău and Haleș villages <i>Types of tourism:</i> cultural, rural tourism (Michelin Guide)</p>	
<i>Curtea de Argeș</i>	
<p><i>Tourist attractions:</i> museums, churches, Transfăgărășan, Vidraru Dam <i>Types of tourism:</i> cultural, religious tourism (Michelin Guide, Le Guide du Routard, National Geographic Guide, Rough Guides)</p>	

Muntenia	Oltenia
Offline environment	
Guides	
<p><i>Tourist attractions:</i> Iezer Mountains (views, villages, monasteries) <i>Types of tourism:</i> cultural, religious tourism (National Geographic Guide)</p> <p><i>Tourist attractions:</i> Arefu Village, Poenari Fortress, Vidraru Lake <i>Types of tourism:</i> cultural, rural tourism (Rough Guides)</p>	
Brochures	
<p style="text-align: center;"><i>Bucharest</i></p> <p><i>Tourist attractions:</i> historical monuments <i>Types of tourism:</i> cultural tourism, urban tourism (Cities of România Brochure, General Brochure 2012, Cultural Romania Brochure)</p> <p><i>Tourist attractions:</i> Snagov Lake <i>Type of tourism:</i> active tourism (General Brochure 2012)</p> <p><i>Tourist attractions:</i> surroundings of Bucharest <i>Types of tourism:</i> religious, cultural tourism (Cities from Romania Brochure, General Brochure 2012)</p>	<p style="text-align: center;"><i>Vâlcea county</i></p> <p><i>Tourist attractions:</i> Horezu, Cule from Măldărăști, Arutela Roman Camp <i>Type of tourism:</i> cultural tourism (General Brochure 2012)</p> <p><i>Tourist attractions:</i> Călimănești-Căciulata <i>Type of tourism:</i> health tourism (General Brochure 2012)</p> <p><i>Tourist attractions:</i> Cozia Monastery <i>Types of tourism:</i> cultural, religious tourism (Cultural Romania Brochure)</p> <p><i>Tourist attractions:</i> Căpățâni Mountains, Buila-Vânturarița National Park <i>Types of tourism:</i> mountain-based tourism, ecotourism, active tourism (General Brochure 2012)</p>
<p style="text-align: center;"><i>Prahova county</i></p> <p><i>Tourist attractions:</i> Prahova Valley – Sinaia with Peleş, Peleş castles, Sinaia Monastery <i>Types of tourism:</i> cultural, religious tourism (Cultural Romania Brochure, Cities from Romania Brochure)</p> <p><i>Tourist attractions:</i> Bucegi National Park <i>Types of tourism:</i> active, mountain-based, speleology tourism (Natura Brochure, General Brochure 2012)</p> <p><i>Tourist attractions:</i> Teleajăn Valley – Vălenii de Munte, Slănic Prahova, Cheia <i>Types of tourism:</i> cultural, mountain-based, health tourism (General Brochure 2012)</p>	<p style="text-align: center;"><i>Gorj county</i></p> <p><i>Tourist attractions:</i> Târgu Jiu –Brâncuși ensemble <i>Types of tourism:</i> cultural, urban tourism (General Brochure 2012)</p>
<p style="text-align: center;"><i>Buzău county</i></p> <p><i>Tourist attractions:</i> Mud Volcanoes <i>Types of tourism:</i> cultural, active tourism, ecotourism, mountain-based tourism (General Brochure 2012)</p>	<p style="text-align: center;"><i>Mehedinți county</i></p> <p><i>Tourist attractions:</i> Ponoare, Podul lui Dumnezeu <i>Types of tourism:</i> active, speleology tourism (Nature Brochure)</p> <p><i>Tourist attractions:</i> Porțile de Fier National Park</p>

Muntenia	Oltenia
Offline environment	
Guides	
	<i>Types of tourism:</i> active, mountain-based tourism, ecotourism (General Brochure 2012)
<p><i>Argeş county – Curtea de Argeş</i> <i>Tourist attractions:</i> Curtea de Argeş Monastery, Poenari Fortress, Dâmbovicioara Cave, Sân Nicoară Church, Transfăgărăşan <i>Types of tourism:</i> cultural, religious tourism, speleology tourism (General Brochure 2012)</p> <p><i>Tourist attractions:</i> Piatra Craiului National Park <i>Types of tourism:</i> rural tourism, speleology, active tourism, ecotourism (Natura Brochure)</p> <p><i>Tourist attractions:</i> Făgăraş Mountains <i>Types of tourism:</i> active, mountain-based tourism, ecotourism (Natura Brochure)</p>	<p><i>Dolj county</i> <i>Tourist attractions:</i> Arts Museum from Craiova <i>Types of tourism:</i> cultural, urban tourism (General Brochure 2012)</p>
<p><i>Dâmboviţa county – Târgovişte</i> <i>Tourist attractions:</i> Sf. Vineri Church, Chindiei Tower, Royal Court <i>Types of tourism:</i> cultural, religious, urban tourism (Cities from Romania Brochure)</p>	
<p><i>Giurgiu county</i> <i>Tourist attractions:</i> Comana Natural Park <i>Types of tourism:</i> cultural tourism, ecotourism (General Brochure 2012, Natura Brochure)</p>	

Source: information processed after the studied guides and brochures.

Among the tourist attractions presented in the offline environment (guides and brochures), which were based on the very tourism essence of the two studied regions, an important part of the corresponding superlatives have been identified, fact which indicates that the two sources, relatively homogenous in segmentation, targeting and strategy of the message, represent the most serious tourism information and documentation source. The superlatives of the regions, as the essence of the cultural-historical identity (especially urban), and, implicitly, the touristic one, have been thus capitalized by the presence of all superlative-museums from Bucharest: “Grigore Antipa” Museum, National History Museum of Romania, National Museum of Geology and Village Museum (Table 2). Furthermore, other important buildings and resorts with tourism potential from the region have been presented. Even though these instruments presented the tourist attractions as constitutive elements of some complex tourism products, occasionally including predefined circuits and routes, there exist tourism destinations and corresponding attractions within the

superlatives, which not only that were not designed as an independent tourism product, but, moreover, they were not even included in any established route (examples, the area of Brăila – Balta Brăilei, Fetești-Cernavodă, Călărași and Teleorman county).

Regarding Oltenia, the most important highlighted superlatives have been Drobeta-Turnu Severin, Podul lui Dumnezeu and Turnu Roșu-Cozia, both by the frequency of the contact points (number of guides and brochures in which they appear) and by the importance they have as tourism destinations or attractions (Table 2), fact which determines their visibility and, consequently, knowledge and recognition among potential tourists. Thus, even though Băile Olănești destination is mentioned in some of the guides, it occupies a secondary place within the proposed journey that does not have as corresponding form of tourism, its specificity – balneotherapy tourism, situation that could not maximally capitalize its touristic potential.

Table 2

Superlatives of the regions found within the offline communication means

Superlatives of Muntenia and Oltenia regions found within the offline written communication means	
Muntenia	Oltenia
Azuga	Băile Olănești
Bucharest	Drobeta-Turnu Severin
Comana	Mehedinți Plateau
Clock Museum of Ploiești	Ocnele Mari
"Grigore Antipa" Museum	Podul lui Dumnezeu
National History Museum of Romania	Turnu Roșu-Cozia
National Museum of Geology	
Village Museum	
Palace of the Parliament	
Sinaia	
Slănic	
Snagov	
Vidraru	

Source: processing after Mărculeț (coord.) (2010).

As the communication activities, traditionally viewed, endorse the achievement of an objective from a certain category or the achievement of a set of objectives from one or more categories, in order to establish an integrated communication, the Internet, through all its instruments and techniques (examples, newsletters, blogs, online applications, social media etc.), has the role of contributing to the achievement of each of the communication objectives pursued by the organisation (processing after Vegheș, 2003, p. 206). Additionally, it is necessary that the analyzed online environment should be dissociated in the awarded sites at the E-travel conference and sites of the tourism offices from abroad, as the latter have, to a large extent, the character of a printed promotional material, in which there can be found, on a smaller scale,

the specific tourist attractions, presented as communication elements in guides and brochures (Table 3). The most imported destinations and attractions correspond to the ones found in guides, which were, subsequently, merged and adapted to the target markets (example, the United States office presents several circuits as main tourism products, the Austria office eloquently presents destinations for the balneotherapy tourism etc.), complying with the psychographic characteristics of the potential tourist (example, sport tourism is better represented than in the case of other instruments). The superlatives which were found are subscribed to the same category as those from the guides, meaning, cultural objectives: museums from Bucharest and resorts that allow practicing a form of tourism corresponding to a specific interest (example, Azuga – mountain-based tourism, Băile Olănești – balneotherapy tourism). In the online environment (in which promotional materials are presented in Romanian), analyzed by means of the institutions awarded within E-travel Conference, the superlatives which were found are represented actually by two destinations, one of them being Băile Olănești – for balneotherapy tourism, and the other, Drobeta-Turnu Severin – for cultural tourism. Contrary to the principles of integrated communication, but also to those of tourism marketing, in general, is the inconsistency between the types of tourism presented within the studied promotion means and the specificity of the corresponding channel. Therefore, balneotherapy tourism, which in its form of treatment tourism takes a “regulated” form, of good practices (objective informative materials being necessary in this respect), is present, to a larger extent, in the online environment, which is an “open” and non-specialized environment, while other types of tourism, such as relaxation tourism (in which personal experiences have a significant added value to the informative messages), are better represented in the written materials (guides and brochures)!

Table 3

Attractions and destinations in the online environment	
Online environment	
<i>Mix of online instruments (online booking systems, online tourism agencies, mobile applications, newsletters, Facebook pages and applications, blogs, publications, others)</i>	
Muntenia	Oltenia
Pitești, Buzău, Brăila, Târgoviște, Giurgiu, Slobozia, Bucharest –cultural tourism Giurgiu – rest tourism Amara, Pucioasa – relaxation, balneotherapy tourism Călărași, Buzău counties – recreation tourism Bucharest – event tourism, relaxation at spa, business tourism, cultural tourism for young people with increased revenues (National Museum of Maps and Old Books from Bucharest) Argeș, Buzău counties – rural tourism Prahova Valley – mountain-based tourism	Râmnicu Vâlcea, Târgu Jiu (park with Brâncuși's sculptures), monasteries: Arnota, Tismana, Hurezi, Bistrița, the famous fortified manors - cule - Greceanu, Duca, Bujoreni, Cernătescu, Tudor Vladimirescu Horezu – lilac forest from Ponoare, Podul lui Dumnezeu, Muierii Cave, Topolnița Băile Olănești, Călimănești-Căciulata – balneotherapy-mountain-based tourism Rânca Drobeta-Turnu Severin – Drobeta Turnu Severin hotel, Porțile-de-Fier, cruises on the Danube – business tourism

<i>Tourism offices from abroad</i>	
<p><i>Bucharest</i> <i>Tourist attractions:</i> museums, events, parks <i>Types of tourism:</i> cultural, urban tourism (Spain, Austria, Italy)</p> <p><i>Tourist attractions</i> – Bucharest – transit point: circuit to Târgoviște, Curtea de Argeș</p>	<p><i>Târgu Jiu</i> <i>Tourist attractions:</i> monuments created by Brâncuși, museums, events, parks <i>Type of tourism:</i> cultural tourism (Spain, United States)</p>
<p><i>Prahova Valley</i> <i>Tourist attractions:</i> Azuga, Bușteni, Sinaia <i>Types of tourism:</i> recreation, mountain-based, cultural tourism (Austria, Italy)</p>	<p><i>Horezu</i> <i>Tourist attractions:</i> Hurezi Monastery <i>Type of tourism:</i> urban tourism (Austria)</p>
<p><i>Sinaia</i> <i>Tourist attractions:</i> Bucegi Mountains with Piatra Arsă and Furnica Peaks <i>Type of tourism:</i> mountain-based tourism (Spain, Austria)</p> <p><i>Tourist attractions:</i> Peleş, Peleşor castles, Bucegi Mountains <i>Types of tourism:</i> cultural, mountain-based tourism, ecotourism (United States, Austria)</p>	<p><i>Oltenia</i> <i>Tourist attractions:</i> fortified civil buildings <i>Type of tourism:</i> cultural tourism (Spain)</p> <p><i>Tourist attractions:</i> Băile Olănești, Călimănești-Căciulata, Băile Govora <i>Type of tourism:</i> urban tourism (Austria)</p>
<p><i>Curtea de Argeș</i> <i>Tourist attractions:</i> Byzantine and post-Byzantine churches <i>Types of tourism:</i> cultural, religious tourism (Spain)</p>	<p><i>Craiova</i> <i>Tourist attractions:</i> museums, events, parks <i>Type of tourism:</i> urban tourism (United States)</p>
<p><i>Bușteni</i> <i>Tourist attractions:</i> Cantacuzino castle, ski tracks <i>Types of tourism:</i> sports, camping, mountain-based tourism (Austria)</p>	
<p><i>Buzău</i> <i>Tourist attractions:</i> Mud Volcanoes <i>Type of tourism:</i> ecotourism (Austria)</p>	
<p><i>Câmpina</i> <i>Tourist attractions:</i> churches, museums <i>Type of tourism:</i> cultural tourism (Austria)</p>	
<p><i>Comarnic, Breaza</i> <i>Tourist attractions:</i> palaces, churches, "Lac de Verde" golf club <i>Types of tourism:</i> sports tourism, camping, health tourism (Austria)</p>	
<i>Superlatives of the regions within the online communication means</i>	
Azuga, Bucharest, Sinaia	Băile Olănești, Drobeta-Turnu Severin, Podul lui Dumnezeu

Source: the sites of the tourism offices from abroad and the sites of the online tourism agencies, online publications, blogs, mobile applications, social media awarded within the E-travel conference.

Comparing the two tables (1 and 3), it can be noticed that:

1) the offline instruments are based on a multidisciplinary documentation, offering objective information and details regarding history and geography for substantiating the presentation of the most important destinations and objectives from the two regions;

2) although the main characteristic of the online environment is the precise targeting of consumer segments and dynamics, these two functions have been highlighted by other means of communication such as guides, in which one can find detailed information about the consumers, but also various tourism products (within which the positioning elements are clearly delimited and placed in a broader, relevant frame, that of the country brand).

As the principle of cohesion between the two sources of communication must exist, offline and online, at least regarding the representative, essential attractions of a destination, for the purpose of evaluating the mix of communication instruments, it is necessary to compare the basis of the pyramid with its top (Figure 1). Thus, there has been selected information mainly referring to cultural attractions and destinations – customary elements from the “background of each holiday” – from the most complex guide in the authors’ opinion (Michelin Guide), along with those from the encyclopedia “Romania’s Superlatives”, which were subsequently configured in key-words, in order to be retrieved in the online environment, represented by Facebook pages (Table 4). As the starting point was the idea according to which this communication instrument’s role is to highlight the information background on a destination/attraction that is already considered by means of other instruments, there have been considered only those Facebook pages having in the title’s composition, the name of the respective destination/attraction, accepting the idea that there are also other pages having a relevant, yet not specific content.

With regard to Muntenia destination, there can be noticed that majority of the Facebook pages focus on the geographic position, the accessible information being related to the number of likes, of visits and of discussions, composing the dimension of the “touristic phenomenon” given by the respective attraction/destination and explained by the users’ “communicational vector”. Consequently, the page of geographic position has, to a large extent, a general informative role, the role of persuasion being fulfilled by the other users who signal their presence in that particular place or share their opinion regarding the respective attraction/destination in the online environment, and not by a certain entity that assigns a communicational budget making constant efforts in order to promote the tourism objective. In this situation, in Muntenia, only the Romanian Peasant Museum, the National Contemporary Arts Museum

and “Grigore Antipa” Museum have updated Facebook pages, with various information on the museums and about other subjects/news that coincide with the interests of the potential visitors, with representative photographs and constant events, ensuring a continuous visibility in the online environment. While the absence of the churches (cultural objectives) is explained to a certain extent through the discretion required by the nature of the specific activities, the reduced visibility of some important tourist attractions, such as Village Musuem and Cișmigiu Park (with 700-800 likes) is inexplicable!

Besides Bucharest destination, which, even though not intensely represented on Facebook, is broadly illustrated, the other destinations and attractions from Muntenia (considered having an important touristic potential) do not have a specific page, attended by interested economic agents or local authorities, except for Slănic Prahova destination, which has a “dedicated” group of discussions (306 members). It should be noticed that two museums whose object of activity is represented by elements of uniqueness of the region/country (National Oil Museum and Folk Costumes Museum from Romania) are not at all represented on Facebook, their visibility being close to zero for those tourists that do not use the communication means from the basis of the pyramid, which substantiate the identity elements.

Table 4

**Information from guides versus information on the Facebook pages
for Muntenia destination**

Information from guides versus information on the Facebook pages for Muntenia	
Key-words from the guides	Facebook pages
Bucharest	Location: 2,541,671 likes, 1,290,339 people have been there, 120,063 are talking about this topic Additional pages: Where do we go out in Bucharest? – events – 484 members, Bucharest Optimist - 35.346 likes
Sfântul Gheorghe Church (Bucharest)	Location: 8 people like this, 94 people have been there, 2 people are talking about this topic
Lipscani District	Location: 6,406 people like this, 49,097 people have been there, 227 people are talking about this topic Various pages of the restaurants from Lipscani District
National History Museum	Location: 302 people like this, 5,237 people have been there, 107 people are talking about this topic
Stavropoleos Church	-
Manuc's Inn	Location: 1,075 people like this, 15,096 people have been there, 117 people are talking about this topic
Jewish Community Museum	-
Metropolitan's Church hill	Location: 75 people like this
Palace of Parliament	Location: 10,024 people like this, 48 people are talking about this topic
National Arts Museum	Location: 357 people like this, 2,457 people have been there, 18 people are talking about this topic

Information from guides versus information on the Facebook pages for Muntenia	
Key-words from the guides	Facebook pages
National Contemporary Arts Museum	Location: 2,168 <i>people like this</i> , 6,982 <i>people have been there</i> , 74 <i>people are talking about this topic</i> Additional page: MNAC Bucharest – 7,618 likes (events)
Folk Costumes Museum from Romania	-
Cișmigiu Park	Location: 730 <i>like this</i> , 15 <i>people are talking about this topic</i>
Military Circle	Location: 272 <i>people like this</i> , 9,724 <i>people have been there</i> , 49 <i>people are talking about this topic</i>
Revolution Square	Location: 555 <i>people like this</i> , 4,973 <i>people have been there</i> , 28 <i>people are talking about this topic</i>
Romanian Athenaeum	Location: 2,920 <i>people like this</i> , 16,028 <i>people have been there</i> , 118 <i>people are talking about this topic</i>
Village Museum	Location: 796 <i>people like this</i> , 12,956 <i>people are talking about this topic</i> , 219 <i>people are talking about this topic</i> Additional page: "Dimitrie Gusti" National Village Museum – 865 members
Romanian Peasant Museum	Location: 34,521 <i>people like this</i> , 750 <i>people are talking about this topic</i> Additional page: Romanian Peasant Museum – 34,521 likes (information, events)
"Grigore Antipa" Musuem	Location: 10,820 <i>people like this</i> , 133 <i>people were here</i> , 412 <i>people are talking about this topic</i> Additional page: "Grigore Antipa" National Museum of Natural History – 34,521 likes (information and events)
Zoological garden (Bucharest)	Location: 26 <i>people like this</i> , 41 <i>people are talking about this</i> , 1,002 <i>people are talking about this topic</i>
Slănic Prahova	Location: 5,123 <i>people like this</i> , 6,760 <i>people have been there</i> , 89 <i>people are talking about this topic</i> Additional page: Slănic Prahova – Stațiune balneoclimaterică – 306 membri
National Oil Museum	-
Clock Musuem (Ploiești)	Location: 32 <i>people like this</i> , 513 <i>people have been there</i> , 4 <i>people are talking about this topic</i>
Mud Volcanoes	Location: 1,387 <i>people like this</i> , 18,730 <i>people have been there</i> , 391 <i>people are talking about this topic</i>
Peleş Castle	Location: 8,908 <i>people like this</i> , 769 <i>people have been there</i> , 151 <i>people are talking about this topic</i> Additional page: Muzeul Național Peleş (information, events)
Comana	Location: 838 <i>people like this</i> , 5,356 <i>people have been there</i> , 90 <i>people are talking about this topic</i>
Snagov	Location: 127 <i>people like this</i> , 3,691 <i>people have been there</i> , 68 <i>people are talking about this topic</i> Additional pages: Snagov City, Snagov Club, Snagov Palace
Vidraru	Location: 281 <i>people like this</i> , 5,518 <i>people have been there</i> , 119 <i>people are talking about this topic</i>

Source: information processed from the Facebook pages of the tourist attractions and destinations considered, accessed on 24.05.2013.

Oltenia region is not so intensely represented on Facebook, no objective from the Michelin Guide or from “Romania’s Superlatives” having any specific Facebook page, administered by a person/company, which updates it with information regarding its touristic potential or the specific activities and events (Table 5). Considering the volume and the nature of the information from the offline environment, superlatives such as Podul lui Dumnezeu and Polovragi, although mentioned and appreciated (48, respectively 935 likes) have no correspondent in the online environment!

Similarly, Drobeta-Turnu Severin and Horezu (destinations which are also promoted in the offline environment) record on Facebook between 9,000-11,000 likes, however these actions will increase the visibility of the tourist objectives only among the persons connected to the users who have appreciated the destinations. In conclusion, this instrument is mainly used due to its lever effect (from certain users to the communities to whom they are connected). Therefore, there is even more necessary to sustain the hierarchy presented in Figure 1, according to which it is recommendable that the “basis of information” should be communicated/extracted from the written channels of communication such as, the books, guides, atlases, while the online instruments (example, Facebook social media) should be strictly used as means of accessing friends’ experiences and opinions; presently, in view of substantiating the buying decision of tourism products for the two destinations, Muntenia and Oltenia, there is no sufficient, controllable and periodically managed information.

In other words, the cumulated knowledge, fundamented with information from guides, represents “the hidden documentation database” to which the tourist unconsciously turns regarding a tourism destination (having proven before the overlapping with the objective superlatives); afterwards, it shall be completed and nuanced with other information/instruments from the online environment (Figure 1), but also with information presented at the tourism fairs.

Table 5

**Information from guides versus information on the Facebook pages
for destination Oltenia**

Information from guides versus information on the Facebook pages for Oltenia	
Key-words from the guides	Facebook pages
Cozia Monastery	Location: 182 likes, 4,843 people have been there, 145 are talking about this topic
Râmnicu Vâlcea	Location: 138,138 people like this, 115,923 people have been there, 5,071 people are talking about this topic
Govora Monastery	Location: 9 people like this, 103 people have been there, 1 person is talking about this topic
Dintr-un Lemn Monastery	Location: 116 people like this, 1,876 people have been there, 45 people are talking about this topic

Information from guides versus information on the Facebook pages for Oltenia	
Key-words from the guides	Facebook pages
Horezu	Location: 10,649 people like this, 18,299 people have been there, 171 people are talking about this topic
Măldărăști	-
Polovragi	Location: 935 people like this, 3,513 people have been there, 31 people are talking about this topic * Polovragi Cave
Târgu Jiu	Location: 1,751 people like this, 8,917 people have been there, 411 people are talking about this topic Additional pages: Târgu Jiu Odinioară, Centrul Brâncuși Târgu Jiu
Tismana Monastery	-
Craiova	Location: 357 people like this, 2,457 people have been there, 18 people are talking about this topic
Art Museum (Craiova)	Location: 379,700 people like this, 288,793 people have been there, 13,745 people are talking about this topic
Romanescu Park	Romanescu Park Craiova – Community, Nicolae Romanescu Park, Nicolae Romanescu Park Craiova
Drobeta-Turnu Severin	Location: 9,363 like this, 85,643 people have been there, 2,996 people are talking about this topic
Băile Olănești	Location: 378 people like this, 12,223 people have been there, 156 people are talking about this topic
Ocnele Mari	Pages: Ocnele Mari pool, Ocnele Mari saltworks
Podul lui Dumnezeu	Location: 48 people like this, 672 people have been there, 28 people are talking about this topic

Source: information processed from the Facebook pages of the tourist attractions and destinations considered, accessed on 24.05.2013.

Unlike this type of information, “technical” and targeted, which is supposed to be specific to the online environment, the “encountered”/present information have a general character, the presentation of the accommodation, transport and food services being a non-differentiated one, fragmented and unorganized. Their part, in this context, meaning the one to offer an extensive support with regard to the number of users, but also to the volume of “subjective”, and in the same time documented information, based on resources, but also on experiences, that supplements the fundamentals of offline communication, remains an insignificant one!

Conclusions

Even though the destinations promoted within each region were largely found in most of the analyzed communication channels (examples, for Muntenia: Bucharest, Sinaia, Curtea de Argeș, Târgoviște and for Oltenia – Târgu Jiu), this fact does not offer enough arguments for an integrated marketing communication in tourism. For this, in the authors’ opinion, the

concerned company, the Resort Ministry or any other supporter of this field should value its entire communicational capital (focusing on the important and brand elements) through the communicational objectives, subordinated to the general marketing objectives of each destination (established according to the dominant resources and preponderant types of tourism wanted to be developed), and these, in their turn, subordinated to the marketing objectives established by the marketing program elaborated within the national strategy of tourism development, respectively in the Master plan.

The lack of unity with regard to the tourist attractions and the types of tourism which should reside at the basis of the brand elements of the two regions being argued, the success of the promotion actions could not take place but in the case of creating some specific strategies for different segments of consumers, which can be targeted only by means of certain communication channels. In this respect, it is necessary to clearly define the tourism products and establish in detail the markets they will access, defining the destination, at global level, as a synergy of “combined superlatives”.

Furthermore, it is also necessary to create a coherent message, specific to each component destination of the region, which would represent a constitutive element of the regional brand and that would filter the types of tourism, the tourist attractions – located under the same conceptual umbrella – according to the targeted segments and communication channels.

Limits

Given the supported dynamics of transmitting messages in both environments, but especially in the online one, the main limit of this analysis is related to the fact that, within the multiple marketing channels and instruments, there is a considerable volume of promotional or communicational messages, being difficult to “scan” them in their entirety even at a certain point. Thus, in the case of a future research, it derives the necessity to extend the “sample” of offline communication instruments by introducing other relevant guides and brochures, as well as the permanent and more detailed analysis of all the instruments from the online environment (examples, consideration of more Facebook pages, the analysis of their evolution, the consideration of other socialization networks such as Twitter, Pinterest etc.). Furthermore, the analysis on tourist segments is recommended (actual and potential), but also the events in which the communicational materials can be presented to the potential tourists (example, Romania’s Tourism Fair).

Note

- ⁽¹⁾ The brochures have been collected during the two tourism fairs, fall and spring editions, which have taken place during October 2012 – March 2013, by the licence and master students from the Marketing, Commerce and Agriculture and Environment Economy within The Bucharest University of Economic Studies, promotion 2012/2013 and from The Entrepreneurship, Engineering and Affairs Management Faculty within The University “Politehnica” of Bucharest, whom we thank on this occasion.

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Productivity change patterns in the Romanian banking system – the impact of size and ownership on total factor productivity

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Abstract. *In this paper we analyze Romanian banking performance for the period 2006-2011 by computing a Malmquist index based on Data Envelopment Analysis. By adopting the intermediation approach in defining categories of inputs and outputs our conclusions focus on how ownership structure and size influence multi factor productivity change. Also this study aims at identifying the relatively best performing bank categories by focusing on the sources of total factor productivity (TFP) growth. The results point out the difficulty in describing a consistent pattern of efficiency changes in time for the period considered. Overall the trend of productivity growth is a descending one. Alternatively, large and small banks manage to obtain the best scores whereas most time second ranked are medium sized banks. As the efficiency scores suggest, scale efficiency and management efficiency are responsible for most of the productivity growth. In terms of the selected variables this means good financial management of liquidity (reflected by the input output ratio of loans and deposits), a well-considered ratio of interest incomes and expenses, comfortable personnel expenses corroborated with an adequate size of operations. Regarding the influence of ownership origin, the study presents evidence that foreign-owned banks outperform domestic owned banks.*

Keywords: bank performance; Malmquist index; DEA; Romanian banking system.

JEL Codes: G21, L25.

REL Code: 11C.

1. Introduction

Recent economic literature seeks to explain banking performance by appealing to the notions of competition, concentration, efficiency and productivity (Bikker, Bos, 2008). A great deal of attention is paid to the performance of banks due to the fact that banks are seen as special given their major role in providing credit to enterprises. The role of banking institutions in the process of reallocation of financial resources is even more important if other elements of the financial sector are underdeveloped. Thus, in this situation banks contribute in a larger scale to the optimal allocation of financial resources in the real sector. Recent studies (Dragotă, 2006, Dragotă et al., 2008, Dragotă et al., 2011) provide evidence that in the case of Romanian companies bank loans represent the main external source of financing exceeding by far the role of the capital market. The banking system finances nearly all Romanian listed companies on Bucharest Stock Exchange or on RASDAQ as the short-term loan represents the most preferable instrument of debt outgrowing the values of medium and long-term bank credit.

From a microeconomic point of view the problem of bank performance assessment is one of profit maximization, hence explaining the changes in the profitability of banks is the implicit or explicit subject of much of the banking literature. In this sense the use of economic profit is suitable for measuring the performance of banks. It has been argued (Kosmidu et al., 2007, Ben Naceur, Omran, 2011, Olson, Zoubi, 2011) that measures as ROA – reflecting the capacity of the bank management to transform assets into net earnings, ROE – accounting profit as a percentage of the bank's equity, NIM – net interest margin for measuring current and future profitability defined by the difference between a depository institution's interest income and interest expenses as a percentage of total assets, are the most suitable for performance assessing.

Nevertheless, this “traditional” measurement of performance by using financial ratios fails to provide a general efficiency score when multiple inputs or outputs are used (Siriopoulos, Tziogkidis, 2010). An alternative approach is to explain banking performance through inefficiency. One bank can operate at lower costs and produce higher profits if it makes better use of its inputs and transforms them into outputs in the cheapest possible way. In order to survive, every bank has to produce efficiency in the long run. The issue of measuring inefficiency by using a frontier analysis approach that is based on the production possibilities curve was first addressed by Farrell in 1957, and in the year 1978 Chares et al. introduced the method of data envelopment analysis

(DEA) to assess the efficiency of non-governmental and non-profit organizations. Ever since then there has been rapid and continuous growth in the field. As a result, a considerable amount of published research has appeared, with a significant interest focused on DEA applications of efficiency and productivity (Emrouznejad et al., 2008).

By implying a DEA approach the purpose of this study is to explain Total Factor Productivity changes and its components in the context of Romanian banking system for the period 2006-2011. Total Factor Productivity is reflected by a Malmquist index (MI) which captures efficiency changes and technical efficiency changes providing information on the sources of the overall productivity change. As a result, productivity gains will be caused by technological advancements and more efficient management.

2. Literature review

Total Factor Productivity (TFP) represents a generalized index that basically captures multiple inputs and multiple outputs in order to provide a single productivity ratio. The original index proposed by economist and statistician Sten Malmquist (1953) measured the quantity of consumption that a consumer should achieve in a certain year in order to obtain the same utility level as that from a reference year. In fact the index represented a ratio of two distance function in different time periods but until 1989 the index was rarely computed. Färe et al. (1989) proposed a non-parametric linear programming method (DEA) that made the Malmquist index easily computable. Since then the literature examining efficiency and productivity expanded rapidly especially with application to the banking industry. The main advantage that Malmquist index offers is a decomposition of productivity growth sources in two components: the frontier-shift – that reflects improvements or deterioration in the performance of the best practice decision making unit (DMU) and the catch-up effect – that represents the convergence towards or divergence from the best practice on the part of the remaining DMU. Much of the early and recent research literature is devoted to establishing which of the components best explain the growth of TFP in time.

In 1992 Berg et al. published one of the first studies in the field of banking addressing the question of productivity change. The study showed that the productivity of Norwegian banking institutions grew rapidly in time of deregulation compared to the period experiencing strong regulation. Following

this line of research, Griefell-Tatje and Lovell (1997) explored efficiency and productivity performance in Spanish banking. The results showed that deregulation improved productivity growth rates but saving banks present superior productivity performance as compared to commercial banks since the latter category presents inability to improve performance at the pace of the best practice benchmark. Also, managerial inefficiency is a characteristic of most commercial banks as they failed to reduce operational expenses and thus to improve productivity.

Tsionas et al. (2003) also estimates TFP change of the Greek banking system over a period of acceleration of liberalization and deregulation of the financial system (1993-1998). The results show a positive but not substantial TFP growth (2.3% on average) associated to efficiency improvements of medium sized banks (6.3% on average) and technological change improvement for larger institutions (4% on average). This conclusion is conflicting with the study of Canhoto and Dermine (2003) regarding Portuguese banks. The two authors show that the “catching-up” component has a negative impact over the TFP index for the entire period under survey suggesting a small decrease in average efficiency relative to the period benchmark technology. Moreover, Casu et al. (2004) estimates productivity change for a period of six years in advanced European economies by using both a parametric and a non-parametric method. Both approaches suggest similar conclusions: productivity growth was brought by improvements in technological change rather than managerial efficiency as there is little evidence of a “catch-up” effect of the non-best-practice institutions to the benchmark.

Fiordelisi and Molyneux (2010) analyzed the value relevance of bank cost efficiency and TFP on shareholder value creation in European banking. The study uses both listed and non-listed banks from France, Germany, Italy and UK for the period 1995-2002. The results show that changes in TFP have the highest relative information content among shareholder value drivers since it explains about 46% of the variation of market-adjusted return in the case of listed banks and 29.3% of the variation of economic value added in the case of non-listed banks. This study also suggests that technological change is the most important component of TFP.

Tai Liu (2010) uses the case of Taiwan’s commercial banks to illustrate TFP changes over the post Asian crisis. The aim of the study is to provide insight of how to improve efficiency given a source base or by changing resource allocation. The study presents a classification comprising four groups

under the criteria of competitiveness and pace of progress that aims to help banking institutions in order to create a strategy to survive a changing environment. This study also concludes that the shift in technology is the most important component of TFP whereas the catching-up effect is scarce.

Deng et al. (2011) investigates bank productivity in Malaysia in the period of internet technology waves (2001-2008). The study shows that TFP change is in average 1.4% and follows a certain pattern: TFP will initially be affected by the shift in the frontier but later on the catching up effect will suppress and dominate the frontier effect. The cycle will resume after another great wave of innovation therefore managers should not just stop after they have engaged in new technology but should furtherer innovate and expand their scale of operations.

Another major line of research addresses the question of ownership influence over TFP. The preoccupation towards this subject was inspired by X-efficiency studies (Berger, Humphrey, 1997, Berger et al., 2000, 2005, Isik, Hasan, 2003, Hasan, Marton, 2003).

Using an output orientated Malmquist index proposed by Jaffry and al. (2007), Sufian (2011) examines three points of interest in the context of Malaysian banks: whether there exists a positive and significant association between foreign ownership and bank productivity, if banks that are linked to the government tend to be less productive than banks with other forms of ownership and does the performance of public listed banks differ from their privately held counterparts. The results suggest that while domestic banks have exhibited marginal productivity increase, foreign banks showed a productivity decline. Using as a dependent variable the TFP the study shows that the more productive banks have a higher proportion of income drawn from non-interest sources. Also, bank productivity is negatively related to bank size, risk, and inflation rate. Public listed banks are relatively more productive compared to their private bank peers, the empirical findings seem to support the market discipline hypothesis.

Drawing from the two major line of research this study aims at providing an insight regarding productivity transformation patterns by grouping banks into three categories that reflect size factor (small, medium, large), and two categories that reflect control ownership impact over performance (foreign, domestic). The conclusions focus on the drivers of productivity growth (managerial efficiency or technological change) in a period of economic turmoil. The presented results offer further clarification regarding the Romanian

banking industry and completes other studies in this field that mainly address the issue of X-efficiency: Nițoi (2009) analyzes the efficiency and productivity of 15 commercial Romanian banks from 2006-08 using DEA by focusing on identifying the relatively best performing and the relatively worst performing banks; by using the frontier analysis Andrieș and Cocriș (2010) compute the efficiency scores of the main banks in Romania (six banks), the Czech Republic (six banks) and Hungary (six banks) for the period 2000-2006 and offer a comparative evolution of banking sector performance for the three countries; Roman and Șargu (2012) use DEA for analyzing Romanian banking sector efficiency evolution for the period 2002-2009 and conclude that foreign banks have been more efficient than their domestic peers, as foreign banks can benefit from the experience and superior know-how of their parent banks.

3. Methodology

3.1. Bank behaviour: intermediation vs. production approach

A single definition about bank behavior is hard to be presented since issues concerning what banks produce diverge in the views of researches. Van Hoose (2010) presents an outlook of the major perspectives regarding this divergence, the most known conceptions being the production and the intermediation approach.

The production approach views banks as financial institutions that convert an asset portfolio into a set of financial instruments – deposits and other bank debts that surplus householders and firms desire to hold in their own asset portfolio. Banks primarily specialize in producing services for holders of loan and deposit accounts; hence the bank output should be considered the number of various financial transactions performed per unit of time. Yet, detailed transaction flow data are property of banks and not generally available.

In contrast, the intermediation approach focuses on the fact that banks are engaged in the process of intermediating funds between savers and borrowers. Stock values of bank assets and/or liabilities are appropriate bank output measures. Earnings assets are considered outputs whereas labor and capital are physical inputs and deposits are financial inputs.

According to Berger and Humphrey (1997) neither of this two approaches is perfect since both fail in fully capturing the dual role of financial institutions of being providers of transaction/document processing services *and* financial intermediaries that transfer funds from savers to investors. But the

intermediation and production approach can be reconciled on empirical grounds following the assumption that transaction flows are proportional to the stock value of bank asset and liability accounts. From an empirical standpoint Van Hoose (2010) presents three methods of identifying inputs and outputs:

- the asset method that assumes that bank assets are outputs, deposits, purchased funds and other liabilities are financial inputs, and real resources such as labor and capital are real inputs;
- the value added method associates outputs with banking functions that presuppose substantial labor or capital expenditure to produce flows of banking services; commercial and industrial loans, installment loans, real estate loans are output and transaction deposits, retail savings, time deposits are outputs as well. The typical inputs are labor, capital and purchased funds;
- the user cost method understood as the cost of holding an asset during the current period minus the assets discounted net revenue in the following period. Bank balance sheets can be classified in items with negative user costs: all categories of loans and transaction deposits – outputs and positive user costs: savings, time deposits and purchased funds – inputs along with labor, raw materials and physical capital.

As noticed, all three methods recognize that loans are without any question economic outputs of banks. Regarding the nature of the deposits there is some debate, on the one hand, deposits have input characteristics because they are paid in part by interest payments and the funds raised provide the institution with the raw material of investible funds, on the other hand, deposits have output characteristics because they are associated with a substantial amount of liquidity, safekeeping and payment services to depositors.

Beyond the general availability of data if assuming the intermediation approach, in this paper we consider some other advantages over the production approach that refers the first method as the most practical. First, by using the intermediation approach we avoid the problem on how to weight each bank service in the computation of output. Second the production approach ignores interest costs which will be of importance in realistic situations like for example the increase in the number of branches that would be accompanied by falling deposits rates.

As a result this study uses two output variables: interest and commission income and net value of loans to costumers. On the other hand, three input variables are included: interest and commission expenses, staff expenses and due to costumers – deposits.

3.2. Malmquist index and total factor productivity

The field of studying and measuring bank efficiency and productivity was dominated by econometric modelling in its earlier days, but for the last 15 years the emergence of the non-parametric method DEA brought linear programming into the light of interest. Briefly formulated, DEA is a linear programming technique that reports the relative efficiency score of each decision making unit (DMU) by computing a comparative ratio of multiple outputs to multiple inputs (Avkiran, 2005).

In order to decompose the productivity change in the case of panel data a DEA algorithm can be of use for computing a Malmquist index (MI). MI is in fact the product of the catch-up effect and frontier-shift coming from DEA technologies. This kind of index represents the total factor productivity growth of a bank (DMU) reflecting the progress or regress over time of each organization considering the framework of multiple inputs and outputs.

MI is the most commonly used measure of productivity change that evaluates the change between two data points by calculating the ratio of the distances of each data point relative to a common technology (Casu et al, 2004). The first component of MI – the catch-up effect (C.E) –represents the distance of the DMU under observation from the efficient frontier:

$$\text{Catch up effect} = \frac{\delta^{t+1}((x_i, y_i)^{t+1})}{\delta^t((x_i, y_i)^t)} \quad (1)$$

where, x and y represents the input and output vectors, the subscript i designates the DMU number, δ^t and δ^{t+1} represents the efficiency score for periods t and $t+1$ frontier technologies.

The catch-up effect is the ratio between the efficiency score of the combination input-output $(x_i, y_i)^{t+1}$ obtained by using the $t+1$ technology with respect to the efficiency score obtained from the combination $(x_i, y_i)^t$ by using period t technological frontier. If $C.E > 1$ DMU₀ is dealing with progress in terms of relative efficiency from period $t+1$ to period t , while $C.E=1$ and $C.E<1$ indicate no change respectively regress in efficiency terms. In other words, efficiency change above unity means that the i th firm has moved closer to the best-practice DMU on the frontier and thus measures “catching up” or “falling behind” if it is less than unity (Dacanay, 2007).

Furthermore, the catch up effect can be decomposed into pure efficiency change (Managerial efficiency) and scale efficiency change:

$$\text{Managerial efficiency} = \frac{\delta_{vrs}^{t+1}((x_i, y_i)^{t+1})}{\delta_{vrs}^t((x_i, y_i)^t)} \quad (2)$$

where the extra subscript vrs denotes variable return to scale technologies, and the subscript crs denotes constant returns to scale technologies.

$$\begin{aligned} \text{Scale efficiency} &= \\ &= \left[\frac{\delta_{vrs}^{t+1}((x_i, y_i)^{t+1}) / \delta_{crs}^{t+1}((x_i, y_i)^{t+1})}{\delta_{vrs}^t((x_i, y_i)^t) / \delta_{crs}^t((x_i, y_i)^t)} \times \frac{\delta_{vrs}^t((x_i, y_i)^{t+1}) / \delta_{crs}^t((x_i, y_i)^{t+1})}{\delta_{vrs}^t((x_i, y_i)^t) / \delta_{crs}^t((x_i, y_i)^t)} \right]^{\frac{1}{2}} \quad (3) \end{aligned}$$

Pure efficiency change is entirely under the control and results from management decisions, thus this kind of efficiency is also called managerial efficiency. From this point of view inefficiency occurs when inputs are used more than should be required for producing a certain amount of output thus resulting in poor abilities of costs control and failure to maximize revenue.

Scale efficiency refers to optimal choice of production scale in terms of cost control (e.g minimization of average costs). Typically, a scale efficient firm will produce at constant returns to scale (crs). In the case of a production technology that is characterized by increasing returns to scale (irs), efficiency gains could be obtained by expanding production levels. On the other side, if the bank's technology reflects decreasing returns to scale (drs), efficiency gains could be achieved by reducing production levels.

The second component of the M.I reflects the effects of innovation or technological change. The frontier shift effect is given by the formula:

$$F.S = \left[\frac{\delta^t((x_i, y_i)^t)}{\delta^{t+1}((x_i, y_i)^t)} \times \frac{\delta^t((x_i, y_i)^{t+1})}{\delta^{t+1}((x_i, y_i)^{t+1})} \right]^{\frac{1}{2}} \quad (4)$$

This formula describes the frontier shift effect as the geometric mean of the frontier shift at $(x_i, y_i)^t$ evaluated as the ratio of efficiency of $(x_i, y_i)^t$ with respect to period t and t+1 frontiers, respectively the frontier shift at $(x_i, y_i)^{t+1}$ evaluated as the ratio of efficiency of $(x_i, y_i)^{t+1}$ with respect to period t and t+1 frontiers. If $F.S > 1$ DMU₀ records progress in the frontier technology from period t+1 to t, or that the efficient frontier has shifted out compared to the previous period. $F.S = 1$ and $F.S < 1$ indicate no change respectively regress in efficiency terms.

Malmquist index is the product of the catch-up effect and frontier shift effect and it is given by the formula:

$$M.I = \left[\frac{\delta^t((x_i, y_i)^{t+1})}{\delta^t((x_i, y_i)^t)} \times \frac{\delta^{t+1}((x_i, y_i)^{t+1})}{\delta^{t+1}((x_i, y_i)^t)} \right]^{\frac{1}{2}} \quad (5)$$

To calculate equation 5 the four distance functions are computed involving four linear programming (LP) problems. Because we use an input-oriented DEA measure the LP are as follows:

$$\begin{aligned} [\delta^t((x_i, y_i)^{t+1})]^{-1} &= \min_{\theta, \lambda} \theta & (6) \\ \text{s.t} & \\ y_{it} + Y_s \lambda &\geq 0 \\ \theta x_{it} - X_s \lambda &\geq 0 \\ \lambda &\geq 0 \end{aligned}$$

where θ is a scalar and λ is a $I \times 1$ vector of constants. The value θ is the component score of the i -th DMU. X and Y are input and output vectors, and x and y represents the amount of input consumed and output generated by DMU _{i} . The remaining three LP problems are simple variants of the former. The calculation of pure and scale efficiency components requests two additional LP problems with the convexity restriction $N1' \lambda = 1$ added to each of the LP's of the upper right term for pure efficiency and lower left term of MI for scale efficiency.

3.3. Data

The present study uses a balanced panel of 19 commercial bank from 2006-2011. The sample covers a significant variety of banking institutions that accounts for more than 80% of the net assets of credit institutions. The dataset is constructed from the bank's published statements: profit and loss account, balance sheet and notes on the financial statements. Due to accounting policy bias only those banking institutions that use the International Financial Reporting Standard (IFRS) framework were selected. The period of six years was chosen due to data availability as data from an earlier period are difficult to obtain for a comparative framework approach. The list of the sampled banks and some descriptive statistics are presented in the Annex (Table 1).

This study uses three output variables: interest income, net value of loans and profit, and three input variables: interest expenses, staff expenses and due to costumers – deposits.

4. Results

Productivity transformation patterns were examined by grouping banks into three categories that reflect the size factor, and two categories that reflect control ownership impact over performance.

We defined the size categories starting from the value of net total asset of the sampled banks. In every analyzed year five banks were considered as being large having an average value of net assets between 27.43% and 7.25%. Medium sized banks are those that have net total assets between 6.7%-2% in the total of net assets of the entire banking system whereas for the small banks values of less than 1.9% are specific. In order to assess mean differences between groups ANOVA tests were performed all indicating the validity of this classification. For all variables considered in the model the mean differences between groups are significantly different from each other. The average results for the entire period are presented in Table 2:

Table 2

Average Productivity scores for the period 2006-2011

Type	Pure efficiency change (1)	Scale efficiency change (2)	Catch-up effect	Frontier shift(4)	Total Factor Productivity(5)
			(3)= (1) * (2)		
Large banks	1.0615	1.1037	1.1778	0.9597	1.0245
Medium sized	1.1403	1.0398	1.1725	0.9028	1.0195
Small banks	1.0178	1.1222	1.1415	0.9163	1.0164
Domestic owned	1.0506	1.0217	1.0734	0.9128	0.9139
Foreign owned	1.0759	1.1050	1.1850	0.9349	1.0427
Total	1.0716	1.0907	1.1660	0.9312	1.0208

Source: own calculation.

The results indicate that on average, in the six years that were taken into account, total factor productivity increased by small amounts. The highest average productivity growth for the entire period, 2.45%, is registered in the large banks group. Productivity growth is explained by a catching-up effect that results from increasing of scale economy efficiency. Managerial efficiency – reflected in the ability of cost-revenue optimization – increased by 6.15% and is also responsible for total factor productivity growth. These positive effects are weight down by the technological innovation effect – the frontier shift – that presents values smaller than 1 suggesting that, from one period to another, large banks fail to adapt to the new frontier of efficiency wasting amounts of inputs relative to the amounts of produced outputs. This pattern of productivity growth

is similar for the small banks group. In the case of medium sized banks the catch-up effect also dominates the frontier shift with the difference that this category of financial institutions benefits most from managerial efficiency rather than scale efficiency. It can be concluded that small and large banks succeed to optimize the size of their operations thus generating positive scale economy effects.

Regarding ownership origin the differences between the two groups are significant. Not only that on average foreign owned banks out-performed domestic owned banks but the patterns of performance growth follow opposite directions. As a group, Romanian banks exhibit decreasing productivity while foreign owned banks register an average productivity growth of 4.24%.

The mean differences obtained between the five groups were verified by using ANOVA method in order to obtain a generalized t-test statistic of differences between more than two groups. The F statistic obtained by introducing the variables “catch-up effect” and “frontier shift” in order to verify mean differences between groups were large enough in order to reject the null hypothesis of means being equal.

A more detailed view is offered in Table 3, which captures changes in terms of productivity as indices reflecting gains/losses from one year to another.

For the first period analyzed a remarkable score is achieved in the group of medium sized banks that accomplish a productivity growth in 2007 of 22% compared to 2006. As the improvement from one year to another in terms of 55.96% efficiency growth suggests this gain is the result of financial management practice. In 2007 compared with 2006 medium sized banks manage to optimize the cost-revenue structure in order to obtain higher productivity scores. This result is weight down by poor scale efficiency and inability to reach the new frontier technology existing in 2007. Second ranked is the group of large banks that displays a productivity growth of 12.33%. In this case the explanation of productivity growth is synonym with optimal firm size. The overall productivity improvement was triggered by the 20.78% efficiency growth in terms of scale efficiency. The less efficient bank group considering the size classification is the one of the small banks. In 2007 small banks display the highest depreciation of almost 10% compared to 2006. This depreciation is explained by decreasing productivity scores in all the indexes.

The years 2008-2007 are of particular interest since they mark the beginning of the global financial crisis. Overall the scores reflect some depreciation in terms of TFP, but general improvements in terms of scale

economies. The most productive banks are large banks and the most inefficient are the small banks (almost 18% lost efficiency compared to the previous year).

The year 2009 compared to 2008 reveals further deterioration of the overall situation. In this period the frontier shift is responsible for the slight improvement. We assist to smaller scores for the catch-up effect suggesting inefficient financial management. In this year the only group that registers productivity growth is the small sized one (7.30% productivity growth).

The year 2010 presents a more positive outcome. This is the first and only year when banks of all sizes present incising productivity values. The most remarkable growth is that of small banks (35.17%) explained by increasing scale efficiency. In the case of large and medium sized banks, productivity growth is the result of management activity. Also in this year the frontier shift acts as a productivity diminishing factor.

The year 2011 reveals overall decline of TFP. Even though some improvements are made in terms of catch-up efficiencies, the frontier shift counterbalances this gains presenting productivity decreases of almost 16%.

Regarding the impact of corporate control ownership over performance we divided the sample into domestic owned and foreign banks. Following Berger (2000) two alternative scenarios can be consider: *home field advantage* – domestic owned institutions are favored due to organizational diseconomies in operating or monitoring an institution from a distance (e.g. turf battles between staff in different nations, high costs and turnover in persuading managers to work abroad, or differences in language, culture, currency, regulatory and supervisory structures); *global advantage hypothesis* superior managerial skills or best-practice policies and procedures of foreign banking institutions can lower the costs, also raising revenues through superior investment or better diversification of risks allows foreign banks to undertake higher expected returns on investment. Both hypotheses seem plausible but the results suggest that in the case of Romanian banking system the global advantage seems more adequate. Only in the year 2008 it seems that domestic owned banks have a greater TFP score than the foreign owned ones. The year 2010 shows the most dramatic productivity decrease of almost 41% followed by a recovery in the next year which has to be understood in the context of this huge depreciation. Even though in 2011 domestic owned banks present a higher TFP score than the foreign owned ones we have to consider the outstanding fall from 2010 and the fact that this 0.5% productivity growth is in fact a small compensation compared to the situation of the previous year.

Table 3

Detailed productivity scores

Type	Pure efficiency change (1)	Scale efficiency change(2)	Catch-up effect	Frontier shift(4)	Total Factor Productivity(5)
			(3)= (1) * (2)		
2007/2006					
Large banks	0.9766	1.2078	1.1747	0.9690	1.1233
Medium sized	1.5596	0.8793	1.3162	0.9167	1.2200
Small banks	0.9805	0.9720	0.9549	0.9518	0.9056
Domestic owned	0.9751	0.9819	0.9599	1.0498	1.0035
Foreign	1.1871	1.0210	1.1613	0.9244	1.0747
2008/2007					
Large banks	1.0002	1.3956	1.3957	0.8738	1.1249
Medium sized	1.1014	1.2890	1.4399	0.7353	1.0132
Small banks	1.3371	1.2743	1.6178	0.5577	0.8252
Domestic owned	1.4030	1.0504	1.5143	0.7989	1.0934
Foreign	1.1185	1.3708	1.5052	0.6740	0.9341
2009/2008					
Large banks	0.8831	0.9434	0.8323	1.0218	0.8423
Medium sized	0.8566	0.9753	0.8437	1.1686	0.9770
Small banks	1.0405	0.8046	0.8472	1.4647	1.0730
Domestic owned	0.9924	0.8468	0.8427	1.1456	0.8720
Foreign	0.9363	0.8993	0.8419	1.2822	1.0043
2010/2009					
Large banks	1.2083	1.0642	1.2837	0.7835	1.0374
Medium sized	1.2086	1.0460	1.2779	0.8330	1.0425
Small banks	0.9561	1.4228	1.3778	0.9225	1.3517
Domestic owned	0.9255	1.1502	1.0345	0.5801	0.5956
Foreign	1.1305	1.2322	1.3818	0.9148	1.2951
2011/2009					
Large banks	1.0211	1.0000	1.0211	0.9331	0.9541
Medium sized	0.9749	1.0093	0.9848	0.8603	0.8446
Small banks	1.0112	1.0419	1.0472	0.8922	0.9416
Domestic owned	0.9570	1.0794	1.0158	0.9897	1.0050
Foreign	1.0134	1.0073	1.0223	0.8745	0.8978

Source: own calculation.

Conclusion

Though we can access a vast literature concerning the issue of bank productivity change in developed countries, the number of studies that debate this issue in emerging countries remains low. Most of them survey countries like Turkey, Malaysia, Taiwan, but also countries from Central and Eastern Europe. The present research comes to complete the overall picture by providing insight about productivity transformation patterns and productivity

growth in the case of Romanian banking system in a period of economic turmoil.

This study focuses on how corporate control ownership and size influence total factor productivity change. The results point out the difficulty in describing a consistent pattern of efficiency changes in time for the period considered (2006-2011).

If we consider TFP index alternatively large and small banks manage to obtain the best scores whereas most time second ranked are medium sized banks. Also, in the case of small and large banks the main source of productivity growth comes from scale efficiency gains whereas in the case of medium sized banks managerial efficiency plays a more important role.

Overall the trend of productivity growth is a descending one excepting the year 2010 when small sized banks register the highest productivity growth of 35.17%. Nevertheless this situation should be analyzed by inspecting the previous TFP values that presented a cumulative decline.

This conclusion is in line with the research of Roman and Şargu (2012, p. 12) that shows that the years 2007-2009 registered the highest decline in efficiency which can be attributed to the depreciation of the macroeconomic environment as a result of the financial and economic downturn.

Regarding the sources of productivity growth the results presented are different from the research literature that takes the case of developed economies banks that suggests the frontier shift as the main source TFP growth. Nevertheless the study of Deng (2011) that takes the case of an emerging economy presents similar conclusion to this study. In the case of Romanian banks there is evidence of a higher catching-up effect. As the efficiency scores suggest in the case of banking institutions that operate in Romanian territory scale efficiency and management efficiency are responsible for most of the productivity growth. In terms of the selected variables this means good financial management of liquidity (reflected by the input output ratio of loans and deposits), a well-considered ratio of interest income and expense, comfortable personnel expenses corroborated with an adequate size of operations.

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Annex

Table 1

List of the sampled banks for the period 2006-2011

1	Alpha Bank	11	Eximbank
2	Banca Carpatica	12	Marfin Bank
3	Banca Comercială Română	13	Otp bank
4	Banca Italo-Romena	14	Piraeus Bank
5	Banca Românească	15	ProCredit
6	Banca Transilvania	16	Raiffeisen
7	BRD-Groupe Societe Generale	17	Romanian International Bank
8	CitiBank Romania	18	Unicredit Tiriac
9	Credit Europe Bank	19	Volksbank
10	Emporiki Bank		

Table 2

Descriptive statistics of the sample (values expressed in RON thousands)

	Variable	Obs	Mean	Std. Dev.	Min	Max
LARGE BANKS	Loans	30	21,000,000	13,300,000	5,510,000	48,000,000
	Deposits	30	24,400,000	16,300,000	5,700,000	59,700,000
	Interest income	30	2,650,000	2,080,000	499,000	8,500,000
	Interest expenses	30	1,290,000	1,150,000	136,000	4,880,000
	Personnel expenses	30	509,000	255,000	94,400	1,130,000
	Profit	30	548,000	454,000	109,000	1,950,000
MEDIUM BANKS	Loans	30	7,300,000	4,200,000	1,290,000	15,600,000
	Deposits	30	6,410,000	5,040,000	1,060,000	19,500,000
	Interest income	30	680,000	349,000	91,900	1,320,000
	Interest expenses	30	395,000	216,000	42,000	775,000
	Personnel expenses	30	110,000	36,800	32,900	176,000
	Profit	30	32,700	107,000	-404,000	185,000
SMALL BANKS	Loans	48	1,310,000	650,000	237,000	2,690,000
	Deposits	48	1,520,000	1,140,000	103,000	4,920,000
	Interest income	48	183,000	118,000	26,600	433,000
	Interest expenses	48	100,000	83,600	10,400	319,000
	Personnel expenses	48	47,000	30,600	4,464	95,600
	Profit	48	18,700	53,200	-77,600	162,000
DOMESTIC OWNED BANKS	Loans	18	4,500,000	3,630,000	237,000	12,800,000
	Deposits	18	4,920,000	4,180,000	103,000	15,400,000
	Interest income	18	524,000	418,000	26,600	1,580,000
	Interest expenses	18	284,000	237,000	11,200	925,000
	Personnel expenses	18	137,000	124,000	7,934	506,000
	Profit	18	99,700	161,000	-56,800	613,000
FOREIGN OWNED BANKS	Loans	90	9,250,000	11,800,000	315,000	48,000,000
	Deposits	90	10,100,000	14,100,000	196,000	59,700,000
	Interest income	90	1,110,000	1,630,000	27,600	8,500,000
	Interest expenses	90	559,000	854,000	10,400	4,880,000
	Personnel expenses	90	206,000	256,000	4,464	1,130,000
	Profit	90	184,000	365,000	-404,000	1,950,000

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Is there a difference between intrapreneurs and early-stage entrepreneurs in Romania?

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Abstract. *The aim of this paper is to study the differences between being an intrapreneur and an early-stage entrepreneur in Romania. We first present an international comparison of intrapreneurial and early-stage entrepreneurial activity rate, followed by the individual level analysis of these new venture creators using Global Entrepreneurship Monitor (GEM) database of Romania from 2012.*

Keywords: intrapreneur; early-stage entrepreneur; Global Entrepreneurship Monitor; socio-demographic characteristics; entrepreneurial perceptions and attitudes.

JEL Codes: L26, D20, J24.

REL Codes: 14D, 10B.

1. Introduction and literature review

According to Parker (2011) intrapreneurs are those who develop a new venture within an existing organization, who explore a new opportunity and create economic value, while entrepreneurs are those who develop a new venture outside an existing organization.

In this study we will analyze the main socio-demographic and perceptual characteristics of both types of new venture creators in order to identify the possible influencing factors of becoming an intrapreneur or an early-stage entrepreneur.

The safe environment could be a reason of choosing intrapreneurship. The probability that a job created in a new firm would still be around four years later is less than that of jobs created in all firms (Armington, Acs, 2003). Wagner (1997) showed that jobs in new firms pay less, offer worse fringe benefits, and provide less job security than jobs in existing firms. People who have the required skills to create a new venture but they lack the resources (mostly the younger) or the inclination (which is most frequent in case of older persons) to engage in independent start-up activities can be persuaded to do so within a corporate environment (Parker, 2011). Managers wishing to discourage employees from quitting to found potentially competing start-ups might seek to “buy them off” with higher salaries, which helps retain both the employee and the innovation within the firm (Hvide, Kristiansen, 2012, Hvide, 2009, Parker, 2011).

Intrapreneurs are much more likely to have the intention to start a new independent business than other employees, but employees with safe jobs in existing firms will think twice before moving to a risky new business venture (Bosma et al., 2011). The ambiguity-reducing effect of knowing other entrepreneurs was emphasized by Minniti (2005), which may lead individuals to accept more risk (Einhorn, Hogarth, 1985).

Among socio-demographic characteristics, age and gender have been shown to play some role in entrepreneurial decisions. For example, the probability of starting a business has been shown to increase with age up to a threshold point and to decrease thereafter (Levesque, Minniti, 2006). The youngest and older employees are significantly more likely to engage in nascent intrapreneurship than in nascent entrepreneurship (Parker, 2011), and men have been shown to be more likely to start a business than women (Blanchflower, 2004).

Education has been shown to be negatively related to the probability of being an entrepreneur, except in some rich countries where post-graduate training has been found to have some positive effects (Blanchflower, 2004). According to Bosma et al. (2011), higher educational attainment is positively

linked to intrapreneurship, but linked negatively to independent entrepreneurship. The effect of household income is positive for entrepreneurship, but strongest for intrapreneurship.

Nyström (2012) showed that there are important differences between entrepreneurs and intrapreneurs with respect to their perceptions of capabilities.

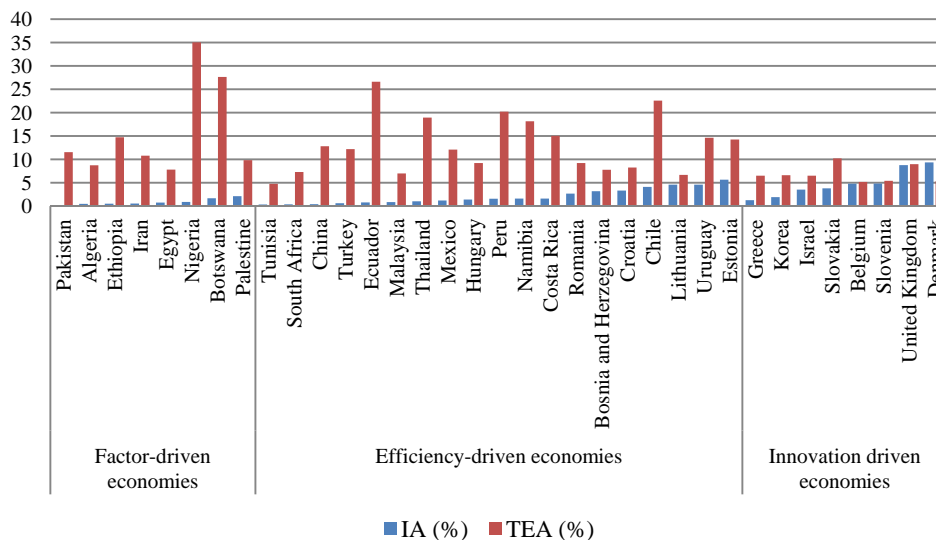
Entrepreneurial decisions are largely based on perceptions, and the cognitive mechanism (Koellinger et al., 2007). Bosma et al. (2011) showed that in low income countries there are very high levels of perceived entrepreneurial skills and knowledge, as well as perceived opportunities, that might be the reason why in these countries intrapreneurship may function as a stepping stone on the way to entrepreneurship. According to Nyström (2012) intrapreneurs do think that there are good opportunities for starting a business, while in case of entrepreneurs the perceived knowledge, skills and experience required to start a new business are higher, which is the most pronounced difference between entrepreneurs and intrapreneurs.

There are few studies in the literature which compares intrapreneurship with entrepreneurship. This article contributes to the literature by presenting the global perspective of intrapreneurship and early-stage entrepreneurship, by analyzing the characteristics of being an intrapreneur or an early-stage entrepreneur in Romania.

2. Intrapreneurship and early-stage entrepreneurship in international view

The GEM consortium collected data regarding entrepreneurial employee activity since 2011. In this section we will present the entrepreneurial employee activity rate in comparison with the total early-stage entrepreneurial activity rate in 35 countries by stage of economic development in 2012 (Figure 1).

According to the GEM definition, early-stage entrepreneurs (TEA) refers to the adult population aged between 18-64 years, identified as nascent or young business entrepreneurs. Nascent entrepreneurs are those individuals aged between 18-64 years who are actively planning a new venture. These entrepreneurs have done something during the previous 12 months to help start a new business, that he or she will at least partly own. Activities such as organizing the start-up team, looking for equipment, saving money for the start-up or writing a business plan would all be considered as active commitments to starting a business. This business has not paid salaries, wages or any other payments to the owners for more than three months. Young business entrepreneurs or new business owners are those entrepreneurs who at least partly own and manage a new business that is between 4 and 42 months old and have not paid salaries for longer than this period. These new ventures are in the first 42 month after the new venture has been set up (Kelley et al., 2011, p. 64).



Source: GEM Global National Level Data, 2012.

Figure 1. Intrapreneurial activity (IA) and total early-stage entrepreneurial activity (TEA), 2012

As Figure 1 shows the intrapreneurial activity rate is higher in the innovation-driven economies, while in case of early-stage entrepreneurial activity rate the highest rates are reached in the factor-driven economies. On average less than 3% of the adult population are intrapreneurs. In Romania the intrapreneurial activity rate is 2.69%, while the total early-stage entrepreneurial activity rate is 9.22%, both values are close to average rate measured in efficiency-driven economies.

3. Intrapreneurship and entrepreneurship in Romania

In this section we will study the socio-demographic characteristics, as well as the differences in the entrepreneurial perceptions and attitudes in case of Romanian intrapreneurs and early-stage entrepreneurs. We excluded those intrapreneurs from our analyse who are early-stage entrepreneurs in the same time.

The Table 1 presents the distribution of Romanian intrapreneurs and early-stage entrepreneurs by age, gender, household income and level of education.

Table 1

**The socio-demographic characteristics of Romanian intrapreneurs
and early-stage entrepreneurs, 2012 (%)**

		Intrapreneurs	Early-stage entrepreneurs
Age categories	18-24 years	11.5	21.4
	25-34 years	34.6	35.7
	35-44 years	24.0	19.8
	45-54 years	24.0	17.5
	55-64 years	5.8	5.6
Gender	Male	53.9	72.0
	Female	46.1	28.0
Household income	Lowest 33%	3.4	14.0
	Middle 33%	30.3	31.8
	Upper 33%	66.3	54.2
Educational attainment	Some secondary	18.7	32.2
	Secondary degree	36.3	32.3
	Post secondary	33.2	26.6
	Graduate expectation	11.8	8.9

Source: Own calculation based on GEM Romania, Adult Population Survey, 2012.

While Parker (2011) showed that there is a statistically significant difference between nascent intrapreneurship and entrepreneurship according to age in case of the youngest and older employees, we find no statistically significant difference in age and level of education structure of intrapreneurs and early-stage entrepreneurs. The average age of early-stage entrepreneurs is slightly lower (34.86) than the one measured in case of intrapreneurs (37.17). We can observe that the level of education is higher in case of intrapreneurs.

We find that there is a statistically significant difference at 0.04 level in the gender structure of those who are involved in intrapreneurial activity and in early-stage entrepreneurial activity. The proportion of male and female intrapreneurs is almost the same, while in case of early-stage entrepreneurs the presence of males is more pronounced, in accordance to Blanchflower's (2004) results.

We can observe a significant difference (0.027 level) in the structure of household income. In case of intrapreneurs the percentage of those whose household income is situated in the lowest tertile is much lower than in case of early-stage entrepreneurs, which confirms Bosma et al. (2011) result.

Entrepreneurial attitudes and perceptions express the general feelings of the population towards entrepreneurs and entrepreneurship, considering the entrepreneurship context:

- *Perceived opportunities* is the percentage of 18-64 who see good opportunities to start a business in the area where they live.
- *Perceived capabilities* is the percentage of 18-64 population who believe to have the required skills and knowledge to start a business.
- *Fear of failure rate* is the percentage of 18-64 population with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business.
- *Entrepreneurial intention* is the percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years.
- *Entrepreneurship as desirable career choice* – percentage of 18-64 population who agree with the statement that in their country most people consider starting a business as a desirable career choice.
- *High status successful entrepreneurship* is the percentage of 18-64 population who agree with the statement that in their country successful entrepreneurs receive high status.
- *Media attention for entrepreneurship* – percentage of 18-64 population who agree with the statement that in their country you will often see stories in the public media about successful new businesses (Kelley et al., 2011, p. 64).

Table 2 represents the attitudes and perceptions of intrapreneurs and early-stage entrepreneurs. The level of perceived opportunities and capabilities in case of early-stage entrepreneurs is significantly higher than in case of intrapreneurs, but in case of fear of failure there is no significant difference. A significantly higher proportion of early-stage entrepreneurs consider that individuals would prefer a uniform living of standard.

Table 2

Individual perceptions and attitudes regarding entrepreneurial activity of intrapreneurs and early-stage entrepreneurs, 2012 (%)

	Intrapreneurs	Early-stage entrepreneurs
Knows a person who started a business in the past two years	40.6	66.4
Sees good opportunities for starting a business in the next six months	34.7	50.5
Has the required knowledge/skills to start a business	56.0	77.2
Fear of failure would prevent to start a business	43.9	37.3
All inhabitants prefer uniform living standard	53.6	72.1
Starting a business is considered as a good career choice	65.7	66.4
Persons growing a successful new business receive high status	67.3	72.8
Lots of media coverage for new businesses	55.1	52.9

Source. Own calculation based on GEM Romania, Adult Population Survey, 2012.

In accordance with the results of Nyström (2012) there are no statistically significant differences between intrapreneurs and early-stage entrepreneurs with respect to the following three measures of societal attitudes: entrepreneurship is perceived as a good career choice, perceptions about high status to successful entrepreneurs and media attention for entrepreneurship.

4. Conclusions

We studied intrapreneurship and early-stage entrepreneurship in international view. The higher values of intrapreneurial activity rates are reached in innovation-driven economies, while the highest rates of early-stage entrepreneurial activity are measured in factor-driven economies. According to Bosma et al. (2011) this fact can be explained by that due to the relatively high share of adults formally employed in multiperson organizations in high income countries, intrapreneurship is more prevalent in high income countries than in low income countries, respectively intrapreneurs have more autonomy (partly related to a relatively high educational level) than those in low income countries.

In Romania there is no statistically significant difference between intrapreneurship and early-stage entrepreneurship regarding age and education level, nevertheless the level of education is slightly higher in case of intrapreneurs. Statistically significant differences are between intrapreneurship and early-stage entrepreneurship regarding gender and household income, the proportion of male and female intrapreneurs are almost same and we can observe that a much lower prevalence rate of intrapreneurs have household income in the lowest tertile.

There are statistically significant differences regarding perceived opportunities and capabilities between intrapreneurs and early-stage entrepreneurs, while we find no significant difference in case of entrepreneurial attitudes.

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Profit optimization during crisis periods

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Abstract. *This article highlights the authors' attempt to identify a simple and effective calculation method for profit optimization in crisis periods. This method was identified based on the analysis of a representative sample of professionals working in both state-owned and private bakery companies in Romania. The article also presents methodological case studies for three bakery products aimed to highlight the changes in results according to changes of variables in the current business environment. The results obtained are presented and analysed by the authors. The article ends with the authors' conclusions on the benefits of the Direct-Costing Method and profit optimisation in crisis periods.*

Keywords: Direct-Costing; cost-volume-profit analysis; dashboard; breakeven; profit.

JEL Codes: M41, M21.

REL Code: 14K.

1. Introduction

Due to the economic and financial crisis currently faced by the business environment both in Europe and at global level, managers must identify ways to regain their lost financial position, but also to obtain new profitable sources for the next period. *Can the economic and financial crisis bring beneficial business solutions?* This is one of the questions that underlie our research in this article.

Among the objectives of our study we can enumerate the following: identification of a viable simple and effective calculation method for achieving positive results; identification of advantages brought by this method compared to market and users' information needs; identification of a tool for monitoring and measuring the performances of a company and respectively the impact of its use.

2. Literature review

Back in 1898, the German economist Schmalenbach made the first attempts to group costs in fixed and variable costs. The first calculation developed based on the current principles of the Direct-Costing Method was reported at General Motors in 1923. The promoters of this method, Jonathan N. Harris (1934) and Carter G. Harrison (1935), set the methodological bases for the application of this method, which was implemented in the American economy. After the Second World War, the American Management Association adopted and supported this method, which was used with good results both in the USA and in Europe. It was considered *a system established in order to provide the companies' management with more and clearer information on the relationship between production costs, production volume and benefits*.

K. Rummel laid the foundations of this method in Germany. In this country, the variable cost method was known under various names, such as: *block cost calculation (Blockkostenrechnung)* – total fixed costs are allocated to results on a monthly basis; *proportional cost calculation (Proportionalkostenrechnung)* – calculation of coverage contribution (*Deckungsbeitragsrechnung*); *planned marginal costing (Grenzplankostenrechnung)* – H.G. Plaut widely applied and adequately promoted the latter. The variable cost method expanded rapidly to other European countries such as France, where it was promoted by G. Bouchet and called *méthode des coûts directs*, but also to England, where it was promoted by F.C. Lawrence and E.N. Humphreys, being known as *marginal costing*. The advantage of applying this method consists in the fact that it introduced electronic computers that facilitate data recording and processing.

Since its occurrence to present days, the concept of variable cost method developed through various approaches. Thus, some authors consider that the

Direct-Costing Method requires a prior study of cost trends and their separation in fixed and variable (Brumet, 1955). This study is particularly useful for understanding costs at all responsibility levels and for a correct assessment of cost planning and control issues. Other authors believe that Direct-Costing assigns to goods only variable costs and treats fixed costs as period costs (Seiler, 1959). In the opinion of other professionals (Lentilhon, 1964), Direct-Costing causes a decrease in inventory value as fixed costs are not considered for the calculation of costs per products. Some authors have demonstrated the effectiveness of Direct-Costing and cost-volume-profit analysis in determining a company's short-term gains (Budugan, Georgescu, 2008, Mihalache, Salagean, 2010, Topor et al., 2012). Other authors highlighted the method's importance in taking managerial decisions and its usage as a financial reporting tool (Briciu, Sas, 2008).

3. Research methodology

3.1. Research questions

Starting from the main objective of this scientific approach, respectively profit optimization in crisis periods, we aimed to conduct a case study at a bakery company and test managers' reactions when identifying a viable cost calculation method. In other words, we aim to answer the following questions:

- 1. What would be the simplest viable and effective cost calculation method that would help a bakery company in optimizing profits in crisis periods?*
- 2. What would be the advantages of the identified method?*
- 3. What tool(s) could be used successfully during the crisis for monitoring and measuring the performance of a bakery company?*
- 4. What would be the impact of using this/these tool(s) on the bakery company?*

3.2. Instrumentation

This study involved the observance of principles and rules that are specific to mixed research methodology. The used research technologies and procedures were as follows: literature review, use of various information sources, data gathering and processing, summarising of theoretical aspects and research results, and questionnaire. We used this research technique for the empirical work of our study. The questionnaire was used for the empirical part of our study and it was structured to meet the overall objective, namely profit optimization in crisis periods by using an effective cost calculation method.

Questionnaires were sent electronically to 45 respondents in bakery companies located in different regions of Romania, as follows: 15 state-owned companies and 30 private companies. Further to gathering the questionnaires and data centralization, the situation is presented below (Table 1):

Table 1

Categories of respondents

(%)

Questions/Answers	Category of respondents			
	State-owned		Private	
	pros	cons	pros	cons
<i>1. What would be the simplest viable and effective cost calculation method that would help a bakery company in optimizing profits in crisis periods?</i>				
a) Standard-Cost Accounting	33.34	66.66	50.00	50.00
b) Direct-Costing	80.00	20.00	73.34	26.66
c) Order method	60.00	40.00	60.00	40.00
<i>2. What would be the advantages of the identified method?</i>				
a) simplicity, effectiveness and reduced computation time	40.00	60.00	46.66	53.34
b) effectiveness and reduced computation time	60.00	40.00	50.00	50.00
c) reduced costs and computation time	80.00	20.00	66.66	33.34
<i>3. What tool(s) could be used successfully during the crisis for monitoring and measuring the performance of a bakery company?</i>				
a) dashboard	53.34	46.66	70.00	30.00
b) cost-volume-profit analysis	60.00	40.00	83.34	16.66
c) balanced dashboard	40.00	80.00	16.66	83.34
<i>4. What would be the impact of using this/these tool(s) on the bakery company?</i>				
a) profit optimization	66.66	33.34	80.00	20.00
b) gradual improvement of the company's results	26.66	73.34	40.00	60.00
c) reduce costs	46.66	53.34	46.66	53.34

The related graphs are shown below (Figure 1):

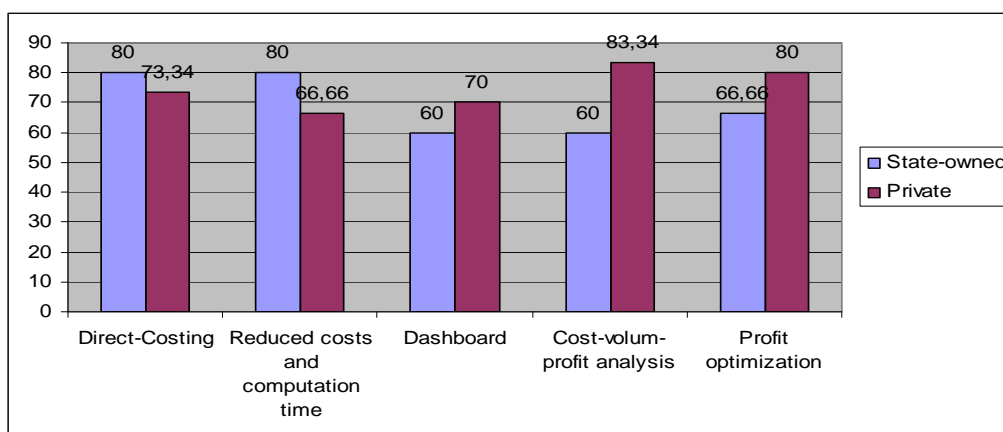


Figure 1. Graphical representation of respondents from bakery companies

As you can see, for all the four issues pursued in our study, the largest weight in both surveyed categories supported the use of Direct-Costing Method as a simple viable and effective cost calculation method, which would help a company in crisis periods (80.00%); the advantages based on reduced costs and time (80%); the cost-volume-profit analysis and the dashboard, as tools to guarantee performances (53.34%, respectively 60.00%); and profit optimization is the result of the impact of using those tools (66.66%).

4. Direct-Costing method

4.1. Axiology and indicators of Direct-Costing Method

The essence of this method is the separation of production and sales costs in terms of their character in relationship to the physical volume of production and sales, in variable and fixed costs, and in considering only variable costs for calculating the costs per product. Fixed costs are considered expenses of the period and deducted from the company's gross financial results. The method focuses on boosting sales due to the fact that fixed costs are not distributed on inventories (work in progress, finished goods, not collected shipped goods), but should be covered by the sales of the period. Direct-Costing uses specific indicators, such as: breakeven, coverage factor, safety coefficient, safety range.

Breakeven is the point where profits equal to zero or revenues equal to costs. By knowing the breakeven or the balance point we are able to know the point where a company should start from in order to obtain profits and cover its fixed and variable costs. Breakeven is calculated according to the equation (Briciu et al., 2010, p. 360):

$$Breakeven = \frac{\text{Fixed costs}}{\text{Gross contribution per unit}} \quad (1)$$

where:

$$\text{Gross contribution per unit} = \frac{\text{Total gross contribution}}{\sum \text{Sold quantities}} \quad (2)$$

Gross contribution is the difference between turnover and variable costs. The results are the difference between gross contribution and total fixed costs.

Coverage factor or *contribution margin*. This indicator emphasises the extent to which a product or an order is profitable for a company in terms of covering costs and obtaining profits. The contribution margin of the coverage factor per order is calculated according to the formula (Briciu et al., 2010, p. 360):

$$\text{Contribution margin} = \frac{\text{Gross contribution}}{\text{Turnover}} \times 100 \quad (3)$$

With the Direct-Costing Method we can detect those products that cannot cover the costs and are not profitable for the company.

The dynamic safety coefficient shows how much sales can decrease for the company to reach the balance point. Any decrease over this coefficient will make the company to incur losses.

So, all decisions related to sales must be taken within the dynamic safety coefficient. It is calculated as follows:

$$S_c = \frac{P}{GC} \times 100 \quad (4)$$

Where:

P = company profits,

GC = gross contribution.

The safety interval shows how much sales can decrease so that the company does not incur losses. It is calculated as follows:

$$S_I = TS - SB_p, \quad (5)$$

Where:

SB_p = sales at balance point; TS = total sales.

4.2. SWOT analysis for the Direct-Costing Method

Based on the SWOT analysis, the method has the following strengths:

- simple, effective and economical computation and analysis method; *simple* – it easily calculates costs per product only based on variable costs, without allocating the fixed costs (Lentilhon, 1964); relationship between cost evolution and variation of the physical production volume, by dividing them in variable and fixed (R Brumet, 1955); *effective* – it provides quick information on the final results, especially for companies with large number of products and sorts; *economical* – by reducing the work required for cost calculation and final results it also reduces the costs for obtaining such information;
 - variable costs are identified and collected directly by the cost bearers;
 - fixed costs are treated as costs of the period in which they incur; they are globally programmed and tracked, and are not included in the cost per product, but deducted directly from the company's gross financial results (Călin, Cârstea, 2002).

Weaknesses of the Direct-Costing Method:

- although there are a number of methods by which production costs are separated in fixed and variable costs, such a separation is not accurate, but it keeps a certain degree of relativity; this is due to certain semi-fixed or semi-variable costs;
 - costs per unit and end results cannot be determined precisely;
 - final results calculated during the year are distorted also because fixed costs considered refer to total production of the current period, and sold production and variable costs refer only partially to the production of the current period;
 - fixed costs known only at the end of the period may be higher than the gross profit contribution and result in losses;
 - a higher gross profit contribution does not always mean higher profits.

Opportunities offered by this method:

- it allows management both in terms of efficiency and productivity per work places or activity centres, and in terms of product profitability (Călin, Cârstea, 2002);
 - by calculating the gross profit contribution, the balance point and the fixed costs, the method easily provides the first information required by management for taking long-term decisions, such as those related to investment policy, production and sales planning, use of various technological process, production mechanisation and automation, size of batch production, etc. (Călin, Cârstea, 2002);
 - it allows indirect computation of selling price as offer price, which is an advantage for taking decisions related to the sales policy;
 - it is very useful in management, because it allows the computation of indicators for the price-cost-volume analysis and for taking short-term decisions related to production and sales policies, thus optimising profits in a forecasting view (Călin, Cârstea, 2002);
 - it allows cost standardization and a strict control of business results at all management levels, thus strengthening their work responsibility.

Threats of the Direct-Costing Method:

- the calculation of gross profit contribution does not provide a clear image to those taking decisions related to production and sales policies during the period, as it is complex and includes both fixed costs and profits (Briciu, Sas, 2008);
 - in order to take a safe decision related to production and sales policies we must know the profit per product, but this can only be calculated at the end of the period, usually when the balance sheet is prepared (Călin, Cârstea, 2002); during the reporting period, Direct-Costing Method can only provide information on the period's profits, which is insufficient for a fair decision.

4.3. Tools for measuring the company's performance

4.3.1. Cost-volume-profit analysis

The cost-volume-profit analysis is focused on the research and analysis of the breakeven, the relationships between product prices, volume of activity, variable costs per unit, total fixed costs, the balance of mixed production, planning and decision-making (Araujo, 1999). Before conducting this analysis, the company's costs are classified in: *fixed and variable costs*. The cost-volume-profit analysis is particularly useful for forecasts, but also as a managerial control tool (Budugan, Georgescu, 2008). The method includes a set of techniques for solving problems based on understanding the features of the company's cost evolution models. These techniques show the relationships between turnover, cost structure and production volume, including results. They also refer to the determination of the balance point and profit forecast, thus providing a general business model that can be used by managers for profit optimization, short-term decision-making, and analysis of alternatives in decision-making.

4.3.2. Dashboard

The dashboard is the way of employment, selection, arrangement and disclosure of indicators which allows visualization of the overall trend in the evolution aimed by the company's management (Ravignon et al., 2003). The dashboard includes that system of indicators expressed in absolute and relative sizes, used for the evaluation and control of a company's activity. Data disclosure must be as relevant as possible. The dashboard can contain tables with values, graphs or a combined form of the two. Value tables present data related to the expected forecasted level of set objectives, results of the reference periods (negative or positive) deviations due to differences between results and fixed objectives, the degree of achieving the objectives and the causes that determined the negative or positive deviations. Graphs illustrate the trends of indicators or indices for a specific period.

4.3.3. Profit optimization by means of using performance measurement tools

The bakery company manufactures three products, as follows: white bread, semi-white bread and black bread. When choosing the three products they considered studies performed by the marketing department (Table 2), which showed a higher degree of consumer interest for the three products mentioned above.

Table 2

Consumer interest degree for the three types of selected products
(%)

Type of bread	Urban consumers	Rural consumers
White	80.56	76.45
Semi-white	67.15	69.20
Black	35.67	72.33

To reflect profit optimization in crisis periods, we bring to your attention an initial situation (Table 3) based on which we analysed four cases encountered in the current practice of many bakery companies. The four cases are:

1. Increase of variable production costs by 10% and of fixed production costs by 5%.
2. Increase of total variable costs by 10% and of total fixed costs by 5%.
3. Increase of physical volume of production by 10%, total variable costs by 20% and decrease of fixed costs by 10%.
4. Increase of selling prices by 10%, increase of total fixed costs by 10%, decrease of variable production costs by 5% and decrease of number of products by 10%.

Table 3

Initial situation of the bakery company

No.	Explanations	White bread		Total (lei)	Semi-white bread		Total (lei)	Black bread		Total (lei)
		Quantity (pc.)	Price/Cost per unit (lei/pc.)		Quantity (pc.)	Price/Cost per unit (lei/pc.)		Quantity (pc.)	Price/Cost per unit (lei/pc.)	
1.	CA	20,000	6.5	130,000	20,000	5.5	110,000	20,000	5.2	104,000
2.	CVP	20,000	3.2	64,000	20,000	3	60,000	20,000	2.9	58,000
3.	CVD	20,000	1.8	36,000	20,000	1.6	32,000	20,000	1.5	30,000
4.	CVT	-	-	100,000	-	-	92,000	-	-	88,000
5.	CB	-	-	30,000	-	-	18,000	-	-	16,000
6.	CFP	-	-	8,000	-	-	6,000	-	-	5,700
7.	CFA	-	-	6,000	-	-	4,000	-	-	3,500
8.	CFD	-	-	2,000	-	-	1,000	-	-	800
9.	CFT	-	-	16,000	-	-	11,000	-	-	10,000
10.	R	-	-	14,000	-	-	7,000	-	-	6,000

Where:

CA = turnover; CVP = variable production costs; CVD = variable sales costs; CVT = total variable costs; CB = gross contribution; CFP = fixed production costs; CFA = fixed administration costs; CFD = fixed sales costs; CFT = total fixed costs; R = result (profit or loss).

Starting from the initial situation, we determined the changes required by each of the cases referred to above, as follows:

Case 1. Increase of variable production costs by 10% and of fixed production costs by 5%. The situation is as follows (Table 4):

Table 4

Revenues, costs ad results for case 1

No.	Explanations	White bread		Total (lei)	Semi-white bread		Total (lei)	Black bread		Total (lei)
		Quantity (pc.)	Price/ Cost per unit (lei/pc.)		Quantity (pc.)	Price/ Cost per unit (lei/pc.)		Quantity (pc.)	Price/ Cost per unit (lei/pc.)	
1.	CA	20,000	6.50	130,000	20,000	5.50	110,000	20,000	5.20	104,000
2.	CVP	20,000	3.68	73,600	20,000	3.45	69,000	20,000	3.335	66,700
3.	CVD	20,000	1.80	36,000	20,000	1.60	32,000	20,000	1.50	30,000
4.	CVT	-	-	109,600	-	-	101,000	-	-	96,700
5.	CB	-	-	20,400	-	-	9,000	-	-	7,300
6.	CFP	-	-	8,800	-	-	6,600	-	-	6,270
7.	CFA	-	-	6,000	-	-	4,000	-	-	3,500
8.	CFD	-	-	2,000	-	-	1,000	-	-	800
9.	CFT	-	-	16,800	-	-	11,600	-	-	10,570
10.	R	-	-	3,600	-	-	-2,600	-	-	-3,270

Case 2. Increase of total variable costs by 10% and of total fixed costs by 5%. The situation is as follows (Table 5):

Table 5

Revenues, costs ad results for case 2

No.	Explanations	White bread		Total (lei)	Semi-white bread		Total (lei)	Black bread		Total (lei)
		Quantity (pc.)	Price/ Cost per unit (lei/pc.)		Quantity (pc.)	Price/ Cost per unit (lei/pc.)		Quantity (pc.)	Price/ Cost per unit (lei/pc.)	
1.	CA	20,000	6.5	130,000	20,000	5.5	110,000	20,000	5.2	104,000
2.	CVP	20,000	3.52	70,400	20,000	3.3	66,000	20,000	3.19	63,800
3.	CVD	20,000	1.98	39,600	20,000	1.76	35,200	20,000	1.65	33,000
4.	CVT	-	-	110,000	-	-	101,200	-	-	96,800
5.	CB	-	-	20,000	-	-	8,800	-	-	7,200
6.	CFP	-	-	8,400	-	-	6,300	-	-	5,985
7.	CFA	-	-	6,300	-	-	4,200	-	-	3,675
8.	CFD	-	-	2,100	-	-	1,050	-	-	840
9.	CFT	-	-	16,800	-	-	11,550	-	-	10,500
10.	R	-	-	3,200	-	-	-2,750	-	-	-3,300

Case 3. Increase of physical volume of production by 10%, total variable costs by 20% and decrease of fixed costs by 10%. The situation is as follows (Table 6):

Table 6

Revenues, costs ad results for case 3

No.	Explanations	White bread		Total (lei)	Semi-white bread		Total (lei)	Black bread		Total (lei)
		Quantity (pc.)	Price/ Cost per unit (lei/pc.)		Quantity (pc.)	Price/ Cost per unit (lei/pc.)		Quantity (pc.)	Price/ Cost per unit (lei/pc.)	
1.	CA	22,000	6.5	143,000	22,000	5.5	121,000	22,000	5.2	114,400
2.	CVP	22,000	3.84	84,480	22,000	3.6	79,200	22,000	3.48	76,560
3.	CVD	22,000	2.16	47,520	22,000	1.92	42,240	22,000	1.8	39,600
4.	CVT	-	-	132,000	-	-	121,440	-	-	116,160
5.	CB	-	-	11,000	-	-	-440	-	-	-1,760
6.	CFP	-	-	7,200	-	-	5,400	-	-	5,130
7.	CFA	-	-	5,400	-	-	3,600	-	-	3,150
8.	CFD	-	-	1,800	-	-	900	-	-	720
9.	CFT	-	-	14,400	-	-	9,900	-	-	9,000
10.	R	-	-	-3,400	-	-	-10,340	-	-	-10,760

Case 4. Increase of selling prices by 10%, increase of total fixed costs by 10%, decrease of variable production costs by 5% and decrease of number of products by 10%. The situation is as follows (Table 7):

Table 7

Revenues, costs ad results for case 4

No.	Explanations	White bread		Total (lei)	Semi-white bread		Total (lei)	Black bread		Total (lei)
		Quantity (pc.)	Price/ Cost per unit (lei/pc.)		Quantity (pc.)	Price/ Cost per unit (lei/pc.)		Quantity (pc.)	Price/ Cost per unit (lei/pc.)	
1.	CA	18,000	7.15	128,700	18,000	6.05	108,900	18,000	5.72	102,960
2.	CVP	18,000	3.04	54,720	18,000	2.85	51,300	18,000	2.755	49,590
3.	CVD	18,000	1.8	32,400	18,000	1.6	28,800	18,000	1.6	28,800
4.	CVT	-	-	87,120	-	-	80,100	-	-	78,390
5.	CB	-	-	41,580	-	-	28,800	-	-	24,570
6.	CFP	-	-	8,800	-	-	6,600	-	-	6,270
7.	CFA	-	-	6,600	-	-	4,400	-	-	3,850
8.	CFD	-	-	2,200	-	-	1,100	-	-	880
9.	CFT	-	-	17,600	-	-	12,100	-	-	11,000
10.	R	-	-	23,980	-	-	16,700	-	-	13,570

4.3.4. Findings based on the cases presented and analysed

In order to reflect the evolution of prices, costs and physical volume of production based on the four analysed cases, we have designed the following situation (Table 8):

Table 8

Evolution of revenues, costs and results based on the four cases

No.	Explanations	Case 1			Case 2		
		White bread	Semi-white bread	Black bread	White bread	Semi-white bread	Black bread
1.	CA	130,000	110,000	104,000	130,000	110,000	104,000
2.	CVP	73,600	69,000	66,700	70,400	66,000	63,800
3.	CVD	36,000	32,000	30,000	39,600	35,200	33,000
4.	CVT	109,600	101,000	96,700	110,000	101,200	96,800
5.	CB	20,400	9,000	7,300	20,000	8,800	7,200
6.	CFP	8,800	6,600	6,270	8,400	6,300	5,985
7.	CFA	6,000	4,000	3,500	6,300	4,200	3,675
8.	CFD	2,000	1,000	800	2,100	1,050	840
9.	CFT	16,800	11,600	10,570	16,800	11,550	10,500
10.	R	3,600	-2,600	-3,270	3,200	-2,750	-3,300
No.	Explanations	Case 3			Case 4		
		White bread	Semi-white bread	Black bread	White bread	Semi-white bread	Black bread
1.	CA	143,000	121,000	114,400	128,700	108,900	102,960
2.	CVP	84,480	79,200	76,560	54,720	51,300	49,590
3.	CVD	47,520	42,240	39,600	32,400	28,800	28,800
4.	CVT	132,000	121,440	116,160	87,120	80,100	78,390
5.	CB	11,000	-440	-1,760	41,580	28,800	24,570
6.	CFP	7,200	5,400	5,130	8,800	6,600	6,270
7.	CFA	5,400	3,600	3,150	6,600	4,400	3,850
8.	CFD	1,800	900	720	2,200	1,100	880
9.	CFT	14,400	9,900	9,000	17,600	12,100	11,000
10.	R	-3,400	-10,340	-10,760	23,980	16,700	13,570

From a geographical point of view, the evolution is as following (Figure 2):

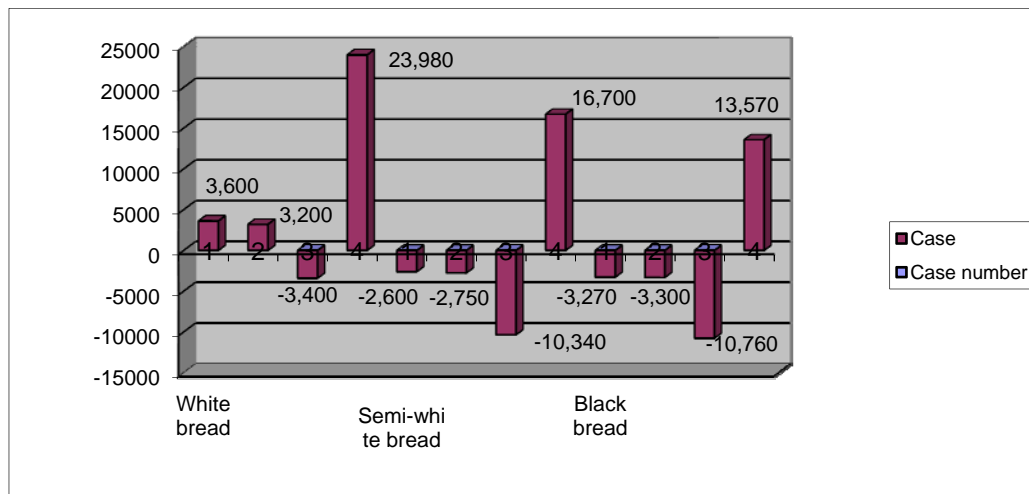


Figure 2. Evolution of results based on the presented cases

Based on the overall situation (Table 8 and Figure 2), we note a significant increase in the results of the three products in case 4. Because it is considered to be an ideal profit optimization, we used it for calculating the specific indicators for the Direct-Costing Method and for preparing the dashboard based on the provided data.

Based on the cases presented and analysed above (cases 1-4) we can draw the following general conclusions:

1. Controlled percentage increase (a certain percentage) of sales prices leads to a *decrease of the balance point; increase of coverage factor; increase of dynamic safety coefficient; increase of profits.*

2. Quantitative increase of the physical volume of production *maintains the balance point and the coverage factor; leads to an increase of the safety coefficient and of the safety interval; increase of profits.*

3. Decrease of variable costs per unit will lead to an *increase of the coverage factor, of the safety coefficient and of the safety interval; decrease of the balance point; increase of profits.*

4. Decrease of fixed costs with a certain percentage will lead to a *decrease of the balance point; maintenance of coverage factor; increase of safety coefficient and safety interval; increase of profits in accordance with the decrease of fixed costs.*

4.3.5. Preparation of the dashboard

Based on the data provided by case 4, we calculated the indicators that are specific to the Direct-Costing Method (Table 9). These were used to perform the *cost-volume-profit analysis* and form the basis for the preparation of the *dashboard* specific to Direct-Costing Method.

Table 9

The situation of indicators for the three products and overall

Indicator	White bread	Semi-white bread	Black bread	Total
1. Balance point	7,619.04 pc.	7,562.50 pc.	8,058.60 pc.	23,146.90 pc.
2. Coverage factor	32.30%	26.44%	23.86%	29.62%
3. Safety coefficient	57.67%	57.98%	55.22%	57.13%
4. Safety interval	7,4221.29 lei	63,140.22 lei	56,854.51 lei	194,561.92 lei

After selecting the indicators, the dashboard specific to the Direct-Costing Method looks as following (Figure 3):

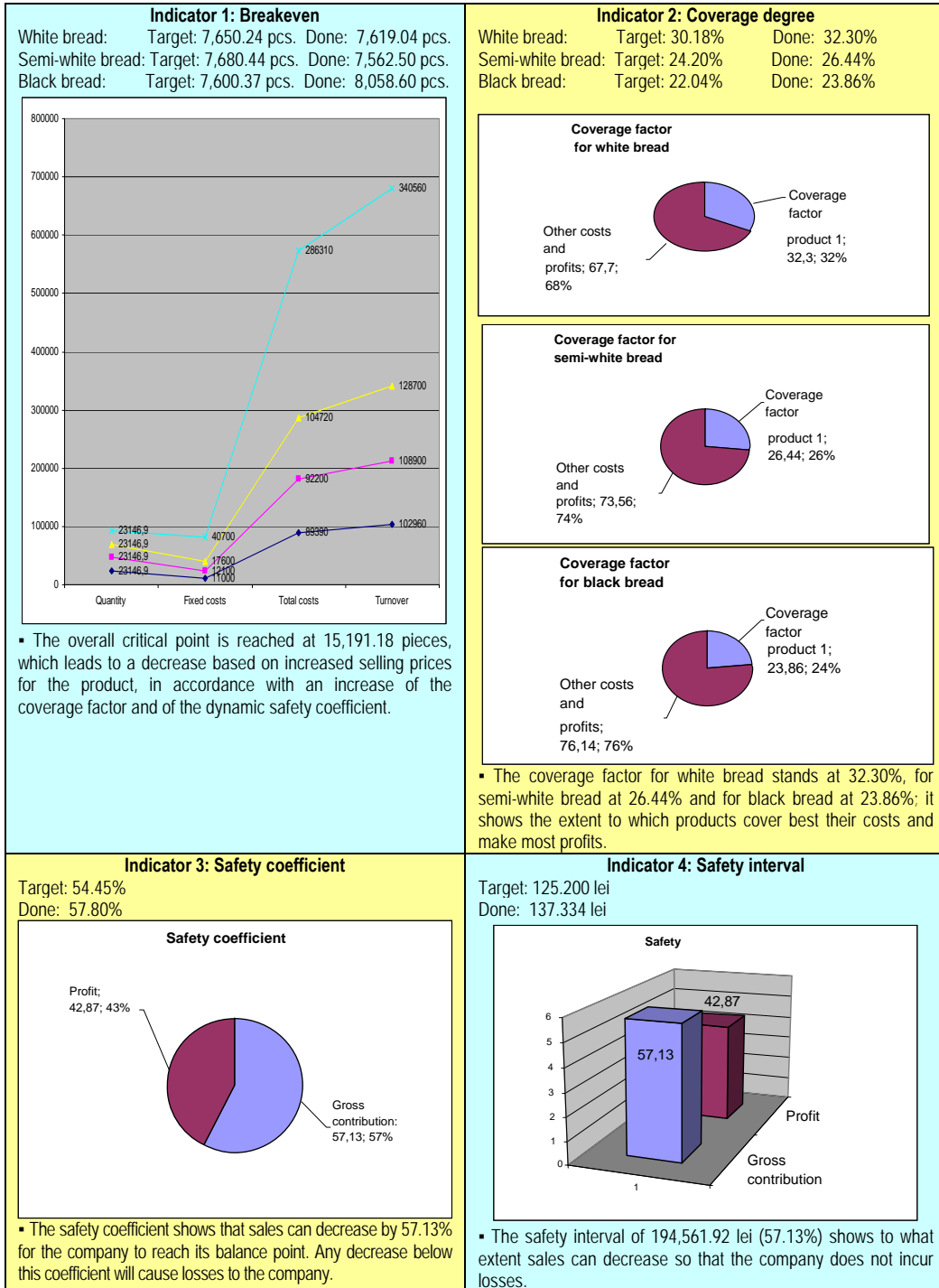


Figure 2. Dashboard for the Direct-Costing Method

Based on the data disclosed in the dashboard, we came to the following findings (negative and positive), causes and action points (Table 10):

Table 10

Analysis of the indicators in the dashboard for the Direct-Costing Method

Indicator	Stages			
	Findings	(Negative) causes identified	(Positive) causes identified	Action points
Breakeven	In comparison to the target, there is a decrease	Decrease due to increase of the product's selling price	Increase of the safety coefficient and profits	Expanding the range of products
Product's coverage degree	In comparison to the target, there is an increase	Below 32.30% for white bread, below 26.44% for semi-white bread and below 23.86% for black bread – these percentages do not cover costs and do not bring profits	Covers to a greater extent the costs and brings more profits	Increase of the product's coverage factor
Safety coefficient	In comparison to the target, there is an increase	Decrease below the registered level brings losses to the company	Increase over the registered level brings profits to the company	Increase of the safety coefficient
Safety interval	In comparison to the target, there is an increase	Below RON 194,561.92 the company incurs losses	Over RON 194,561.92 sales lead to profits	Increase of the safety interval

Source: Data processed by authors.

6. Conclusions

Based on the obtained data, we can say that it is possible to obtain performances in crisis periods, by taking into account the following estimates: quantitative decrease of goods to be sold; increase with a certain percentage of the sales price per unit, decrease with a certain percentage of variable costs per unit and increase with a certain lower percentage of fixed costs. The disclosure of indicators that are specific to the Direct-Costing Method in the dashboard allows managers to have a real picture in order to take the appropriate decisions. The cost-volume-profit analysis is the basis for ensuring sustainability of managerial decisions. The two tools for monitoring and measuring performances mix perfectly in the decisions taken at management level. In other words, you can be able to optimise profits in crisis periods as well, with beneficial solutions for the current business environment, and in this way we believe that we managed to answer the question set at the beginning of our study for the presented cases. Our research will not stop here, but we will try to identify also other effective tools to help professionals in terms of consolidating information required by management for decision-making.

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Study on the perception of accounting professionals concerning intangible assets and intangible capital

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“The most serious mistakes are not being made as a result of wrong answers. The truly dangerous thing is asking the wrong question!”
(Peter F. Drucker)

Abstract. *The purpose of the research is to obtain an overall image on the accounting professionals' opinions concerning intangible assets and capital. Out of the 111 accounting professionals who participated in the study, 55.86% consider that the traditional financial statements cannot capture the value of intangible assets, which leads to an increase in the information asymmetry, the solution being to focus, in the annual reports, on non-financial information. Over 80% of the respondents consider that, internally, the evaluation of intangible capital plays a very important role in strategy development and in creating innovation.*

Keywords: intangible assets; intangible capital; accounting professionals; survey; financial reporting.

JEL Code: M41.

REL Code: 14I.

1. Literature review

In the new society based on knowledge and innovation, the success of companies depends to some extent on the way in which intangible assets and intangible capital are acknowledged, evaluated, and capitalized upon.

Competitiveness relies more on meeting the customers' needs than on achieving what one knows best. And competitiveness – in the conditions in which competition is in continuous change – imperatively needs the willingness and ability to learn new things, rather than devotion to the sources of past victories (Christensen, Raynor, 2003, pp.142-143). Only a pro-active, adaptable and intelligent company, well supported by resources of all kinds, can have a chance to survive and the necessary potential to dominate the market in the future (Andone et. al., 2010, p.74).

According to the National Institute of Statistics, innovative companies are the ones that launched new or significantly improved products or that introduced new or significantly improved processes. Innovations are based on the results of technical developments, on the new contributions of existing technologies, or on the use of other knowledge required by the company. In 2010, these companies represented 30.8% of the total Romanian companies (2.5% less than in 2008), while the weight of the research & development expenses in the organizational sector in the GDP was 0.18%.

Arvidsson (2011) shows the ever higher importance of non-financial information related to intangible assets, of the focus of the managers' efforts in the direction of identifying and explaining the role of intangible assets in the process of added value creation and in the company's strategy, as well as the need for voluntary reports on the immaterial assets in order to reduce the information asymmetry in the traditional financial statements.

Other recent studies prove that between the reporting of human capital, respectively intellectual capital, and the performance of a company there is a positive connection (Lin et al., 2012, Phusavat et al., 2011).

Although specialized literature abounds in studies and research on the managers' perception of the role of intangible assets and/or intangible capital (or components of it) in insuring company performance, we have not been able to identify any such study for Romanian companies.

Starting from these premises, we aimed to initiate a research based on a survey, through which we wished to grasp the perception on intangible assets and capital from the perspective of those who draw the financial statements. The results obtained for certain questions, for Romania, have been compared to those obtained by the Ministry of Science, Technology, and Innovation of Denmark, since the Danish Guide, together with the Meritum project, are the main references in the field of reporting the intangible capital.

Through the participation of the accounting professionals to making this study, we consider that we will have the premises for identifying the financial and non-financial information available at the management level but that, for various reasons, are not published /made available for the users.

2. Research methodology and sample structure

The purpose of the research is to obtain an overall image on the accounting professionals' opinions concerning intangible assets and capital. The research is descriptive, and the data collection technique used was the survey. Like any technique, the survey has its advantages: it can be applied to a large number of subjects, in different geographical areas, as well as its disadvantages: the information obtained is only the anticipated one, no additional information can be obtained, and there is the possibility for some subjects not to answer all the questions. This last disadvantage has been removed by certain settings applied in the application where the survey was created: in case the subject does not answer all the questions, the survey is not saved.

The target population is made up of accounting professionals in the regions of Iași, Bacău, Vaslui, Botoșani, Suceava and Neamț – accounting experts, accountants, and auditors – listed in the member table of the two professional organizations: the Chamber of Accounting Experts and Authorized Accountants in Romania (CECCAR) and the Chamber of Financial Auditors of Romania (CAFR), and of accounting professionals who perform their activity in companies quoted in the Bucharest Stock Exchange, BSE section. On 11.15.2012, out of 106 companies listed in the BSE section, 25 were not quoted, and 13 were banks and financial investment companies, so that the final population subject to the study includes 68 companies.

Sampling always allows certain error margins, because there is a certain probability for the group of units observed and analyzed, thus selected, not to reproduce the basic population and/or its characteristics perfectly (Zaiț, Spalanzani, 2006, p.156).

In order to reduce these errors, we sent the survey to all the 68 companies quoted in the Bucharest Stock Exchange, BSE section, to all the auditors and CAFR interns for whom we found valid e-mail addresses, and to CECCAR interns. In what concerns the population made up of the members of CECCAR Iași, we resorted to random selection.

The table below presents the structure of the sample to which we applied the survey:

Table 1

Structure of the sample to which we applied the survey

Category	Population	Sample	Percentage
Members of CAFR Iași	100	98	98.00
Members of CAFR Suceava	33	30	90.91
Members of CAFR Neamț	46	44	95.65
Members of CAFR Botoșani	8	8	100.00
Members of CAFR Bacău	68	67	98.53
Members of CAFR Vaslui	14	13	92.86
CAFR interns	112	108	96.43
Other accounting professionals (CECCAR interns, accountants)	118	118	100.00
BSE accounting professionals	68	68	100
Members of CECCAR Iași	590	234	39.66
Total population	1,157	788	68.11

Note: According to the data published on the official pages of CECCAR and CAFR in the months of August-September 2012, <http://www.cafr.ro/sectiune.php?id=26>, http://ceccar.ro/ro/?page_id=97.

The survey includes three sections:

- *Section A* includes general information concerning the respondent and the company, such as: position, the activity field of the company from whose perspective the answer is provided, the company size, structure of its social capital, whether or not the company applies IAS/IFRS in drawing the individual financial statements and, if applicable, the consolidated financial statements, whether or not the company is innovative, according to the definition given by the National Statistics Institute.

- *Section B*, called “Perception of intangible assets”, focuses on information concerning the intangible assets that the companies present in the explanatory notes and on the need to complete them with a series of indicators: *Profitability/customer, the customer satisfaction index, the loyal customers index, frequency/repetitiveness of the orders, investments in IT, ratio of the customer support staff in the total number of employees, seniority of the employees, expenses for training the employees from total expenses, value added by the employees, number of patents.*

- *Section C*, named “Perception of intangible capital”, includes questions referring to intangible capital which are opportune to be presented in the annual reports and/or on the companies' websites, the external and internal purposes that determine a company to evaluate its intangible capital, as well as the costs/impediments related to such a decision.

In drawing the survey, we used score sum closed questions (Likert), for which the interviewed subject checks the answer that best fits their opinion,

based on the intensity of their agreement/disagreement, dichotomous closed questions, and nominal closed questions.

In order to eliminate ambiguous or useless elements from the questions, the errors/misunderstandings related to the software used in receiving the answers, as well as in order to insure the appropriate training of the interviewed subjects, we decided to go through an experimental stage, in which we directly applied the survey to 10 accounting professionals in the city of Iași. After this experimental stage, between October 25, 2012 - January 25, 2013, we applied the survey into three different stages, and obtained in the end 10 answers from the companies quoted in the Stock Exchange (respectively a response rate of 14.71%) and 101 answers from the companies in the region of Moldova, respectively a response rate of 14.03%. Therefore, out of 788 accounting professionals we approached, only 111 persons answered the survey, whose structure according to their position is given in the graphic below:

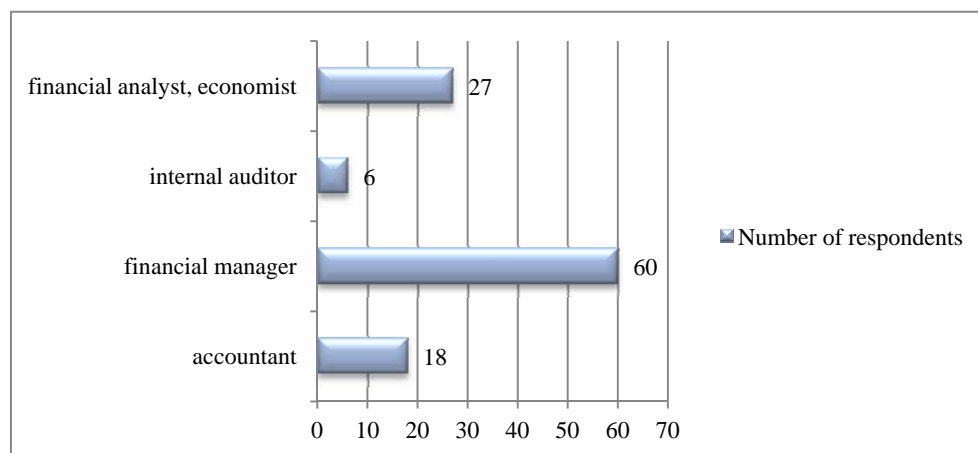


Figure 1. Structure of the respondents according to their position

The majority of the accounting professionals (57%) who answered the questions in the survey perform their activity in accounting, audit, and consultancy companies, 10% in the processing industry, and 8% in constructions:

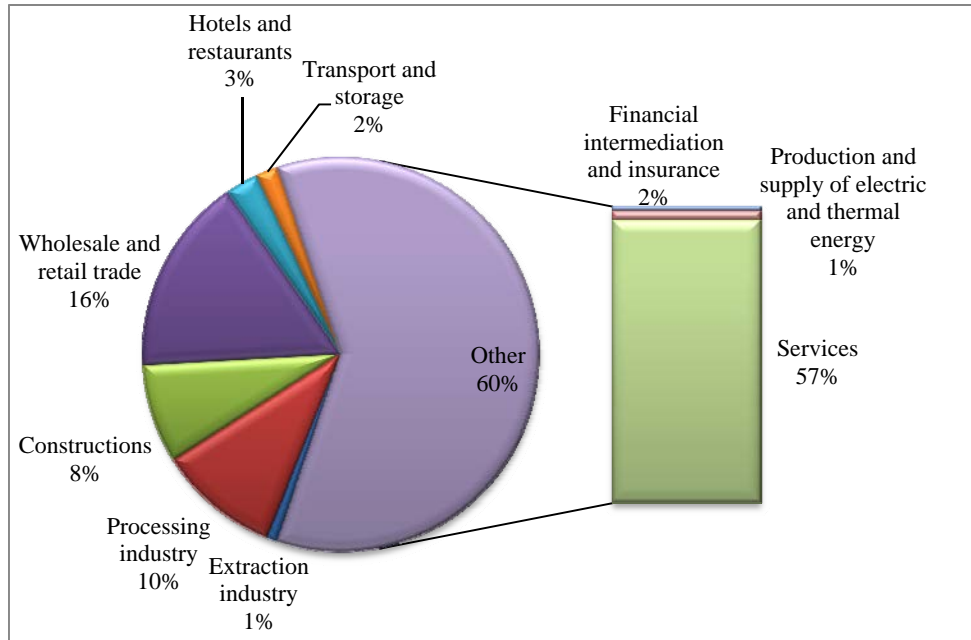


Figure 2. Structure of the companies from whose perspective some of the answers were given, according to the activity field

In what concerns the size of the companies from whose perspective the answers have been provided, 29% are micro-companies, 44% are medium companies, and 27% are large companies. Out of 111 companies in the sample, only 37 launched new or significantly improved products or introduced new or significantly improved processes.

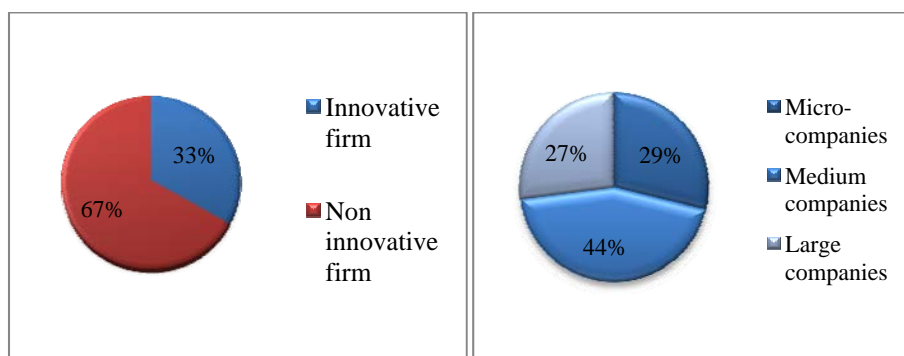


Figure 3. Structure of the companies according to the innovation and size criterion

Another criterion used to classify the companies was the structure of their social capital:

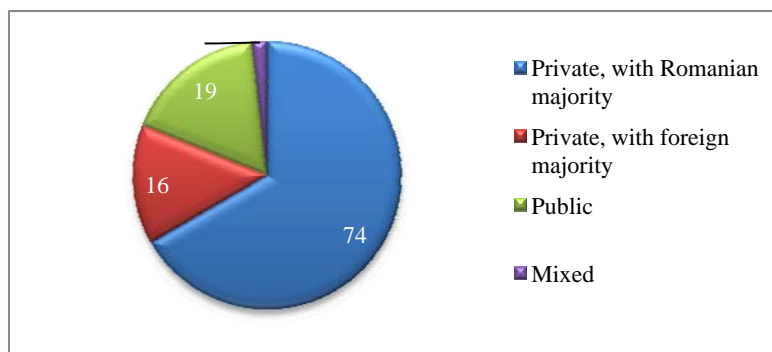


Figure 4. *Structure of the companies according to the source of their social capital*

Of the 111 analyzed companies, only 23 companies apply IAS/IFRS in drawing their annual financial statements, and 16 companies draw consolidated financial statements in compliance with the international accounting standards.

The last criteria: company size, structure of the social capital, and accounting provisions based on which the financial statements are drawn allow us to know some of the subjective factors that may influence the answers provided by the Romanian accounting professionals.

3. Perception on intangible assets

The intangible assets developed very much in the last decades, for the entire spectrum of companies. Some companies live at present almost exclusively from their intangible assets (Cohen, 2005, p. 58).

Previously performed studies allowed us to notice that, in general, Romanian companies publish in the explanatory notes little information on intangible assets (Fădur et al., 2012, Fădur, Rusu, 2012). Therefore, besides monitoring the respondent's expressing an agreement or a disagreement concerning some statements on the role of intangible assets in determining performance on the long term, we also analyzed the answers given by accounting professionals concerning the information they include in the explanatory notes for intangible assets, answers that confirm, for the most part, the results from previous research (Fădur et al., 2013): the information frequently presented in the explanatory notes refers to movement, increases, and drops in the intangible assets for the analyzed period, to the gross accounting value, and to cumulated amortizations (aggregated with the losses

from cumulated depreciations) and the start and at the end of the fiscal year and to the useful life durations or to the amortization rates used, as well as to the amortization method used for intangible assets with a determined life. Most respondents do not present the description of the factors that played a significant role in establishing the fact that the useful life duration of an intangible asset is non-determined, the aggregated value of the research and development costs known as expenses for the period, and no information concerning the intangible assets that have been completely amortized, but still used or controlled by the entity, but not acknowledged as assets.

Table 2

Information presented in the explanatory notes concerning the intangible assets

		YES	NO
1	Does the entity make the distinction between internally generated and purchased intangible assets?	58	28
2	Is there any mention of the life durations are undetermined or determined? In the case of the determined life duration, is there any mention of the useful life duration or of the used amortization rates, as well as of the amortization method used for intangible assets?	63	23
3	Do the explanatory notes describe the factors that have played a significant role in determining the fact that the useful life duration of an intangible asset is undetermined?	29	57
4	Does the company present the movements, increases, and drops for the period, providing some details that explain the dynamics of intangible assets?	67	19
5	Is the gross accounting value presented, as well as any cumulated amortizations (aggregated with the losses from cumulated depreciation) at the start and at the end of the period?	79	7
6	Does the entity present the adjustments for depreciation, accompanied by a short explanation of the corresponding causes?	56	30
7	Is there a presentation of the aggregated value of the research and development costs acknowledged as expenses for the period?	36	50
8	Is there a description of any intangible asset, completely amortized, which is still used, and a short description of the significant intangible assets that are controlled by the entity, but not acknowledged as assets?	25	61

Note: This question was answered only if the balance structure of the company included intangible assets; the total number of answers was 86.

Most accounting professionals subscribe to the statements that investments in intangible assets are essential for the development of the business and for reducing risks (84.68% of the respondents) and that intangible assets justify to a great extent the market value of the companies, this aspect being only partially grasped in the standard economic analyses (61.26%).

At the same time, 73.87% of the respondents show disagreement or complete disagreement with the fact that intangible assets play an insignificant

role in insuring the performance on the long-term of a company, and 41.44% of the survey respondents do not agree with the statement that the users of the financial statements are not interested in information concerning the intangible assets.

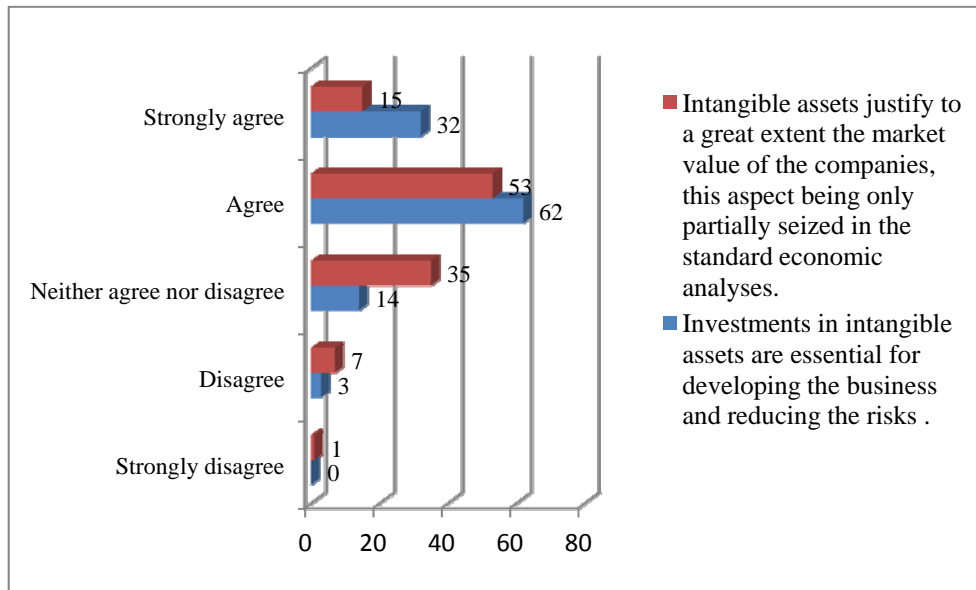


Figure 5. The respondents' opinion concerning the connection between intangible assets and the market value of a company, and investments in intangible assets and business development

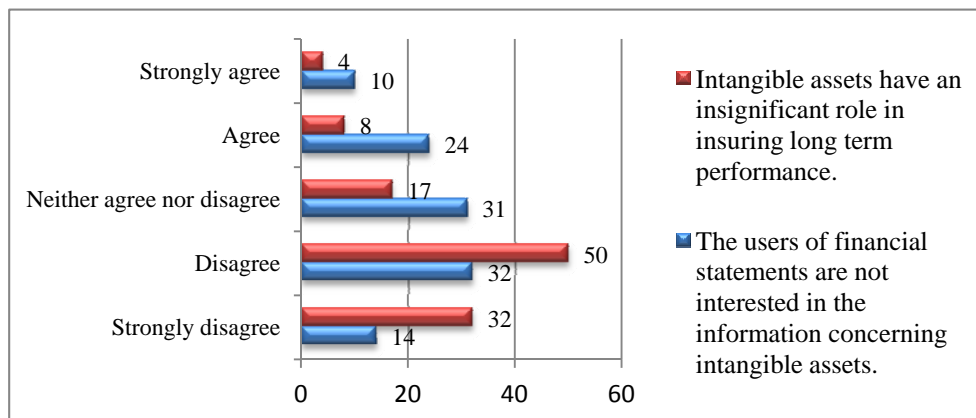


Figure 6. The respondents' opinion concerning the role of intangible assets in insuring performance on the long-term and the interest shown by the users of the financial statements concerning intangible assets

Out of 111 accounting professionals who participated in the study, 62 consider that the traditional financial statements cannot capture the value of intangible assets, which determines an increase in the information asymmetry, the solution being to focus, in the annual statements, on non-financial information.

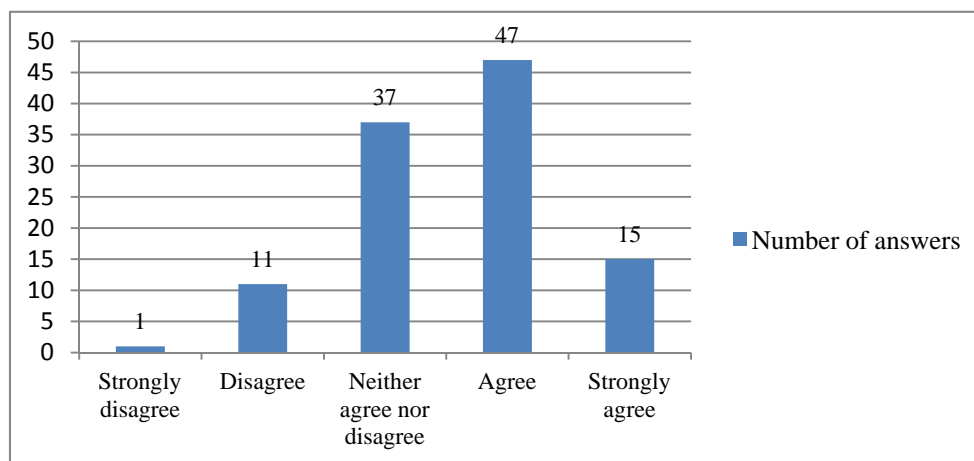


Figure 7. *The respondents' opinion concerning the need to present non-financial information in the annual statements*

In tight connection with the above opinions concerning the role and importance of intangible assets, most accounting professionals consider that it is necessary to complete the explanatory notes with the following indicators: profitability/customer, the customer satisfaction index, the loyal customers index, frequency/repetitiveness of the orders, investments in IT, ratio of the customer support staff in the total number of employees, seniority of the employees, expenses for training the employees from total expenses, value added by the employees, number of patents. The respondents did not show full agreement only in relation to one of the suggested indicators, that is, the seniority of the employees, for which only 43% of the accounting professionals considered as relevant to be presented in the explanatory notes.

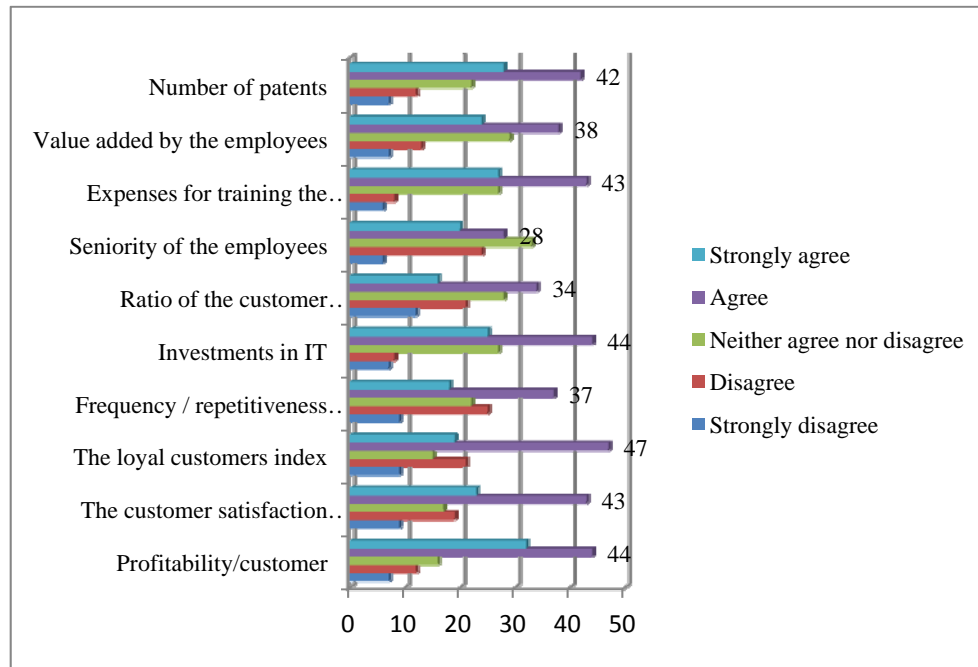


Figure 8. *The respondents' opinion concerning the need to fill in the explanatory note referring to financial indicators*

4. Perception on intangible capital

New and very complex theoretical problems that a good manager must master can be expressed through several key words: the market value of the shareholders' equity and of the invested capital, the intellectual capital/intangible assets of the company and their value, intangible investments, profitability of the capital invested in tangible and intangible assets, the cost of invested capital (Stan et al., 2006, p.1).

According to the German economist Horst Siebert, in the present circumstances, knowledge is the decisive production factor, and the production functions in the traditional economic theory do not correspond to reality: "the paradigm of the traditional theory of economic growth was that work, capital, and technology determine economic growth. This approach, relevant for the industrial society and also for the service based economy, is no longer valid in the society based on information and knowledge, where human capital becomes the major trigger of economic growth" (Arsene, 2010, p.127).

Ever since 2000, Richard Thoman, executive director of the Xerox Corporation, guessed the need for strategies based on innovation, stating that: "my objective is intellectual property. I am convinced that the management of

intellectual property is the way through which added value will be created at Xerox and not only in this company, but in any other. Extending this idea, companies with a good management of their intellectual property will win. The others will lose” (Rivette, Kline, 2000).

The motivations that lie at the basis of measuring intangible capital have been the topic of numerous research, of which we mention:

Table 3

Motivations that lie at the basis of measuring intangible capital

Internal purposes for evaluating intangible capital	External purposes for evaluating intangible capital
<p><i>It is possible to manage only what is evaluated, measured</i></p> <p>Darroch, Guthrie and Van der Meer-Kooistra showed in their studies that managers consider that failure to measure intangible capital will determine sub-optimal decisions, but do not develop the connections through which optimal decisions would be facilitated by the evaluation of intangible capital. A study of 30 Danish companies, performed by the Ministry of Sciences, Technology, and Innovation, shows the following internal motivations of the companies, which lie at the basis of the decisions to evaluate intangible capital:</p> <ul style="list-style-type: none"> ▪ Strategy development (90%); ▪ Insuring knowledge distribution and update (90%); ▪ Systematic implementation of knowledge management (85%); ▪ Identifying the control indicators (80%); ▪ Competence management (80%); ▪ Creating innovation (80%). <p>Marr identified, after analyzing over 700 articles on the measurement of intangible capital, five internal innovations:</p> <ul style="list-style-type: none"> ▪ Support in formulating the strategies of the organization; ▪ Evaluating the application of the strategies; ▪ Assistance in diversifying and extending the company's decisions; ▪ Usage as a basis in rewarding the managers; ▪ Communication with the shareholders. 	<p><i>An instrument to attract investors</i></p> <p>The study of 30 Danish companies, performed by the Ministry of Sciences, Technology, and Innovation identifies the following external motivations of the companies, which lie at the basis of the decisions to evaluate intangible capital:</p> <ul style="list-style-type: none"> ▪ To show that the human resources are the most important asset (90%); ▪ To show that the organization is innovative (85%); ▪ To attract new employees (80%); ▪ To show that the most important asset is knowledge (80%); ▪ To prove that the organization is flexible (75%); ▪ For the company's products and services to be better understood (70%); ▪ To fill in the financial statements (70%); ▪ To position in relation to the competitors (65%); ▪ To attract and gain the loyalty of the customers (65%). <p>Other studies claim that the evaluation and presentation of intangible capital lead to diminishing the cost of capital.</p>

Source: Hunter L., Webster E., Wyatt A. (2005). "Forum: Intellectual Capital. Measuring Intangible Capital: a review of current practices". Australian Accounting Review; July 2005; 15, 2; ProQuest Central, p. 8.

Starting from the motivations identified in specialized literature, we suggested the accounting professionals in Romania to estimate what would be the internal and external purposes that would determine Romanian managers to decide to evaluate intangible capital. Therefore, the internal purposes subject to analysis are: better definition of the company's vision, a finer description of the resources owned by the company and stressing those that need to be capitalized upon, developing strategies, insuring knowledge distribution and update, systematic implementation of the knowledge management, identifying the control indicators, managing competence, creating innovation and communicating with the shareholders. The decision to evaluate intangible capital could be related to one of the following external purposes: to show that the human resources are the most important asset, to show that the organization is innovative, to attract new employees, to show that the most important asset is knowledge, to prove that the organization is flexible, for the company's products and services to be better understood, to fill in the financial statements, to position better in relation with the competitors, and to attract and gain the loyalty of the customers.

As we can notice from Figure 8, most respondents considered that all the nine internal purposes suggested as a basis for the decision to evaluate the intangible capital may be strong motivations for managers.

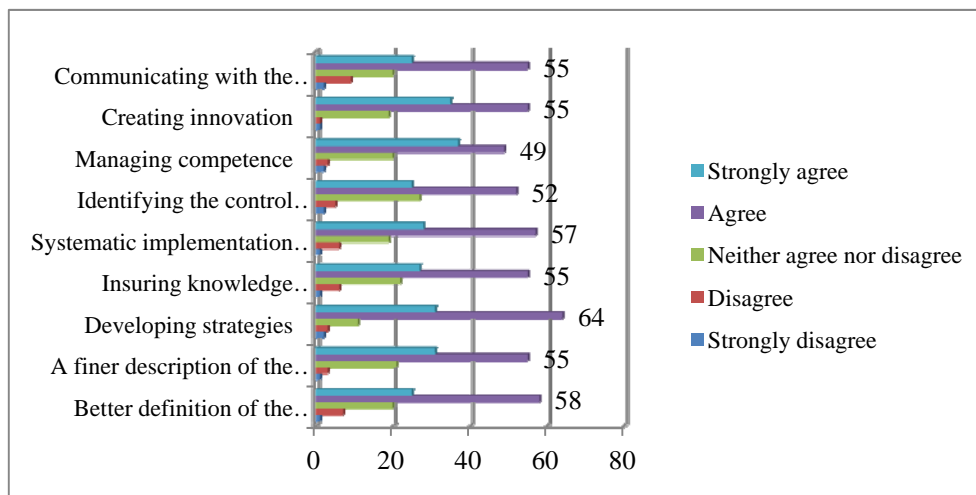


Figure 9. *The respondents' opinion concerning the internal purposes that lie at the basis of the decision to evaluate intangible capital*

In what concerns the external purposes, the accounting professionals were more reluctant, considering that the desire to attract new employees is not essential in supporting the decision to evaluate intangible capital.

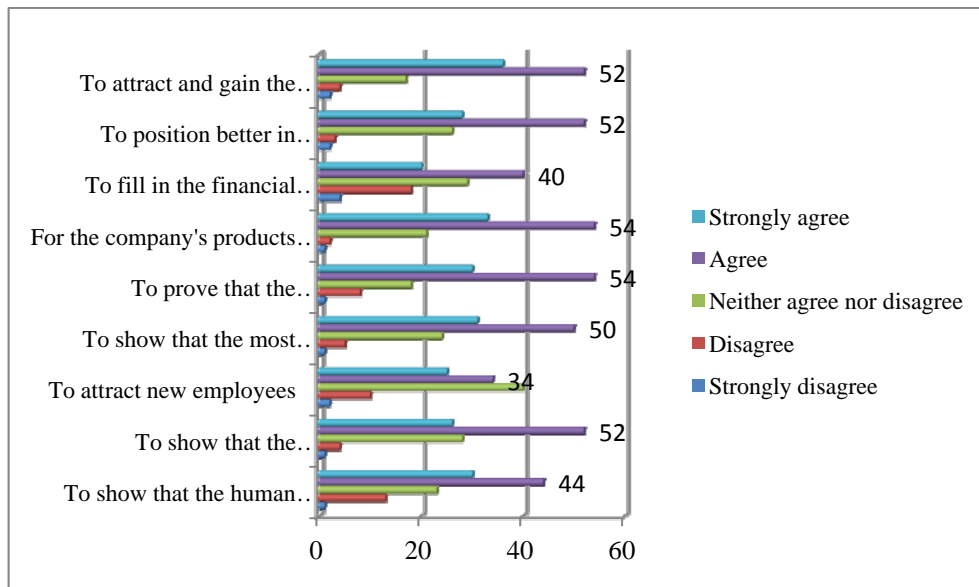


Figure 10. The respondents' opinion concerning the external purposes that lie at the basis of the decision to evaluate intangible capital

Table 4

Perception of the Romanian accounting professionals concerning the internal and internal purposes in evaluating intangible capital

	Purposes	% respondents that show agreement or total agreement
INTERNAL	Better definition of the company's vision	74.77
	Finer description of the resources owned by the company and stressing those that have to be capitalized upon	77.48
	Developing strategies	85.59
	Insuring knowledge distribution and update	73.87
	Systematic implementation of knowledge management	76.58
	Identifying the control indicators	69.37
	Competence management	77.48
	Creating innovation	81.08
	Communicating with the shareholders	72.07
EXTERNAL	To show that the human resources are the most important asset	66.67
	To show that the organization is innovative	70.27
	To attract new employees	53.15
	To show that the most important asset is knowledge	72.97
	To prove that the organization is flexible	75.68
	For the company's products and services to be better understood	78.38
	To fill in financial statements	54.05
	To position in relation with the competitors	72.07
	To attract and gain the loyalty of the customers	79.28

The conclusions of our study are similar to the results obtained for the Danish companies: developing strategies and creating innovation are the strongest internal motivations that lie at the basis of the decision to evaluate intangible capital, while the desire to attract and gain the loyalty of the customers and to make the company's products and services better understood by the customers are the most important external purposes. It is important to notice that the external motivations are mainly related to the customer relations (to attract and gain the loyalty of the customers, for the company's products and services to be better understood, to show that the organization is innovative) and competitors (to position in relation with the competitors) and, second, the relationships with the employees (to attract new employees, to show that the human resources are the most important asset) and with the users of the annual financial statements (to fill in financial statements).

Nevertheless, 63.06% of the respondents consider that the most important component of intangible capital is human capital:

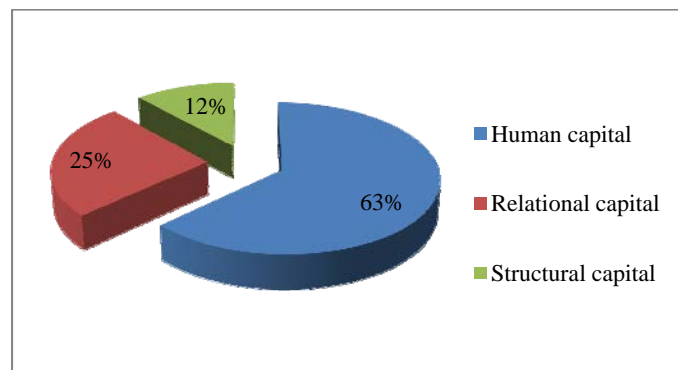


Figure 11. *Importance of the components of intangible capital in the vision of the Romanian financial accountants*

Practical reality shows that most Romanian companies do not publish social responsibility reports, nor information on the intangible capital on their official websites (Fădur et al., 2013). This is also confirmed after processing the answers given to the questionnaire: 63.96% of the 111 companies from whose perspective the answers have been provided do not draw social responsibility reports, while 27.93% draw such reports, but these are not accessible for the public. Only nine companies of the 111 analyzed have social responsibility reports published on their own websites.

In this context, we wished to identify, on the one hand, the information concerning intangible capital that the Romanian accounting professionals

consider as opportune to be made available for the users, and, on the other hand, the impediments or costs associated to the collection and presentation of such information.

In the respondents' opinion, the most useful and opportune information to be presented is that referring to national and international certifications obtained in the field of product quality (81.98% of the professionals), the concern with the environment (72.07%), the customer satisfaction index (71.17%), as well as those referring to innovation, research and development activities (72.97%), at the opposite pole being information concerning the motivations and benefits granted for the employees (9.64%) and that related to the number and age of the employees (38.74%).

Table 5
Perception of the accounting professional on the information concerning intangible capital, which is opportune to be presented

Opportune information	disagreement	partial agreement	agreement (%)
Number and age of the employees	29.73	31.53	38.74
Motivations/benefits granted for the employees	30.63	29.73	9.64
Time allocated to train the employees	17.12	21.62	61.26
National and international certifications obtained in the field of product quality	6.31	11.71	81.98
Concern with the environment	7.21	20.72	72.07
The customer satisfaction index	11.71	17.12	71.17
Social programs, donations	18.02	26.13	55.86
Innovation, research and development activities	6.31	20.72	72.97
Systems (information, management, accounting, etc.)	15.32	26.13	58.56
Number of patents	11.71	23.42	64.86

Of the impediments of the decision to evaluate intangible capital and, implicitly, to report it, most accounting professionals invoked the large amount of time allocated for the collection, synthesis, and systematization of the non-financial information regarding intangible capital, followed by the value of the expenses necessary for training and specializing the persons in charge with presenting the information related to intangible capital. Also, 66.67% of the respondents consider that there is still not enough known about the deep meanings of intangible capital, how it is managed and reported, and it is extremely difficult to move from understanding the importance of knowledge to applying some actions through which it is capitalized upon. At the same time, 59.46% the respondents do not agree with the statement that intangible capital is not a key factor in increasing performance on the long-term, and in the

opinion of 63.96 % of the accounting professionals who participated in the study, intangible capital is not only a “trendy” subject, with no practical implications/valences.

Table 6

Perception of the accounting professional on the impediments to reporting intangible capital

Impediments	(%)		
	disagreement	partial agreement	agreement
Expenses for training and specializing some persons in charge with presenting the information on intangible capital.	16.22	31.53	52.25
Large amount of time allocated for the collection, synthesis, and systematization of the non-financial information concerning intangible capital.	11.71	25.23	63.06
There is still not enough knowledge on the deep meanings of intangible capital, how it is managed and reported. It is extremely difficult to move from understanding the importance of knowledge to applying actions through which it is capitalized upon.	8.11	25.23	66.67
What cannot be measured, cannot be managed.	32.43	29.73	37.84
There are no legal requirements for reporting intangible capital.	14.41	31.53	54.05
Intangible capital is not a key factor in increasing performance on the long term.	59.46	22.52	18.02
Intangible capital is a “trendy” subject, with no practical implications/valences.	63.96	20.72	15.32

In order to obtain a complete image on the perception of the accounting professionals on intangible capital, we included in the survey the 10 principles formulated by Stewart, referring to the management of intellectual capital (Stewart, 1997, apud. Myles, Jackson, 2004):

P1: The organization has no property rights over human capital, nor over relational capital, but it can manage them and obtain added value by using them.

P2: In order to create human capital, the organization must encourage team work, collective learning, and socialization.

P3: The wealth of the organization is based on the employees' skills and abilities. In order to manage and develop human capital, the company must identify the talented staff and invest in them, while it must not make investment expenses for the other employees.

P4: Structural capital is the easiest to manage, but it is important to monitor if its component elements are of interest to the customers.

P5: Transforming the vision from “we accumulate knowledge just in case” to “we must have information that our customers need, and provide it in due time”.

P6: Information and knowledge should replace expensive physical and financial assets.

P7: Knowledge generates innovating solutions; in the fields where template solutions have been provided, it is impossible to generate high profit performance.

P8: Every company has to re-analyze the activity field where it performs in order to identify crucial information.

P9: Managers must focus on the information flow within the company.

P10: Human, structural, and relational capital create value only together. Separate investments in people, systems, or customers are not enough.

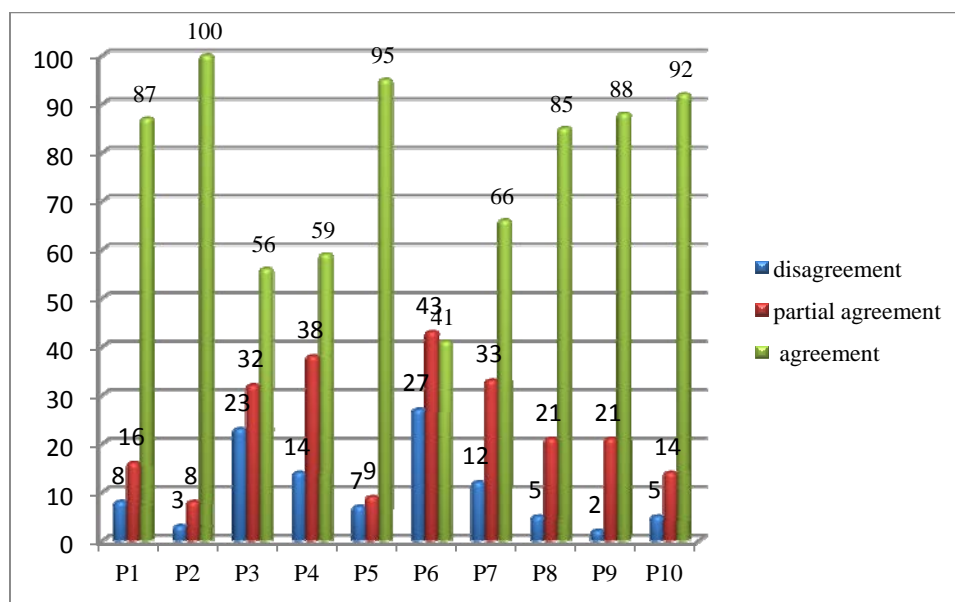


Figure 12. Stewart's principles in the vision of the Romanian accounting professionals

Processing the answers received to the survey show that most Romanian accounting professionals manifested their agreement or total agreement concerning the following principles: P1: *The organization has no property rights over human capital, nor over relational capital, but it can manage them and obtain added value by using them*; P2: *In order to create human capital, the organization must encourage team work, collective learning, and socialization*; P5: *Transforming the vision from “we accumulate knowledge just*

in case” to “we must have information that our customers need, and provide it in due time”; P8: *Every company has to re-analyze the activity field where it performs in order to identify crucial information;* P9: *Managers must focus on the information flow within the company and* P10: *Human, structural, and relational capital create value only together. Separate investments in people, systems, or customers are not enough.*

It seems that the following principles: P3: *The wealth of the organization is based on the employees' skills and abilities. In order to manage and develop human capital, the company must identify the talented staff and invest in them, while it must not make investment expenses for the other employees* and P6: *Information and knowledge should replace expensive physical and financial assets* correspond to a lesser extent to the reality of the Romanian accounting environment, while in the case of principles 4 and 7, the pros and cons have an approximately equal number of representatives.

5. Conclusions and discussion

Of the 111 accounting professionals who participated in the study, 55.86% consider that the traditional financial statements cannot capture the value of intangible assets, which leads to an increase in the information asymmetry, the solution being to focus, in the annual reports, on non-financial information. Most companies from whose perspective the answers to some questions in the survey have been given, apply, in drawing their annual financial statements, the provisions of OMFP No. 3055/2009 *for the approval of the Accounting Regulations compliant with the European directives*, updated, which justifies the answers provided to the question on the information presented in the explanatory notes. Generally, the explanatory notes include information that refers to gross value, amortization, and adjustments of intangible assets, their dynamics, the amortization rates, and the amortization methods used. At the same time, only nine companies publish social responsibility reports or other reports that grasp elements of intangible capital. As a result, although accounting professionals consider that the traditional financial statements determine an increase in the information asymmetry, practical reality in financial reporting proves that very few efforts are made in this direction.

In what concerns the completion of the explanatory notes with a series of new indicators, 68.47% of the respondents consider it useful to provide information referring to the profitability/customer ratio, 63.06 % to the number of patents and weight of the expenses for training the employees from the total expenses, and 62.16% to investments in IT. However, in the opinion of 30.63%

of the respondents, the users of financial statements are not interested in the information on intangible assets.

Only 10.81% of the accounting professionals who participated in the study consider that intangible assets play an insignificant role in insuring the performance on the long term, while 84.69% believe that investments in intangible assets are essential for business development and for reducing risks.

In what concerns the perception of the Romanian accounting professionals on intangible capital, for 63.06% of them, human capital is the most important component of immaterial capital. Nevertheless, only 39.64% of the subjects who participated in the study consider as opportune to present information concerning the motivations and benefits granted to the employees, while 81.98% state that the information on national and international certifications obtained in the field of product quality should be published on the companies' websites or in annual reports. Also, over 70% of the respondents consider that the environmental policy of the company, its research and development activities, and the customer satisfaction index represent information that should be provided to the users.

The most important impediment in drawing annual reports that contain relevant information on the intangible capital of the organization is, in the opinion of accounting professionals, misunderstanding the deep meanings of intangible capital, how it is managed and reported, and the difficulty in moving from understanding the importance of knowledge to applying actions through which it is capitalized upon. Practically, this impediment translates into the lack of recommendations or practical guides that direct accounting professionals in the process of identification, evaluation, and reporting intangible capital.

Over 80% of the respondents consider that, internally, the evaluation of intangible capital plays a very important role in strategy development and in creating innovation, while in the opinion of over 78% of the subjects the evaluation of intangible capital contributes, externally, to increasing the degree of understanding of the products and services provided by the company, as well as to attracting and gaining the loyalty of the customers.

Considering the results obtained after analyzing the answers received, we conclude that voluntary reporting on the information concerning intangible capital is necessary, as well as completing the explanatory notes with more extended information on intangible assets. In the absence of recommendation guides, Romanian accounting professionals may resort to drawing descriptive and narrative reports, which provide information related to relationships with the customers, with the employees, and with the community with which the company interacts, data on the research and development activities it performs, the systems owned, the recorded patents, etc. An important role in this approach

could be played by internal auditors. Drawing reports on intangible capital within the *internal audit* activity would lead to a reduction of the expenses for training and specialization, as well as of the time necessary for the collection, synthesis, and systematization of non-financial information referring to intangible capital.

Acknowledgements

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The role of social factors in explaining crime

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Abstract. *Utilizing Malaysia data from 1973 to 2008, the study reveals that crime can be influenced by population, fertility, unemployment, and GDP in either the long-run or short-run period. This study also further analysed beyond sample estimations of the variables involved and found that although violent crime can be explained in the short-run only from the VECM analysis, it is found to be explained by other explanatory variables in the long-run of beyond sample for at least 50 years ahead. It is important for policy makers to focus in both social structure and economic conditions to help prevent crime in the long-run.*

Keywords: fertility; violent; property, unemployment, VECM; causality.

JEL Code: J13.

REL Codes: 5C, 9B.

1. Introduction

In 2004, Levitt published an interesting article in which he argued that crime activities hefty decline in the United States in 1990s was not caused by any factors postulated to explaining the decline all this while. His analysis found that the strong economy of the 1990s, changing demographics, better policing strategies, gun control laws, concealed weapons laws and increased use of the death penalty never contributed to the decrease in crime at that time but little. Contrariwise, Levitt (2004) found ample evidence that shows increasing prison populations, rise in the size of police force, crack epidemic decline, and the legalization of abortion were the real cause in the substantial decrease of crime rates at that time. The idea behind the relationship between legalized abortion and crime was built upon two hypotheses, namely unwanted children are at a greater risk for crime and legalized abortion leads to a reduction in the number of unwanted births. This hypothesis is parallel to that of conventional criminology theories which suggest that problematic children with stressful childhood are likely to become criminals in their adulthood (evidence can be found from studies by Farrington (1996) for explanations on how problem families produce problem children). Interestingly, while predicting growth in crime rates in the eighties, Levitt (2004) found that the motivation factors differ from the demotivation factors in nineties.

All this while economists' intervention in criminology studies were bounded to the facts that crime is an act that will sow the wind and reap the whirlwind of economics in a country. It is a well-known fact that crime will influence the transmission of economic growth through hindrance of foreign direct investment, constraints for investment in human capital, decline in competitiveness, reducing productive capacity, and increase in expenditure of unprofitable sector (crime fighting) to name a few. The role of fertility and demographic transition are also hypothesized to influence transition in economic growth from the unified growth theory perspective. However, these diverted causes of growth transmission were given less importance in the development of economics of crime model. At least, not until the provocative article by Levitt (2004). It is inevitable that there are various factors to account before one can analyze the crime decision of particular person. Akerlof (1997) in his paper on social distance argued that social decisions cannot be based on individuals values alone but must also take into consideration the social interaction of particular individuals in their decision making process. Becker's earliest framework (Becker, 1964, 1968, 1971, 1973, 1974) of social decisions

was primarily explained on individual considerations alone on the ground that social interactions are not important since the externalities from them could be captured within the group.

Disagreeing, Akerlof (1997) articulated an improved rational choice analysis by incorporating social factors into the model. In his social interaction theory, Akerlof explains that social decisions such as the demand for education, the practice of discrimination, the decision to marry and bear children or the decision to engage in criminal activities are not as simple as intermediate microeconomics decision-making theory which was built upon various assumptions for simplification purposes. The improved rational-choice theory, although is an extension of Becker's earlier work, will be favouring the arguments by sociologists rather than economists since social decisions have social consequences which are interrelated with a particular individual and all the people and environment surrounding them – a consequence not borne by economists. Hence, growing researches (Dilulio, 1996, Levitt, Donohue, 2001, among the earliest) have turned their interest to certain sociological aspects such as income inequality, poverty, race, gender, and fertility to explain the incidence of crime. Criminology and socio-demographic issues has intersects and interacts with each other directly or indirectly while explaining their respective explananda, epistemological and scientific characteristics (South, Messner, 2000).

Enthused with the facts that social factors may explain the presence and/or absence of crime activities in a country, this study is initiated to empirically estimate the dynamic relationship between crime, unemployment, economic growth (GDP), population, and fertility rate in Malaysia. As a developing economy, Malaysia is in her struggle to increase economic growth for future development. However, social factors such as fertility and population size can bestow considerable impact towards her economic growth. Theoretically, low fertility rates will cause a decrease in the number of population in a country which in the long-run causes their labour force size to decline thus dampen its economic growth. On the contrary, high fertility rates can cause unanticipated increase in population size which in the long-run can cause various social problems such as crime, unemployment, and political turbulences in case where population increase higher than increase in national income thus widen the inequality gap. Several crime literatures can be found discussing on effects of population, neighbourhood and fertility as the cause of crime along with unemployment and equality. Studies on neighbourhood characteristics found that particular neighbourhood characteristics play an important role in determining crime notwithstanding family and individual

characteristics (Billy, Moore, 1992, Brewster et al., 1993, Brewster, 1994, South, Crowder, 1999).

Generally, engaging in sexual activities take place earlier (Billy et al., 1994) and the risk of non-marital (teenage) expectant is greater (Brooks-Gunn, et al., 1993, Crane, 1991, Hogan, Kitagawa, 1985, Ku et al., 1993) in economically disadvantaged communities compared to privileged communities. Crime can also influence family-related demographic events indirectly when diminishing men's economic status and employment stability due to criminal activities influence women's marriage and fertility patterns (Fossett, Kiecolt, 1993, Sampson, 1995, South, Lloyd, 1992a, 1992b). Unemployment and GDP on the other hand can be the indirect causes that trigger socio-demographic instability and inequality that explain crime in a country. There are bulk of research explaining crime-unemployment and crime-income in many countries using different types of data and methodology but results are still mixed and consensus on the types of relationship exists never been achieved to date (Becker, 1968, Ehrlich, 1973, Reilly, Witt, 1996, Papps, Winkelmann, 2000, Raphael, Ebmer, 2001, Edmark, 2005, Cantor, Land, 1985, Britt, 1994, Melick, 2004 among others). Masih and Masih (1996) initiated the use of cointegration and Granger causality test to examine the causal relationship between various socioeconomic variables and disaggregated crime data in Australia for the period of 1963 to 1990. They also go further to explain the dynamic linkages between crime and socioeconomic variables beyond the sample for policy implication purposes. However, the cointegration model is still less favoured in the field of economics of crime (Masih, Masih, 1996, Narayan, Smith, 2004, Narayan, Smith, 2006, Tang, Lean, 2007, Baharom, Habibullah, 2008, Baharom, Habibullah, 2009, Habibullah, Baharom, 2009, are among the few) despite the huge arguments and abundance research available in the particular field. As such, the structured of the paper follows. A brief background of Malaysia demographic issues is discussed in Section 2. Section 3 provides the intuitive account of the econometrics methodology employed before discussing results in more detail in Section 4. Some policy implications and conclusions of the study are made available in Section 5.

2. Malaysian demographic issues

Malaysia is a newly industrialized country with a record of strong economic performance and poverty reduction and a goal of transforming itself into a high-income and developed nation by the year 2020. The government are steadfast in improving the quality of life of the people and enlarging people's

choice ranging from political, social and economic freedom. The economy expanded at a robust 5.8% annual rate in the five years to 2008, contributing to a reduction in overall poverty 5.7% in 2004 to 3.6% in 2007. In 2012, her gross domestic product increased further to 5.4 per cent against 4.9 per cent in the preceding quarter led by continued expansion in the Services and Manufacturing sectors.

At the same time, government responded proactively to mitigate the adverse effects of the global financial crisis by implementing two fiscal stimulus packages (one announced in November 2008 and the other in March 2009), easing monetary policy, and relaxing foreign investment restrictions on certain services and local equity requirements for newly listed companies. These policies envisage national unity as the goal of development and the two-pronged strategy to achieve it⁽¹⁾ the eradication of poverty and⁽²⁾ the restructuring of society conducted within the context of rapid and continuous economic growth. It is evident that formulation of core development philosophy, policies and plans suited to particular circumstances and needs as executed by Malaysian government was the reason behind the 30 years of Malaysia's poverty reduction, growth and racial harmony success (Economic Planning Unit, 2004).

Table 1

Area indices and the Malaysian Quality of Life Index (MQLI)

Index	2007	2008	% change (1990-2008)
Income & Distribution	121.5	124.3	24.3
Working Life	132.4	132.2	32.2
Transport & Communication	121.4	122.9	22.9
Health	129.8	129.1	29.1
Education	125.5	130.6	30.6
Housing	131.8	133.9	33.9
Environment	101.7	94.1	-5.9
Family Life	101.7	105.5	5.5
Social Participation	110.7	111.9	11.9
Public Safety	79.8	82.8	-17.2
Culture & Leisure	109.0	108.1	8.1
MQLI	115.0	115.9	15.9

Note: 1990 is used as the base year.

Source: Economic Planning Unit (EPU).

The human development index (HDI) of Malaysia has improved in the year 1980 to 2010 with 1.1% rise annually. The HDI index for 2010 was 0.744 compared to 0.541 in 1980 placing the nation in ranking 57 out of 169 countries

with comparable data. Concomitant with socio-economic development, numbers of social issues emerged that can paralyzed the economic progress in Malaysia such as increase mobility, city congestion, squatter settlements and crime rate. Although the overall Malaysian quality of life improved in the year 1990 to 2010, its public safety index, as reported by the Malaysia Quality Life Index (2008), shows a downward trend⁽¹⁾. The 2008 MQLI report are supported with crime data from Royal Malaysia Police Department (RMPD) that keep increasing from 1983 to 2008.

Along with the macroeconomic instability, demographic variables have also been accused as the strongest determinant of crime rates in Malaysia (Sidhu, 2005). Further urbanization and population density also affect crime rates as shown by the crime rates between the states of Kuala Lumpur and Pulau Pinang with the comparatively more populous states of Sabah, Sarawak, Perak and Kedah. The former group displayed a higher index crime per 100,000 than the latter states (Sidhu, 2005). This encourages us to include population rate and fertility rate in our study to better explain Sidhu's (2005) findings with relevant data and quantitative modelling. To add to this, Malaysian current crime situation is worrying (Tang, 2009, Baharom, Habibullah, 2009, Habibullah, Baharom, 2009) and became a constant source of discussion and debate along the corridors of the managerial ranks within the police leadership (Sidhu, 2005).

This signifies the importance of the contribution to be made from empirical analysis in this paper since crime is not only a major statistical element in the Criminal Justice System but more importantly so, it effects the economy, social and international trade of the country indirectly. Hitherto, several studies has been conducted in the case of Malaysia to determine the exact relationship between crime rates and macroeconomic variables (Tang, 2009, Baharom, Habibullah, 2009, Habibullah, Baharom, 2009, Hamzah, Lau, 2011) but none of them included population and fertility rate in their economics of crime model. In fact, Baharom and Habibullah (2009) fails to identify any relationship between crime and macroeconomic variables even though a rough looks at the figure prove that they move together. This result most probably is caused by the exclusion of some important variables that are left behind. This paper are anticipated to provides extra information on the relationship between crime and socio-demographic variables especially for the policy makers and police department in both combating crime and improving economic and demographic instability.

3. Methodology

Data description⁽²⁾

Time series data spanning from 1973 to 2008 are utilized in this study. All the crime data were obtained directly from the Royal Malaysia Police Department⁽³⁾. Macroeconomic variables (unemployment and GDP) are provided by the Department of Statistics while demographic variables (population and fertility rate) were downloaded from the World Bank websites. Following the research recommendations of Cherry (1999), variables utilized in this study were transformed into log-linear form to certify that the estimated coefficients are elastic except for population, fertility, and unemployment rate.

Crime function model

Following Becker (1968) and its extension in Ehrlich (1973), this study estimates following models of economics of crime which will be analyzed differently for different categories of crime used in the study namely, total crime, property crime and violent crime for Malaysia;

Model 1: (total crime model);

$$ttl_t = \alpha + \beta_1 fert_t + \beta_2 gdp_t + \beta_3 ue_t + \beta_4 pop_t + \varepsilon_t$$

Model 2: (property crime model);

$$prop_t = \alpha + \beta_1 fert_t + \beta_2 gdp_t + \beta_3 ue_t + \beta_4 pop_t + \varepsilon_t$$

Model 3: (violent crime model);

$$vio_t = \alpha + \beta_1 fert_t + \beta_2 gdp_t + \beta_3 ue_t + \beta_4 pop_t + \varepsilon_t$$

where t_t is the total crime, $prop$ refers to property crime while vio represent the violent crime model, α is the constant and β refers to the estimation parameters. $fert_t$, gdp_t , pop_t , and ue_t fertility rate, Gross Domestic Product growth rate, population growth rate and unemployment rate respectively.

The reason for dividing the crime categories into property, violent and total crime models is due to the fact that violent crime are unique case of crime activities which can be influenced by variety if motives and it may not operate

in a predicted direction in the long-run as that which occurs to some extent with property crimes. Field (1990) argued that violent crime might be influenced by short-term influences which may be different from its long-term determinants. Hence, to identify any differences among the different categories of crime it is important to test the model separately.

Corman et al. (1997) highlights two problems in empirical testing of crime models, mutual causality between crime and the deterrence variables in a dynamic way which is not easily modelled using ordinary regression methods being the first and relative contributions of independent deterrence variables are not clear if multicollinearity exists among them as the second problem which can be overcome using a vector autoregressive (VAR) model. Also, Corman et al. (1997) pointed out that VAR is “*a useful alternative to the standard models in analysing what causes crime*”. The rest of the section will elaborate each steps required to complete the estimations in a VAR technique.

Univariate unit root test

As a prerequisite for a time series analysis we adopt battery of univariate unit root test. The ADF (Dickey, Fuller, 1979), PP (Phillips, Perron, 1988) and KPSS (Kwiatkowski et al., 1992) test are employed to act as supplement of validity evident. It can be verification for the consistency of the results obtained. The three testing procedures are special on their own way. All the testing procedures share the same null proposition of a unit root except for the KPSS which test the null of stationarity.

Cointegration test

When two or more variables in a system are found to be cointegrated, it is said to have a long-run equilibrium relationships. Granger (2004) pointed out that a pair of integrated series must have the property that a linear combination of them is stationary – they are cointegrated. The cointegration series developed by Johansen and Juselius (1988, 1990) provide a new insight in determining the long-run relationships between variables in a series before proceeding to the Granger causality test. Their test utilizes two likelihood ratios (LR) test statistics for the number of cointegrating vectors: namely the trace test and the maximum eigenvalue test. The Johansen procedure is well known in the time series literature and the detail explanation are not presented here.

Granger causality test

Engle and Granger (1987) exhibited that once variables are proven to be cointegrated, there will also be the existence of a corresponding ECM

representation. This ECM implies that changes in the dependent variable are a function of the level of disequilibrium in the cointegrating relationship which captured by the error-correction term as well as changes in other explanatory variables. For cointegrated model, we will test for the Granger causality in Vector Error Correction Model (VECM) by testing the significance of the error-correction term.

Consider the equation below⁽⁴⁾:

$$\Delta ttl = \alpha_1 + \lambda_{t-1} + \sum_{i=1}^n \phi_{11} \Delta fert_{t-1} + \sum_{i=1}^n \zeta_{12} gdp_{t-1} + \sum_{i=1}^N \omega_{13} \Delta ue_{y-1} + \sum_{i=1}^N \gamma_{14} pop_t$$

$$\Delta fert = \alpha_2 + \lambda_{t-1} + \sum_{i=1}^n \phi_{21} \Delta ttl_{t-1} + \sum_{i=1}^n \zeta_{22} gdp_{t-1} + \sum_{i=1}^N \omega_{23} \Delta ue_{y-1} + \sum_{i=1}^N \gamma_{24} pop$$

$$gdp = \alpha_3 + \lambda_{t-1} + \sum_{i=1}^n \phi_{31} \Delta fert_{t-1} + \sum_{i=1}^n \zeta_{32} \Delta ttl_{t-1} + \sum_{i=1}^N \omega_{33} \Delta ue_{t-1} + \sum_{i=1}^N \gamma_{34} pop_t$$

$$\Delta ue = \alpha_4 + \lambda_{t-1} + \sum_{i=1}^n \phi_{41} \Delta fert_{t-1} + \sum_{i=1}^n \zeta_{42} gdp_{t-1} + \sum_{i=1}^N \omega_{43} \Delta ttl_{t-1} + \sum_{i=1}^N \gamma_{44} pop$$

$$\Delta pop = \alpha_5 + \lambda_{t-1} + \sum_{i=1}^n \phi_{51} \Delta fert_{t-1} + \sum_{i=1}^n \zeta_{52} gdp_{t-1} + \sum_{i=1}^N \omega_{53} \Delta ue_{t-1} + \sum_{i=1}^N \gamma_{54} ttl_t$$

Equation above consists of α as the constants, λ as the cointegration vector which is the Error Correction Term (ECT) and ϕ , ζ , ω and γ refers to the estimation parameters. If the variables are found to be not cointegrated, then the following Granger causality test will be conducted based on standard VAR procedures. Although the cointegration test provides insight on the relationship shared among the variables in a system, it does not indicate the direction of causality of the variables included. Granger causality test helps us to determine the direction of causation of all the variables in the system (Engle, Granger, 1987) and come to the conclusion of which variable have influence on the other.

4. Results and discussion

Univariate unit root test

All the three tests involved reveals that the tests statistics are smaller than the conventional significance level in their level form for each of the variables except GDP. Only GDP are stationary in the level form [i.e.: integrated of order $1 - I(0)$] for all the tests carried out. Strong evidence was found for stationarity in all the tests' first difference form since the tests statistics are larger than the conventional significance level for all the variables⁽⁵⁾.

Cointegration test

After determining the stationarity properties of the variables, we proceed to determine the long-run equilibrium of the system under our investigation. We utilized the Johansen and Juselius (1988, 1990) in our study although our univariate unit root tests provide mixture of order of integration among the variables. This is supported by the argument in Johansen (1995) that states that having stationary variables in a system theoretically not an issue. The null hypothesis of no cointegrating vector ($r=0$) in favour of at least one cointegrating vector is rejected at 5 percent significance level for the first two model (see Table 2). In the case of total crime model and property crime model, it is noted that both the trace and the maximum eigenvalue tests led to the same conclusion – the presence of one cointegrating vector.

Rejecting the null hypothesis of no cointegration implies that the two variables do not drift apart and share at least a common stochastic trend in the long run. On the other hand, both the tests failed to reject the null hypothesis of non-cointegration in the case of violent crime even at the 10 per cent level. As predicted earlier, violent crime might portray different results that property crime due to the differences in the nature of the crime itself. Violent crime are non-pecuniary related by nature thus the cause of violent crime might be significantly different than that of property crime which primary focus is pecuniary gain. There are several arguments related to failure in identifying any significant relationship in a violent crime model. Underreporting problem acknowledged earlier should be among one of the possible explanations since violent crime such as rape, murder, assault, and voluntarily causing hurt victims usually know the doers hence discouraging police report. Another important explanation will be the hierarchical nature of uniform crime reporting problems (Levitt, Miles, 2004). For example, in a situation where a woman was raped and brutally murdered, only the murder case will be reported since it is more serious causing a loss of life.

Table 2

Cointegration Analysis					
Panel A: Total crime model					
		$k = 1 \quad r = 1$			
Null	Alternative	λmax		Trace	
		Unadjusted	95% C.V.	Unadjusted	95% C.V.
$r = 0$	$r = 1$	36.32 (0.03)*	33.88	81.35 (0.00)*	69.82
$r \leq 1$	$r = 2$	26.69 (0.65)	27.58	45.02 (0.09)	47.86
$r \leq 2$	$r = 3$	11.06 (0.64)	21.13	18.33 (0.54)	29.80
$r \leq 3$	$r = 4$	7.16 (0.47)	14.26	7.27 (0.55)	15.49
$r \leq 4$	$r = 5$	0.11 (0.74)	3.84	0.11 (0.74)	3.84
Panel B: Property crime model					
		$k = 1 \quad r = 1$			
Null	Alternative	λmax		Trace	
		Unadjusted	95% C.V.	Unadjusted	95% C.V.
$r = 0$	$r = 1$	37.74 (0.01)*	33.88	83.22 (0.00)*	69.82
$r \leq 1$	$r = 2$	26.73 (0.06)	27.58	45.47 (0.08)	47.86
$r \leq 2$	$r = 3$	11.19 (0.63)	21.13	18.75 (0.51)	29.80
$r \leq 3$	$r = 4$	7.42 (0.44)	14.26	7.55 (0.51)	15.49
$r \leq 4$	$r = 5$	0.13 (0.72)	3.84	0.13 (0.72)	3.84
Panel C: Violent crime model					
		$k = 1 \quad r = 0$			
Null	Alternative	λmax		Trace	
		Unadjusted	95% C.V.	Unadjusted	95% C.V.
$r = 0$	$r = 1$	27.30 (0.23)	33.88	68.24 (0.07)	69.82
$r \leq 1$	$r = 2$	22.97 (0.17)	27.58	40.94 (0.19)	47.86
$r \leq 2$	$r = 3$	12.99 (0.45)	21.13	17.97 (0.57)	29.80
$r \leq 3$	$r = 4$	4.98 (0.74)	14.26	4.98 (0.81)	15.49
$r \leq 4$	$r = 5$	0.00 (0.99)	3.84	0.00 (0.99)	3.84

Notes: Asterisks (*) denote statistically significant at 5% level. k is the lag length and r is the number of cointegrating vectors(s). The unadjusted statistics are the standard Johansen. Figures in the parenthesis are the probabilities of rejection for Johansen tests.

VECM Granger causality test

Prior to the cointegration properties of the system, we proceed to examine the causal linkages among the variables. Population is found to be endogenous in both the total crime model and property crime model. This is shown in population equation where the ECT is statistically significant suggesting that population solely bears the brunt of short run adjustment to bring about the long run equilibrium in both total crime and property crime model (refer to Table 3). The *t*-statistics on the lagged residual are also statistically significant and negative in both models supporting the Johansen results reported earlier. The speed of adjustment for total crime model is -0.254 while property crime model reports -0.153 speed of adjustment.

Table 3

VECM Granger causality results							
Dependent Variables	Δ fert	gdp	Δ pop	Δ ue	Δ ttl	ECT	
						Coefficient	t-ratio
<i>X</i> ² - statistics (p-value)							
Panel A: Total crime model							
Δ fert	-	5.079 (0.08)**	2.018 (0.36)	0.322 (0.85)	4.720 (0.09)**	-0.107	-1.793
gdp	0.471 (0.79)	-	1.331 (0.51)	1.399 (0.50)	3.934 (0.14)	0.013	0.005
Δ pop	4.908 (0.09)**	23.979 (0.00)*	-	5.680 (0.06)**	20.289 (0.00)*	-0.254*	-4.938*
Δ ue	1.755 (0.42)	2.373 (0.31)	1.673 (0.43)	-	3.976 (0.14)	-0.285	-0.802
Δ ttl	0.030 (0.99)	0.902 (0.64)	0.344 (0.84)	0.105 (0.95)	-	0.093	-1.334
Panel B: Property crime model							
Dependent Variables	Δ fert	gdp	Δ pop	Δ ue	Δ prop	ECT	
						Coefficient	t-ratio
<i>X</i> ² - statistics (p-value)							
Δ fert	-	4.405 (0.11)	2.228 (0.14)	0.317 (0.85)	3.959 (0.14)	-0.059	-1.633
gdp	0.697 (0.71)	-	1.539 (0.46)	1.302 (0.52)	3.899 (0.14)	-0.156	-0.106
Δ pop	4.140 (0.13)	24.245 (0.00)*	-	6.240 (0.04)*	18.189 (0.00)*	-0.153*	-4.945*
Δ ue	1.846 (0.40)	2.384 (0.30)	1.668 (0.43)	-	4.091 (0.13)	-0.177	-0.83
Δ prop	0.059 (0.97)	0.775 (0.68)	0.215 (0.90)	0.027 (0.99)	-	-0.049	-1.52

Panel C: Violent crime model							
Dependent Variables	Δ fert	gdp	Δ pop	Δ ue	Δ vio	ECT	
	X^2 - statistics (p-value)					Coefficient	t-ratio
Δ fert	-	1.393 (0.27)	5.122 (0.01)*	1.035 (0.37)	4.831 (0.02)*	-	-
gdp	0.951 (0.48)	-	0.738 (0.49)	0.546 (0.59)	1.209 (0.32)	-	-
Δ pop	2.341 (0.12)	0.247 (0.78)	-	0.064 (0.94)	1.557 (0.23)	-	-
Δ ue	1.470 (0.25)	3.110 (0.06)*	0.615 (0.55)	-	2.094 (0.14)	-	-
Δ vio	2.178 (0.13)	3.977 (0.03)*	8.294 (0.00)	1.704 (0.20)	-	-	-

Note: The X^2 - statistic tests the joint significance of the lagged values of the independent variables, and the significance of the error correction term(s). The Vector Error Correction Model (VECM) formulation established only in two models (Total Crime Model and Property Crime Model) with one error correction term for each model. For the Violent Crime Model we use the standard VAR model since no significant cointegration vector was found from Johansen Cointegration Test (Table 2). Δ indicates variables that are stationary after first difference. Figures in the parentheses are the p -values. Asterisk (*) and (**) indicates statistically significant at 5% and 10% level.

The magnitude of these coefficients indicates that the speed of adjustment towards the long-run path varies between the two models. Particularly, it will take around four years for total crime model and 8.5 years for property crime model to adjust to the long run equilibrium due to the short run adjustments. The error correction coefficients are fairly small for property crime models which suggest that once shocked, convergence to the long-run equilibrium is slow for property crime compared to the total crime model.

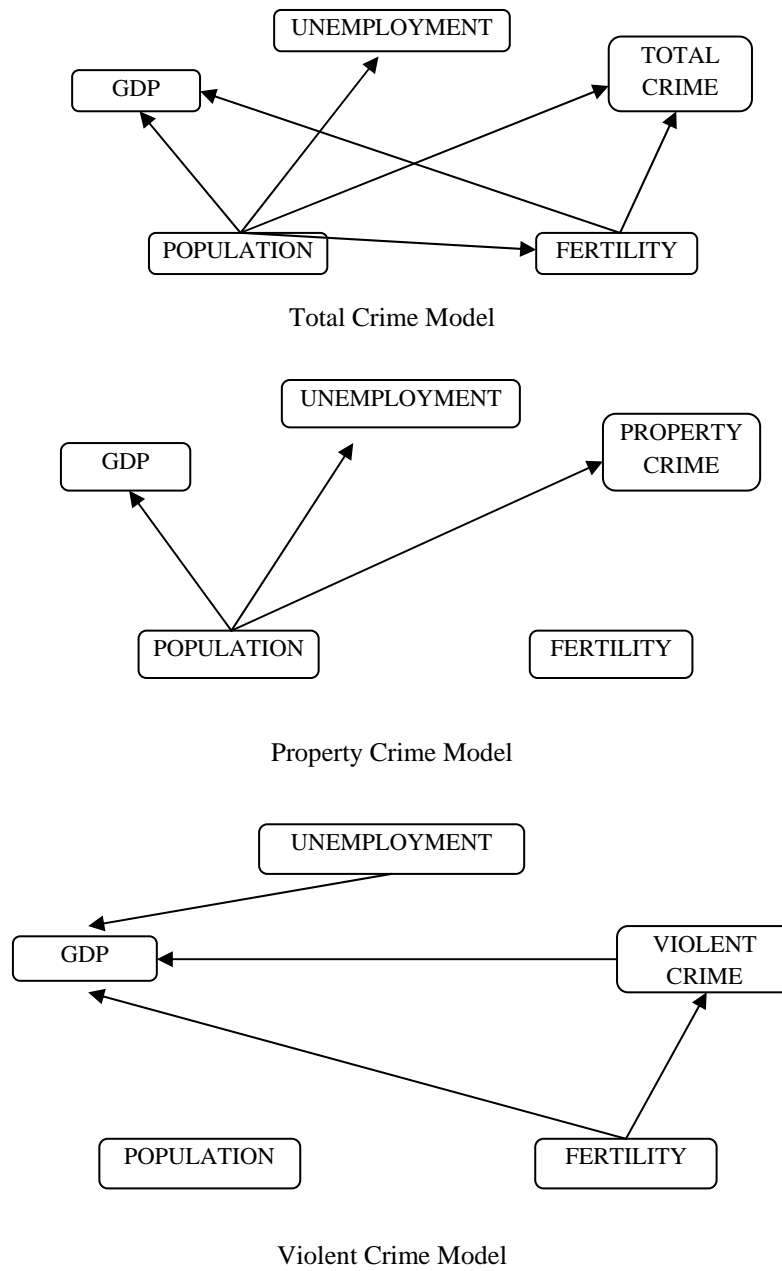


Figure 1. Summary of short-run causal linkages

For the short-run Granger causality analysis, it is proven that there exist causal linkages among the variables for all the three models under investigation either at 5 percent or 10 percent significance level. Fertility are the cause for GDP and total crime in Malaysia while population can cause all the variables (fertility, GDP, unemployment and total crime) involved in the first model. For property crime model, only population can Granger cause GDP, unemployment and property crime at 5 percent significance level. Lastly, violent crime is the cause for GDP and fertility can cause population and violent crime in Malaysia. At the same time, unemployment is proven to Granger cause GDP in the last model. Kendall and Tamura (2008) found negative relationship between violent crime and fertility rate among unmarried women using a panel of time-series analysis in 20 countries. Summary of the causal linkages for all the models are provided in Figure 1.

Further analysis

Having established all the relationship from the results, this paper advances to ascertain the relationships found earlier for beyond sample estimation. In order to gauge the relative strength of the variables and the transmission mechanism responses beyond the sample observed, we shocked the system and partitioned the forecast error variance decomposition for each of the variables in the system (Masih, Masih, 1995, 1996). The innovation of the VDCs will be represented in percentage form and strength of five variables to their own shocks and each other are measured by the value up to 100 per cent. A variable that is optimally forecast from its own lagged values will have all its forecast error variance accounted for by its own disturbances (Sims, 1982). The VDCs are executed using time horizons of 1 to 50 years.

Table 4 provides the decomposition of the forecast error variance of all the variables in the system for the three models employed in this study. For the total crime model, it is obvious that even after 50 years' time horizon; most of the variance in total crime are explained by its own shocks (61%) rather than the other variables in the system. Although VECM results indicates that the causality runs from fertility and population to total crime, the causal linkages may last for a short-term only with insignificant value (0.2% to 1.7%). In the case of property crime, although population is found to be endogenous and can cause property crime in the short-run from the VECM results, it is evident that GDP and unemployment can explain the variance in the property crime after 50 years ahead. Almost 36% of GDP and 28% in unemployment will explain the

property crime rates for Malaysia in the long run. It must be noted that although the short-run relationship are rather weak, it is lighten in the long run that any adjustment made to GDP and unemployment will affect property crime rate in the long-run (say, 50 years ahead). Model 3 shows that all other variables can explain violent crime up to 86% of its forecast error variance in the long run (50 years' time horizon). Although only fertility is found to cause violent crime in the short-run from the VECM analysis, it is obvious that all other variables can affect violent crime in the long-term.

Table 4

Variance Decompositions (VDCs)					
Years	Due to Innovations in:				
	fert	gdp	pop	ue	crime
Total crime					
1	2.86	31.37	0.00	0.00	65.77
15	0.26	36.90	1.73	0.22	60.88
30	0.16	36.70	1.72	0.17	61.24
40	0.13	36.66	1.72	0.16	61.33
50	0.12	36.63	1.72	0.15	61.39
Property crime					
1	2.88	34.65	0.01	19.70	42.76
15	0.23	36.12	0.99	27.77	34.90
30	0.13	35.84	0.94	27.92	35.18
40	0.10	35.77	0.93	27.96	35.25
50	0.09	35.72	0.92	27.98	35.29
Violent crime					
1	10.97	5.21	4.45	1.71	77.66
15	43.89	10.39	10.70	4.97	30.06
30	59.53	7.11	10.82	3.07	19.48
40	64.62	6.04	10.88	2.44	16.01
50	67.98	5.34	10.92	2.03	13.72

Note: Figures in the first column refer to number of years. All other figures are estimates rounded to two decimal places – rounding errors may prevent perfect percentage decomposition in some cases. Column in bold represents their own shocks.

Results are comparable to the one estimated by Gaviria et al. (2011) using the neighborhoods data for Bogotá in analyzing the causal relation between adolescent fertility and homicide rates. They explain the relationship in a longer time span indicating that places with high adolescent fertility rates at the moment the kids of adolescent mother become teenagers are more likely to have higher homicide rates when these teenagers reach their peak crime ages between 18 to 26 years old. The results are independent of access to education among the children. This partly explains our findings on long-run relationship between violent crime and fertility, unemployment, GDP and population rate in Malaysian case.

5. Conclusion and policy implications

This paper is initiated at providing better understanding on the relationship between different crime categories and various socio-demographic variables in Malaysia. It is important to note that this study proves the existence of either a short-run or long-run relationship among the variables involved in the system. From the VECM analysis, we found that population are the endogenous variables which is caused by crime while GDP and fertility are the variables that leads (exogenous) the property crime and total crime in Malaysia. This results is further strengthened by the VDCs analysis for the beyond sample period that also shows GDP as the most exogenous variables in the system. From policy perspective, this study is pinpointed to provide better understanding of the dynamics of different categories of crime in Malaysia prior to any implementation or formulation of policies to combat crime.

Since GDP and fertility are found to be the leading variables in the system, it is suggested that government focus on correcting both of them to give long-term effect to the crime rates rather than spending on law and enforcement for short-term insignificant effect. Malaysia is not unique in facing the risk of increasing world crime rate each year. The stylize fact of alarming crime increase and deteriorating public perceptions towards police drives the implementation of National Key Results Areas (NKRAs) in 2009 as part of the seven key areas concerning the people of Malaysia. NKRA represents a combination of short-term priorities to address urgent public demands and long-term issues affecting the people that required the government's attention immediately. Among those seven key areas, reducing crime was highlighted on the first issues to be addressed under the Minister of Home Affairs.

The policy implications derived from the results suggest that government consider policies which affect the economic and social structural factors which determine the crime rate in the long-run rather than focusing on increase expenditure on law enforcement alone. It is important that both economic and social characteristics are corrected and law enforcement strategies tighten in order to ensure decrease in crime rates can be retained in the long run. While existing crime fighting policies and expenditure are adequate for decreasing crime in Malaysia, it is also important to ensure that expected return from crimes are decreasing for potential criminals. There are several economic and social variables such as equality, unemployment, and population or fertility control to be focused on to ensure the expected returns to illegal market are less favourable. Policymakers should also focus on the population density and fertility rate that can affect crime since too many people and congested neighbourhood without fair distribution of income will increase crime in the long run.

Notes

- (1) The public safety index is measured by two sub-indices namely, crime per thousand population and road accidents per thousand vehicles. Table 1 provides detailed explanation on Area Indices and the MQLI differences in 2007 and 2008.
- (2) Vast empirical studies included control variables in their estimation models to control for any other variables that may influence crime but not included in the model. We found it unnecessary under two circumstances, 1) from the inconsistency in the results obtained in earlier studies it is well-acknowledged that criminal actions are argued to be determined by numerous factors, some not observed in the model studied while others are immeasurable in a quantitative analysis leading to inconclusive number of variables to be controlled, and 2) following the argument by Clarke (2012) who concluded that including a control variables could cause larger problems to the model tested such as increase bias on estimated coefficient, introduce measurement error, introduce endogeneity into specification and/or numerous problems can occur which affect the standard errors. Interested readers can refer to Clarke (2005, 2009, 2012) for detailed explanations on nuisance of control variables.
- (3) It is important to acknowledge one serious shortcoming from the crime official statistics utilized for an empirical investigation. Official crime statistics portrays only the crime that are reported to and recorded in the police department. Since many crimes are either ignored or considered inconsequential, it goes unreported and underrated. However, less serious crime has the high propensity of going unreported while more serious crimes do get reported in common situation. Although there are a lot of unreported cases of crime, available statistics can at least portray a general crime pattern in a country.
- (4) Vector Error Correction Model (VECM) is illustrated for Model 1 only for brevity.
- (5) The variables GDP are not tested for the 1st difference form because it is already stationary in its level form. Results are not provided in this paper for brevity but available upon request.

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The metropolitan area as a knee-jerk response to the multilevel governance and its derived national public decisions

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Abstract. *The paper objectifies the first part of a larger projects aiming at establishing a public decision-making map pertaining to the negative externalities in the framework of the economic approach of subsidiarity in the multilevel governance (the case of Romania). The first part of the larger research project refers to testing whether the economic theory of the European Union multilevel governance, with its core consisting in the subsidiarity principle, puts more pressure on the national public decisions (more specifically those related to specific market failures), though it interferes with all state's functions and their specific decisions.*

Our research thesis begins by establishing whether the relationship between the local political elites and public governance at the level of towns and communes is considered a very straight forward, even obvious relationship. The political parties, by means of the publicly and democratically-elected officials (mayors and local council-members), make the most important decisions concerning public affairs (i.e. pertaining to a market failure examined by a second stage of the project).

In an attempt to modernize the Romanian administrative system, to make public administration more dynamic, flexible and pro-active, the local political leaders decided the development of a new type of structure, the metropolitan area. The metropolitan areas, due to the constraints of the law, were established as associative organizations, composed of several administrative-territorial units.

The paper at hand presents the establishment of the metropolitan areas in Romania as a political decision to associate towns and communes, in view of gaining access to better-performance instruments for local economic development. The emergence of the metropolitan areas in our country is strongly connected with the local political elites, the local political actors representing, in fact, the engine of the metropolitan structures and regional development.

The research will focus on the comparative analysis between the metropolitan areas in Romania, in terms of their grounds for establishment, their composition, both from the organizational and the political viewpoints, and their role in the local/regional economic development.

The case study employed in the research paper refers to the positioning of the metropolitan areas in Romania, in relation to the development regions, discussing the particularities of the metropolitan areas created with administrative structures within the same development region, as opposed to those comprising towns and communes belonging to different regions.

Furthermore, an analysis will be performed with respect to the political belonging of the leadership of the towns and communes associated in metropolitan areas, attempting to identify the possible link between this political belonging and the decision to establish a specific metropolitan area.

Finally, the authors will present the connection between the functionality of the metropolitan area (quickness of decisions, consultations between the towns and communes, unity of decisions) and the specific political parties in power in those administrative structures.

Keywords: regional development; multi-level governance; local authorities; public decision; metropolitan areas.

JEL Codes: D61, H11.

REL Codes: 13I, 13K.

1. The general framework

The metropolitan development comes after the urban development, both structurally and chronologically, this assuming a new phase of the urban system development by extending it outside the initial borders. With the increasing population in the surrounding areas of the cities, particularly through cities' immigration phenomenon, but also by attracting people from other places, the geographical and administrative boundaries of cities are becoming inadequate to define the resulted urban areas. This expansion is equally driven by an extensive endogenous local economic development process, which forces, in order to develop the competitiveness level, the association of several communities around an urban centre which exercises its quality of growth pole. The metropolitan development is therefore an administrative and economic challenge for the management and coordination of a greater palette of resources.

This form of city extension into the surrounding space and of its evolution that is integrated with the settlements in its peri-urban area is especially known in the developed countries, being a feature of a new phase of urban development, which comes after the stages of population concentration in the actual city and of suburbs' development. The experts (Brenner, 2003) have named these new social and economic realities metropolitan areas.

The metropolitan development process, called metropolisation, is the process of creation, building and development of the metropolis. This process needs to be examined for a better understanding of the *modus operandi* in terms of the factors contributing to its development. In this respect it is necessary to distinguish in terms of the terminology used to characterize this process, namely notions like *metropolitanism* and *metropolitanization*⁽¹⁾, concepts which are strictly related to the metropolitan development. Following the same logic of Charles Ricq (1983, pp. 122-123) when drawing the distinction between "*regionalism*" and "*regionalization*" and if we consider that both concepts are strictly related to the process of regional development, we can say that the *metropolitanism* is the equivalent of *regionalism*, and *metropolitanization* is equivalent of regionalization in the metropolitan development process. Therefore, the *metropolitanism* is the result of a "bottom up" process, of certain communities' awareness for regional imbalances, economic and ethno-cultural underdevelopment, centralism of the state where they live, while *metropolitanization* is the "top to bottom process", whereby the states acknowledge the regional imbalances with all the phenomena that accompany them, the economic underdevelopment, excessive centralization and further the decentralization of the political and legal system through a institutionalization at the metropolitan level.

Metropolization belongs to a process that, from the functional organization point of view, reconfigures space. In fact, the entire metropolitan development process has in mind a spatial integration factor, which to allow the unitary development of localities and not a change of the borders between them, but a redefining of the cooperation areas, a rapid integration in the European development networks, established on metropolitan areas and regions. It is a matter of an urbanization process that leads to the intensification of relations between the upper levels of urban hierarchies. From the spatial viewpoint, it is noticed the population's tendency to regroup inside and around large cities or metropolis, and from the functional point of view, we are dealing with a tendency of concentrating activities inside large cities or metropolis.

For an approach as correct as possible of the metropolitan process, it is necessary to also introduce in the current context of the concept of *metropolitanspace*⁽²⁾ the definition of the notion of *metropolis*.

Metropolitan spaces⁽³⁾ are the engines of growth in the national territories. There are a series of interdependences between the spatial, economic and social mutations which redefine the metropolitan space. They presuppose the establishing of links between the strategies of enterprises, the socio-economic changes, the recomposing of power relations and the transforming of metropolitan spatial organization.

The metropolitan space is constituted around a metropolis (over one million inhabitants), standing out through its capacity to support the metropolis in view of its development in the regional and national space. Seen from the quantitative point of view, the metropolitan space provides 80% of the incoming/outgoing flows. They represent a hierarchized space, in which medium and small towns or other rural localities with central place functions have diffuse influence areas.

The metropolitan space comprises a network of main and secondary poles, identified depending on a series of indicators relevant for the correct setting of the attractiveness degree of the composing settlements, being characterized by a wide range of economic specializations which, together with the specializations at the metropolis level, support its development at the regional and national level.

The metropolitan area should be analysed from a complex perspective, including a series of issues pertaining to the political organization, administrative procedures and spatial planning and providing public services to residents who are considered in different administrative and territorial units.

The town is the central element of the metropolitan space. The essence of the quality of town resides from the position it occupies in the structure of the commercial, political, social and cultural networks within a region, a country or at the global level. Regions and metropolitan areas emphasize their comparative advantages within the networks where they work.

Throughout history, the cities and the European urban regions were and still are the contributing factor to the development and economic, social, technical and cultural transfer. They are the ones who develop the effectiveness and competitiveness of the surrounding regions, of Europe as a whole.

If for a long time, the term *metropolitan* indicated the large cities, state capitals, subsequently the metropolises indicated the political and economic capitals of a region, of certain large provincial urban centres, designed to help counterbalance the influence of a country's capital⁽⁴⁾.

The metropolis is a concept, a term that covers, subordinates and reflects a large part of the artificial created and worked by man and implemented in the natural environment where the human society exists, works and evolves and which is represented by major cities in terms of the number of inhabitants and also of the space expansion.

The main feature of metropolis-cities is the will to fulfil their potential and to assert themselves as valuable entities in the European and global context through specific categories of options aiming at sustainable development and competitiveness.

Establishing the metropolitan areas meets the needs or opportunities stemming from organic cities' development. The process of urbanization across Europe led to the interdependent development of metropolises with localities in their area of influence, already forming primary metropolitan realities which, even if are not called metropolitan areas practically operate as uniform areas, relatively independent. The first characteristics of metropolitan areas can thus be extracted, which are distinct forms of human settlements that consisted in a large number of people living in or around a centre of great density (Miles, 1970).

Many of the strategic issues of urban planning at European level cannot be treated directly, only at the level of metropolitan areas, in order to facilitate the development of production, exchange and consumption of goods in the European Union, so as to avoid bottlenecks due to both excessive localism and national centralism. It essentially refers to the formation of metropolitan areas as growth poles and regions developed at European level included in national and transnational strategies. The development of metropolitan areas facilitate the integrated spatial planning at the regional level so that the disparities between the centre and the periphery area diminished, which were caused by the dispersion or marginalization generated by the isolation of certain settlements without opportunities, removal or mitigation of such imbalances leading to the improvement of life quality.

Identifying common trends of development and cooperation of the settlements within the area as well as creating new forms of institutional organization and administration, of externally representing interests, will strengthen their ability to compete and deliver public services. It must be

underlined that, in the framework of the research project of which this paper is part of, the *question* raised throughout the project mainly concerns one of the State's four functions, namely the distribution function, which embodies the decisions made to ensure equity, social justice and income distribution. Aiming at such a sensitive issue like equity, it can be said that in fact the public decision-making pertaining to this distribution function is strongly influenced by the political factor, more than other decision stages like building knowledge on public sector activities and organisation design (financing method, expenditures and local and central duties), anticipating the consequences (the effects of a tax on return – price increase, wage cut, increasing the retirement age), or assessing the alternatives (Matei, 2006, p. 3). These stages apply for all public decisions taken in the framework of the other state's functions. For example, in the case of the allocative function, due to the fact that the public decisions pertaining to this function aim at the government's intervention in the market's allocative function so to correct its negative effects (e.g. negative externalities), the stage referring to consequences' anticipation proves to be quite important (Matei, 2003, pp. 26-27). A similar situation can also be found in the decision context of the stability function, which intervenes in case of macroeconomic imbalances seen in the case of inflation, unemployment, economic downturn, deficits of the trade balance and balance of payments etc. (Ailenei, 2002). In turn, the public decisions pertaining to the regulatory function aimed at reducing the tendencies towards monopoly or, in the context of this research, the negative externalities refer to setting limits for the discretionary behaviour and freedom of individuals by imposing certain rules (through a functional juridical system), thus emphasising the decision-making stage that aims at building knowledge on the public sector activities and organization.

Going back to the public decision-making, no matter to which state function pertains to, the decision variables specific to the field where the decision is applied are difficult to be defined. In the public decisions' case the problems at stake are specific to both the private sector such as efficient allocation, productivity, performance (Constantin et al., 2011, pp. 889-910) and to the issues that only concern the public field (provision of public goods and services, collective choice, externalities).

All in all, the economic competitiveness growth of localities in the metropolitan area will be ensured against the neighbouring regions. Development policy making usually involves a good cooperation between municipalities in the areas of spatial planning, housing, infrastructure, economic development, environmental protection, and human resources. The best performance actions are usually those related to public transportation, water supply, waste management and investment projects.

The political, social and economic relations between the city and the region that surrounds have always been linked. The symbiotic relationship

between the compact city and suburbs with low population density is how it influences the economic and political destiny of the suburban areas.

From an administrative point of view, the metropolitan structures are dependent on the political, social, economic, historical, geographical factors, and therefore cannot be designed and manufactured as finished form in a laboratory/office. Administering the metropolitan areas may raise a number of challenges, these referring to a series of “changes in the patterns of development of territories with low densities through a voluntary cooperation between existing local administrations through state intervention in the provision of urban services, through a public-private coordination, through the existence of regional agencies in addition to the administrative structures and through providing public facilities aimed at stimulating regional institutionalization” (Downs, 1994).

The operation of the metropolitan area requires a careful analysis of the administrative implications in terms of metropolitan coordination as well as an analysis of the economic implications that such a structure can generate. The metropolitan leadership role is to determine the expected results from various forms of administration in the same dynamic of the urban economy in the field of economic strategies’ formulation and development, land market regulations, infrastructure development, fiscal policy making.

In ensuring the sustainable development of the metropolitan area, this implies a strategy that takes into account the social and economic needs of the population, based on the scheduling option that, following impact assessment, best compensates the resources’ losses that cannot be immediately repaired or replaced, so do not limit the future development of the area. The sustainable development perspective assumes a picture of the state of the environment, evaluating the means to improve the quality of the urban framework, urban renewal and regeneration of resources by which to reduce the negative impact of certain area development strategies and thus ensuring a sustainable metropolitan development.

2. The legal regime of the metropolitan areas

A first legal base in the activity of urban and rural space development, in line with their potential, aspirations of residents, pertains to the Law No. 350/2001, where for the first time the legislator defines the “metropolitan territory” as “*the area lying around large urban areas delineated by research studies, in which mutual relationships are created, influencing the field of communications, economic, social, cultural and urban infrastructure. Usually the metropolitan territory limit exceeds the administrative limit of the metropolitan municipality and may exceed the county limit to which it belongs.*”⁽⁵⁾

This definition corresponds to the general principles contained in art. 5-9⁽⁶⁾ of the Law, which aim to sustainably develop on long, medium and short-term the localities in Romania. At the same time, the legislature defines the “localities’ network” as “all urban and rural areas of the national territory, county, functional area whose existence and development are characterized by a set of relationships developed at multiple levels (economic, demographic, service, political and administrative). The Law No. 351/2001 approving the National Spatial Improvement Plan – Section IV – Localities’ Network⁽⁷⁾, the first legal steps were made regarding spatial development planning. For a balanced development of the territory around the Romanian capital and of tier I cities, the basic administrative and territorial units in these areas may join a voluntary partnership for the establishment of metropolitan areas corresponding to the urban space. The association helps to strengthen the complementarity between these units and the decision makers interested in developing the territory.

The metropolitan areas are thus organized as legal entities without legal personality, and can work within a perimeter independent of the boundaries of the administrative and territorial units, mutually agreed by local authorities.

Based on the analyses drawn from the study of the constitutional norms, art. 120-123⁽⁸⁾, in conjunction with those from the local government law⁽⁹⁾, governing local authorities in Romania, we can say that the legal regime established for the local government is a decentralized administrative system (Vida, 1994, p. 18, Popescu, 1999, p. 33, Apostol Tofan, 1997, p. 317), based on the principle of local autonomy. Also, the same legal ground ensures the dual nature of the village and the city, as “local communities and administrative and territorial units” (Iorgovan, 2001, p. 537).

Through local communities are designated municipalities, cities and counties and they represent legal persons of public law, defined by territory, determined property, financial resources and election of its representative by universal, equal, direct and secret vote.

According to the constitutional norms and the Local government law, the local authorities work as “independent authorities” with “the right and ability to solve and manage within the law in their own name and in the public interest, an important part of public business”⁽¹⁰⁾ to manage public property belonging to the village, town or county and the right to own and sufficient resources of which it can dispose freely in exercising their powers, to establish local taxes, and to develop, approve and execute local budgets.

Based on the principle of local autonomy, the local authorities have the right to cooperate and associate, under the law, establishing associations of intercommunity development, with legal status, of public law and public utility, so to achieve local public services of local interest, but also to cooperate,

collaborate and associate with other administrative and territorial units in the country or abroad, or to participate in international associations.

All of these duties established by law in the task and responsibility of local authorities have, as the main ground and purpose, solving public affairs and meeting local needs and interests. The local territorial communities meet a determined territorial space what causes them to be based on their classification into communes, towns, municipalities or counties.

In the local government system in Romania, in addition to the non-governmental organizations that can be established at the initiative of individuals or legal entities and that operate to promote the interests of various community type, the autonomous local authorities themselves can form associative structures.⁽¹¹⁾

The current legislation especially recognizes the local authorities' right, within their powers, to cooperate and associate with other local government authorities in the country or abroad. At the same time to protect and promote their interests, the local authorities have the right to join national and international associations in accordance with the legal provisions.

Under the legislation, the association is a legal entity of three or more persons, which based on an agreement, put together without the right of return, the material contribution, knowledge and their work contribution for solving general activities, community or, where appropriate, in their private patrimonial interest.⁽¹²⁾

The strongest and most important legal form of local association in Romania, in accordance with the legal provisions in force, is represented by the Intercommunity Development Association with public utility status, which is assuming and exercising, in the interest and in the name of the associated local authorities, all powers and duties, rights and obligations of the limited scope of a public service that have been transferred.

The purpose of such institutionalized forms of association is the cooperation of administrative-territorial units, represented by the local authorities so to establish, finance and provide communal services of public utilities, including appropriate technical infrastructure and to mutually organize, operate and explore such services. The reason for establishing the Intercommunity Development Association is set in the Constitutive Act and in the Association Statute specifying the purpose of establishing the association as an instrument designed for the promotion and protection of the common interests of the associated local authorities.

The development association model is used as a form of coordination of administrative fragmentation (management forms) with the functional one (of the public services) to identify a response to the growing economic size of services and equipment of the metropolitan territory. This model provides the

continuity of projects operating in the medium term regardless of the changes generated by the electoral cycles.

The Intercommunity Development Associations are an organized form by which the local authorities delegate certain powers of local interest to an organization outside the local administrative structure.

This organization can be a new or existing public organization that went through the process of privatization. During operation, the development association meets the statutory institutional terms including the law, the forms of local authority, as well as the devolution state organizations in the territory.

The Intercommunity Development Association exploit the local economic potential of the metropolitan area for the purpose of which is created and attracts external funds, in order to promote its economic and social development. The intercommunity associations have the power to decide how to manage the community services of public utilities, either directly or through delegated management.

Another law governing the metropolitan area is provided by Law No. 215/2001, amended by Law No. 286/2006, which, although it does not alter the content of the concept of “metropolitan area” brings a major addition to its legal status, giving it legal personality of private law and public utility.

The recognition of the legal personality of the metropolitan area requires the ability to enter into legal relations in its own name, but within the mandate granted by local authorities to exercise delegated or transferred tasks. Its legal status is of private law, which means, on the one hand, the agreement of the local authorities elected in the component administrative-territorial units, and the freedom to establish legal relationships based on the free agreement will, with patrimonial or non-patrimonial character.

Even though it has private nature, the important feature of this association is to maintain the independent nature of each component administrative-territorial unit. Therefore, the association does not create a new administrative-territorial unit, which are still the associated towns, cities or villages that delegate or transfer their duties under the law, to achieve common services in the interests of all local communities that form them. As a result of the preservation of the autonomous nature is the participation of the inhabitants in establishing goals and objectives of this association, as well as the transparency of public services and joint activities they carry out in the interest of the local communities.

3. The impact of the metropolitan areas on the territorial development

The development of cooperation relations within the development regions presupposes the achievement of territorial development.

By means of territorial development, additional economic growth is added to the overall economic growth, surplus coming from the local character of the action which cannot be achieved through economic policies adopted at the national level.

Metropolitan development is mainly centred on the economic ability of the local actors, on the resources held by them, and on the complexity of the relational interdependency developed between different administrative-territorial units.

Under these conditions emerges the problem of the optimum ratio between territorial development and the development of the national economy, in its entirety.

The achievement of this ratio presupposes the organic integration of the elements composing the territory of the administrative-territorial unit, of the sectors of activity, within the national economic ensemble, in conditions of high economic efficiency.

Optimum, in territorial development, means the selection of that development alternative for a territory or area which ensures either the maximization of effects at the level of the resources existing in the territory, or the minimization of efforts per unit of consumed resource.

It is considered that only that territorial economy which aims at maximum efficiency, at smallest efforts per unit of useful effect, targets this ideal.

The fundamental criterion of territorial optimization is represented by the minimization of the consumption of material, human, financial and any other nature resources, involved in the territorial development process.

The economic optimum presupposes its achievement in each of the national economy compartments: sectors, production units, geographic area - namely, the achievement of the partial optimums. This means that one can speak of an economic optimum, both at the level of an activity, of a sector, and at the territorial, zonal or regional level.

The territorial or zonal economic optimum may be defined as: that state of the economy determined by the natural conditions, climate and soil, the structure of the available and attracted resources for the development process, population structure and its needs, the economic and social connections in the territorial profile, the specific manner of integration in the national economic system – which requires the smallest consumption of resources, per unit of useful effect obtained.

The essential condition for achieving the economic optimum is the state of balance. Starting from the fact that economic balance “is a state of concordance between the interdependent sides of social production, the results of the conjugated action of the technical, economic, social and political factors”, it targets in territorial profile the achievement of certain necessary correlations

between the economic sectors and between the activities producers of material goods in the different areas of the country, on the basis of the resources they have, in correlation with the real social need.

This is the reason why the achievement at the level of the administrative-territorial units of the economic optimum presupposes first the satisfaction of the needs especially on the basis of the endogenous resources and the entrepreneurial activity performed by the local economic agents, as main promoters of regional economic progress.

In this context, the main duty of the administrative-territorial units is to create that favourable environment, in which the economic agents are able to express, on the basis of rationality and efficiency economic/competitiveness criteria. At the same time, it is necessary to stimulate the complementarity of the companies' activities, in conditions of initiative, innovation and cooperation.

Complementarity does not exclude competition between economic agents within the territorial areas, each of them being interested in producing goods and services at the lowest costs, which means with increased possibilities of capitalization of production, with the emergence, in this sense, of the conditions for its achievement and for re-running production at a wider, more diversified scale, in consensus with the existing needs, with the request expressed by the inhabitants of the own and of other territories.

In such a competition-based economic context, the role of the administrative-territorial units is essential, through their ability to attract investments, the emergence of the metropolitan areas within the administrative system contributing to the development of local and regional development.

The case study has as main objective the performing of an analysis of the structure of metropolitan areas in Romania. Within this analysis, we shall attempt to identify a series of particularities of the metropolitan areas, such as:

- The positioning of the metropolitan areas in the development regions in Romania;
- The identification, as well as the number of administrative-territorial units which are part of the metropolitan structures;
- The degree of association of the administrative-territorial units in metropolitan structures;
- The role of the political factor in the creation, development and functioning of metropolitan areas.

In the first stage, we shall attempt to identify the metropolitan areas within the Romanian administrative system, following that afterwards to analyse the composition of the metropolitan areas.

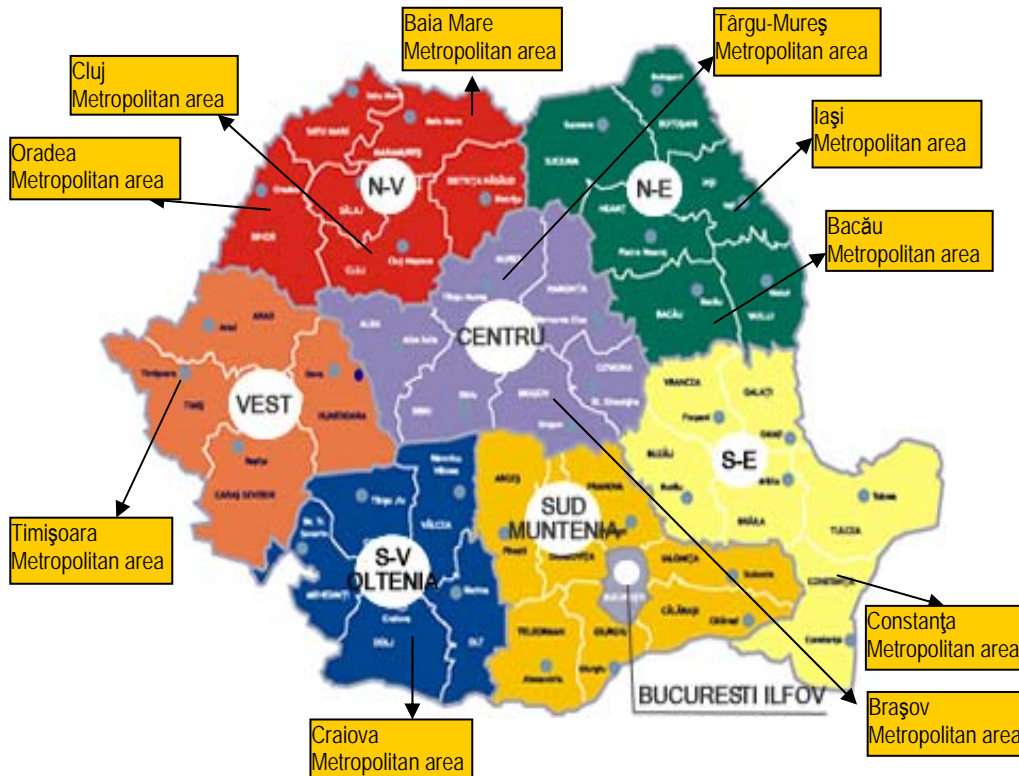


Figure 1. Identification of the metropolitan areas in Romania

As can be seen, in Romania there are at present ten functional metropolitan areas, in all eight development regions of the country. Metropolitan areas are established around rank 0 or 1 municipalities, observing the existing legislative framework.

Another important element in continuing the analysis is represented by the administrative structure of the metropolitan areas. The analysis of the administrative structure presupposes the identification of the number of administrative units which are part of the metropolitan area, by administrative units understanding the number of towns, communes, villages entering the metropolitan area. All these elements are correlated from the territorial development perspective with the development regions they are part of, in order to better dimension the metropolitan area within the development region.

From the Table 1 it can be seen that a relatively small number of administrative-territorial units identified at the county level are currently associated in metropolitan areas, from the table deriving a significant difference between the number of towns and communes belonging to a metropolitan area and the number of those not included in a metropolitan area.

A first example is given by Iași Metropolitan area, from whose analysis is derived the fact that from a total number of three towns in Iași County only one belongs to the metropolitan area, this being, actually, the town around which the metropolitan area was developed. The same analysis is also extended to the level of communes, where from a total of 93 communes included in the county only 12 belong to the metropolitan area, the rest of 81 being excluded.

The ratio with respect to the other metropolitan areas in what concerns the number of administrative-territorial units included and, respectively, excluded from the metropolitan area is relatively identical with the situation of Iași metropolitan area, fact from which it can be easily seen that the number of administrative-territorial units outside the structure of a metropolitan area is predominant.

Another significant element in our attempt to analyse the structure of metropolitan areas is represented by the association degree of the administrative-territorial units in metropolitan structures at the national level, on the basis of the information presented, this degree being of 4.52%.

The percentage of 4.52% which reflects the association degree is very low compared to the number of communes and towns not part of the metropolitan structures.

Table 1

Composition of the structures metropolitan

M.A. Establishing year	No. of counties	No. of towns included/excluded	No. of communes included/excluded	Region/Macro-region		Intra-regional M.A.	Observations
Iași (2005)	1	1/2	12/81	Nord - East	Macro-Reg 2	1	- no inter-regional metropolitan areas were identified; - the association degree of the administrative-territorial units at the national level in metropolitan structures is of 4.52%; -there are identified five M.A. within Macro-region 1; - there are identified three M.A. within Macro-region 2; - there is identified a single M.A. within Macro-region 3; - there is identified a single M.A. within Macro-region 4
Bacău (2007)	1	1/4	17/68	North - East	Macro-Reg 2	1	
Constanța (2007)	1	6/3	8/50	South - East	Macro-Reg 2	1	
Brașov (2006)	1	6	8/40	Centre	Macro-Reg 1	1	
Craiova (2008)	1	1/5	5/99	South-West	Macro-Reg 3	1	
Timișoara (2008)	1	1/7	12/76	West	Macro-Reg 4	1	
Oradea- Bihor County (2005)	1	1/5	11/79	North- West	Macro-Reg 1	1	
Cluj (2007)	1	1/1	16/59	North- West	Macro-Reg 1	1	
Târgu-Mureș – Mureș County (2006)	1	6/1	9/82	Centre	Macro-Reg 1	1	
Baia-Mare – Maramureș County (2007)	1	5/6	9/54	North- West	Macro-Reg 1	1	
Total	10	29/34	107/688	8		8	

One of the reasons why in Romania the percentage of association of administrative-territorial units in metropolitan structures is relatively low can be identified in the former legal framework on which the organizing and functioning of the metropolitan areas is based, which allows the association in metropolitan areas of administrative-territorial units located within a distance of up to 30 km from the rank zero or one town around which the metropolitan area is created.

The political factor may also represent one of the reasons that contribute to the development of metropolitan areas.

In this sense, we considered necessary the performing of an analysis in which we included the metropolitan area of Iasi.

We attempted to identify, on the one hand, the administrative-territorial units entering their composition, as well as the political belonging of the decisional structures of these administrative-territorial units. We aim to identify to what extent the association of the administrative-territorial units in metropolitan areas is influenced by the political belonging of the rank zero or one town around which the metropolitan area was created.

Table 2

The role of the political factor in the creation, development and functioning of the metropolitan areas

Metropolitan area	Zero or one rank town	Political belonging of the zero or one rank town			The administrative-territorial units part of the metropolitan area	Political belonging of the administrative-territorial units part of the metropolitan area					
		PSD									
Iași ⁽¹³⁾	Iași	PSD			Aroneanu		PDL				
					Bârnova				PNL		
					Ciurea	PSD					
					Holboca						USL
					Letcani						USL
					Miroslava		PDL				
					Popricani						USL
					Reditu						USL
					Schitu Duca	PSD					
					Tomești						USL
					Ungheni		PDL				
					Valea Lupului	PSD					
					Victoria						PNL

From the analysis performed for the Iași Metropolitan Area it can be observed that there is a balance between the political affiliation of the centre-city (Iasi) and the political affiliation of other administrative-territorial units that make up the metropolitan area of Iasi. A similar situation can be observed if we would extend the analysis to all metropolitan areas in Romania. We infer that the reasons for the association and operation of the metropolitan areas in Romania exceed the purely political considerations in favour of the economic

ones. A common denominator is therefore identified pertaining to the operation of the metropolitan areas. They are established on the basis of political decisions, which, however, are based on a series of economic necessities. The decision makers of the metropolitan areas realize that the metropolitan areas functioning must be based on a number of common needs that can only be met by the association of the administrative - territorial units.

In the context of economic integration and globalization, the actions of metropolitan areas' improvement can generate, in addition to the efforts on economic growth, a series of negative economic consequences on the environment and social cohesion, with the possibility to only grow on the so-called *islands of growth* around the metropolis, while other administrative-territorial units of smaller size can be disconnected from the growth process.

Considering these aspects, a polycentric development can help to reduce the environmental pressures and social tensions leading to democratic structures' stabilization.

The academic and practical concerns related to the metropolitan areas cover a variety of issues. The first issue is the expansion of the urban area, seen as the result of the action of three powerful forces: "population growth, rising incomes and falling transport costs" (Brueckner, 2000, pp. 160-171).

The urban sprawl and the establishment of the metropolitan areas raise a great concern regarding the sustainable development of this area. A first requirement concerns the planning and management of the metropolitan areas in order to develop a strategic management.

The environmental issues relate to the use of water, energy, solid waste issues, land use and areas conservation (Rojas-Caldelas et al., 2007, pp. 33-42).

Establishing the metropolitan areas also raises the need to adopt certain decisions on the population and on the management of the space created, being generated new production and strength techniques. The need for evaluation of the urban space and to clarify the economic value of this space is another consequence of the development of the metropolitan areas.

In the economic activities' plan, the metropolitan development helps optimizing the existing resources, supporting and attracting industries to the area within the scope of products and services.

4. Conclusions. Consequences of the metropolitan areas' development

The development of the metropolitan areas primarily refers to policy making pertaining to a better planning of space. The need for a spatial planning is manifested under two main aspects covering the preparation of implementation conditions, the strategy of economic development, and correcting malfunctions or developmental errors that occur precisely because of a lack of spatial planning. The

unplanned evolution of a socio-economic phenomenon, such as the urban development inevitably leads to disruptions. Such failures have been created due to the lack of a strategy for urban development planning. This development, largely unrestricted, caused some imbalances and urban errors that affected how the urban system has been developing in Romania.

In the context of the balanced development of the metropolitan areas, the guiding principle should be urban spatial improvement policy, growth oriented, supported by a greater integration with regional policy, on a more sustained cooperation with the private sector and taking into account the requirements of environmental protection through the environmental impact studies.

An important role in metropolitan areas' spatial improvement policy belongs to the private sector, an important element of social development and also territorial development, one of the main tasks of spatial development consisting in the provision of development opportunities, and ensuring security in the management of private investment.

In addition, the territorial improvement policy should contribute, together with the appropriate sectoral policies, to the attractiveness growth of municipalities and regions for private investment on a local and regional level.

In the overall development policy of the urban space, providing basic infrastructure and public services is central to the concerns of the local authorities to ensure their citizens an ideal framework for the activities' operation so that the requirements of resource conservation and environmental protection are met.

Therefore, the main issues to be addressed in the metropolitan areas concern the development of basic infrastructure and providing access to the public, the industrial consumers and tourists to this infrastructure, promotion of strategies for improving housing, providing modern transport strategies and traffic management, protecting the environment, promoting the sustainable development principles.

Being a part of the process of globalization, the metropolitan development has a number of advantages and disadvantages. In terms of benefits, it should be noted that the metropolitan areas are a real process resulted from the development of relations of interdependence between the localities in the area of influence.

From a strategic perspective, the urban development requires the development of growth poles, which are recognized as such in the national and transnational strategies, ensuring the integrated development of the territory by reducing imbalances between the centre and the surrounding areas.

Strengthening the administrative capacity of the area is another advantage generated by the establishment of the metropolitan areas, efficiently contributing to the implementation of the development and spatial planning policies through the cooperation of the localities involved.

The disadvantages of the metropolitan areas are caused by the lack of legislative coherence, which can have the effect of non-involvement of communities and local authorities in the development of these areas. The lack of a public law regime enshrined in the constitution of metropolitan areas likely to determine and ensure the consensus among local governments in terms of infrastructure, land use, environmental pollution, and other areas of cooperation constitutes a significant impediment in increasing the national metropolisation effect on a national level.

The establishment of metropolitan areas in Romania proves to be a difficult process that must face resistance to change generated by the administrative system. The experience of the EU states shows that the well-run metropolitan areas come in a short time at a high level of economic competitiveness, thus having the ability to efficiently draw funds and investors, which will boost the construction, services and tourism sectors.

The development of the metropolitan area contains all the features of sustainable development, if the economic, cultural, social and environmental policies are successfully harmonized.

The uncontrolled development of cities in the recent years has caught unaware the administrative-territorial units. A number of buildings were built without previously developed coherent planning plans. The urban development based on large projects that facilitate the emergence of metropolitan areas is a viable solution that can help develop an efficient urban system.

Notes

- (1) It can be the birth, development process of an element of the metropolis.
- (2) Unlike the metropolitan area, established through the legal association of towns and communes with the metropolis, the metropolitan space also includes other communes and towns which did not wish to associate with it. As a consequence, the concept of metropolitan space is much more appropriate from the point of view of academic analysis, than the one of metropolitan area.
- (3) The metropolitan space is characterized by multiple effects on a wide scale: the systemic rehabilitation of the historical centre, necessary operation of a “landmark imagine” of the metropolis; the rebirth of the town centre, through the emergence of a modern business centre, of the CBD type (Central Business District); the emergence of new centres in the peripheral areas, parallel with an accentuated peri-urbanization phenomenon, it is a matter of technopoles, multi-modal platforms, centres integrated in the landscape etc. The metropolitan space tends to identify with a multi-polar urban tissue. It can be stated that the functions of the metropolitan space are transposed into the landscape, exercising a strong influence on the modality of organizing the territories.

- (4) The case of Liverpool city in the UK – Irish Sea port – with 492 000 inhabitants. It became an important commercial, industrial, and academic centre. The city of Nice – Mediterranean Sea port with a population of 345 000 inhabitants – is an important administrative, industrial, university centre, representing a real academic centre.
- (5) Law no. 350/2001 on territorial improvement – published in the Official Gazette no. 373 of July 10, 2001
- (6) Law no. 350/2001 on territorial improvement – published in the Official Gazette no. 373 of July 10, 2001
- (7) Law no. 351/2001 approving the National Spatial Improvement Plan – Section IV – Localities’ Network – published in the Official Gazette no. 408 of July 24, 2001
- (8) Romanian Constitution – published in the Official Gazette no. 767 of October 31, 2003.
- (9) Law no. 215/2001, republished, on local government law – published in the Official Gazette no. 123 of February 20, 2007
- (10) Art. 3-10 of Law no. 215/2001, republished, on local government – Published in the Official Gazette no.123 of February 20, 2007.
- (11) In accordance to Art. 8 of Law no. 215/2001, republished, on local government – published in the Official Gazette no. 123 of February 20, 2007, the associative structures are represented by the Communes Association of Romania; Cities Association of Romania; Municipalities Associations of Romania; The National Union of Counties Councils of Romania, as well as other associative forms of general interest, established by law.
- (12) Art. 4 of Government Ordinance no. 26/2000 on associations and foundations – published in the Official Gazette no. 39 of January 31, 2000.
- (13) Retrieved from www.acor.ro retrieved on 12.04.2013

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Structural changes and productivity in the crisis period in Romania. The industry case

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Abstract. *The present crisis is a new case study for the theories regarding economic fluctuations. The interpretation of this phenomenon varies from the acceptance of its character of rule in the history of capitalism, which brings corrections to excess in human behaviour, to the emphasis on its uniqueness determined by the effects of unprecedented globalization. The Romanian economy went through the crisis by having persistent structural problems which were partially masked by the expansion during the previous period of sustained economic growth. Considering that productivity is a significant parameter for the competitiveness of the national economy and that the healthy economic growth is a chance for diminishing the gap to other European countries, the paper aims at the identification of the economic activities which have contributed to economic growth until 2008 and of the potential sources of economic recovery in the next period. The research uses the empirical analysis in order to see the effects of the crisis, as well as to understand the signals given by the productivity trend regarding structural changes after the crisis started. Since the industry had a fast recovery in 2011 compared to other EU countries, the analysis is extended to the contribution of this activity to economic growth.*

Keywords: crisis; structural changes; productivity; budgetary constraints; industry.

JEL Codes: E32, E23, L6.

REL Codes: 17E, 17H.

1. Introduction

The debate about the most appropriate development models has now a new approach, because the crisis affected more or less all the countries involved in the flows of the international economy. The present crisis is a new case study for theories concerning the economic fluctuations. According to Nouriel Roubini, in the modern history of capitalism crises are the rule, not the exception. Crises produce outrageous losses, by destroying entire industries, destroying wealth and causing massive layoffs (Roubini, 2010, pp. 35-36). The causes of crises can be different. Depending of its persistence and effects, the present crisis can determine a reconsideration of the economic theory fundamentals.

The problem of restructuring is not strictly circumstantial and surprising, since for some economists it has been even predictable. Even before any manifestation of the crisis in the European Union, they have signaled the necessity of EU restructuring, considering that without serious, profound and clear reforms Europe will inevitably arrive to a decline, and a relative decline may become an absolute one (Alesina, 2006, p. 3).

A subject that has attracted much attention in the political economy literature is the role of economic and political crises in generating incentives to reform (Agéon, 2004, p. 670). Usually the incertitude concerning the economic consequences has strong implications on the acceptance of adjustment programs by the population. Structural policies produce positive effects in the long run, while the short term effects are unfavorable and hard to accept, especially when there is a lack of confidence in the reform programs. The economic crisis imposes hard budgetary constraints, which can force restructuring in a short term.

A first possibility of counteraction is given by the automatic stabilizers. Some studies show that Eastern Europe is characterized by a low level of automatic stabilizers. A possible explanation is that in the economies with a higher degree of openness the automatic stabilizers are weaker because of the positive effects of demand increase on other countries (Dolls et al., 2009). Thus, the increase of interdependencies in the global economy reduces the functionality of those self-regulation mechanisms.

In Romania the economic restructuring process began in 1990, by having a difficult roadmap of the transition process towards the market economy. The privatization policy and the company restructuring, as well as the introduction of the financial discipline have been very much debated in the past decade. The conclusions of a systematic study about structural changes show that the Romanian economy suffered because of weak budgetary restrictions (Croitoru, 2003). In this period has functioned the moral hazard generated by the belief of companies that the government will find solutions. The specific behavior of companies with losses included more funding from suppliers, non-payment of taxes, etc, practices that continued also after the transition period ended.

The economic growth engine after 2000 was the consumption. Governments promoted a pro-cyclical expansionary policy. In the period 2005-2008 the budgetary expenditures have doubled in nominal terms, increasing the share of the public sector from 32% to 37% of GDP (Marinaş, 2012). The accumulation of important budgetary and current account deficits during the economic expansion period made impossible the use of demand stimulation policies when the crisis started, because it could have led to an unsustainable public debt. Hard budgetary constraints imposed an austerity policy in Romania, as well as in other EU countries. These can also lower the effects of the political cycle, because the action margin for stimulating the economy became much shorter.

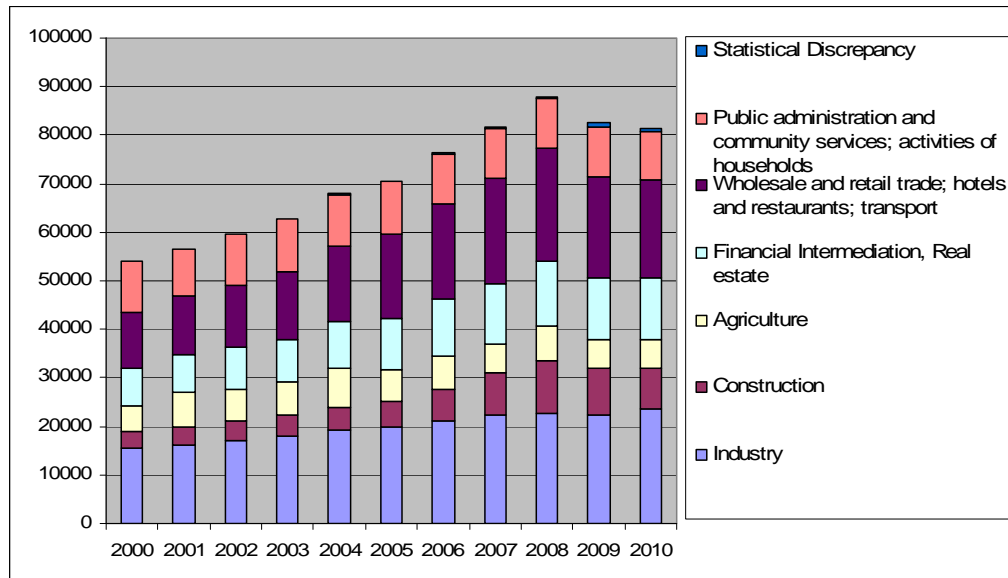
The perception of Romanian companies in 2008 regarding the risk of a possible economic crisis was unrealistic. Joldes and Horobet (2008) showed that the Romanian managers did not realize the exposure degree of their companies to crisis effects. In addition to the lack of expertise in risk evaluation, the more optimistic attitude at the beginning of the crisis can be explained by the confidence given by the adhesion to EU and the habit created by previous weak budgetary constraints.

Considering productivity as a significant parameter for the national economy's competitiveness and healthy economic growth as chance for recovering gaps to other European countries, the present paper has as main purpose to identify the economic activities that contributed to the economic growth until 2008 and potential sources for economic recovery in the next period.

2. Structural changes and implications on productivity in the Romanian economy

After a period when the Romanian economy had a positive evolution (2000-2008), sustained by a regional and global favorable situation, but also by many changes that occurred in the internal economic environment (adhesion to the European Union, investment attraction, economic environment stabilization), 2009 revealed a strong economic contraction (GDP decreased by 6.6% compared to 2008). 2010 was the second recession year, real GDP being 1.6% lower compared to 2009. In 2011 recorded an economic growth of 2.5% due to international environment stabilization, but also to good results obtained by the Romanian economy, especially in industry and agriculture.

The sustained increase of GDP in the period 2000-2008 was mainly due to absolute and relative increase of services activities (commerce, hotels and restaurants, transportation, financial intermediations and real estate transactions) and the boom of constructions on the period 2006-2008 (Figure 1). Thus, over a decade the sectoral structure of the national economic changed, by increasing the share of services, especially on the account of the decreasing share of agriculture in VAB, from 10.2% in 2000 to about 7.4% in 2009-2011.



Source: Eurostat database.

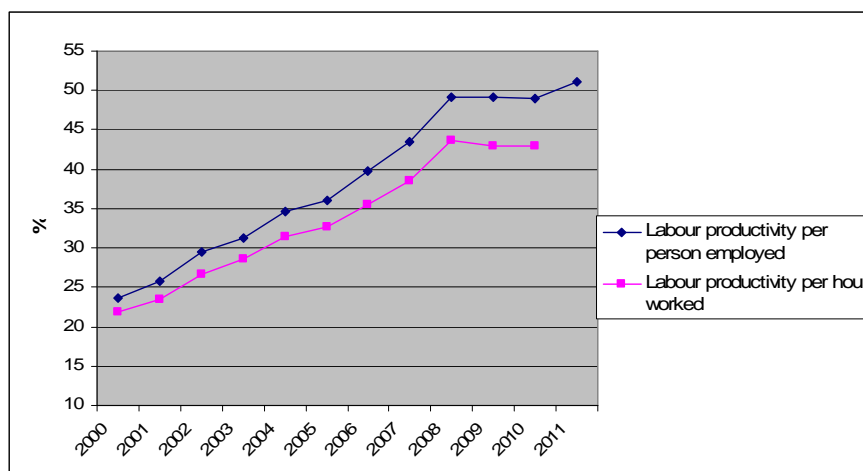
Figure 1. Contribution of the main activities to the gross value added, 2000-2010
Million Euro (reference year 2005)

The shock produced by the crisis is related to the accentuated reduction of the share of services, such as commerce, hotels and restaurants and transportation, from 26.5% of VAB in 2008 to 24.2% in 2011. The share of agriculture in VAB decreased from 8% to about 7.4% in the crisis period, even if there was a slight increase of employment in agriculture, as survival solution. Industry began a continued but slow increase of the VAB in real terms after 2000, reaching in 2011 the share of 31% from total VAB, the highest value of the entire period 2000-2011.

These structural changes at macroeconomic level had effects on the level of labor productivity. Labor productivity is an economic indicator that helps us to measure the efficiency of a sector or of the economy as a whole (Blanchard et al., p. 67). The reduction of the share of agriculture, which had a productivity of 25-28% from the national average and the increase of the share of constructions and financial intermediation, activities with productivity much above the average, have been sources of productivity increase as a whole. Thus, we can notice that the productivity situation has improved visibly comparing with EU until the starting point of the crisis (Figure 2).

The crisis caused not only an immediate decline in commerce, hotels and restaurants and constructions activities, sectors that ensures a high number of work places, but also a reduction of productivity due to labor market rigidity. The 2011 comeback is mainly due to an absolute increase of productivity in industry.

It can be noticed a slower recovery of productivity measured per hour worked comparing with EU-27 average (Figure 2). The increase in supplementary worked hours until 2008 can be a cause for the difference between the two indicators of productivity. The crisis increased the gap to EU more accentuated at labor hour productivity, signaling a substitution of hours from more productive activities with those less productive (agriculture, public services).



*GDP calculated at purchasing power parity

Source: Eurostat database.

Figure 2. Labour productivity* in Romania compared to EU-27 (EU-27=100%)

In order to highlight the efficiency of economic activities, which reflects also the structural characteristics of national economy, it is also necessary to analyze the resource productivity, which indicates the GDP obtained per domestic material consumption unit (DMC). The DMC measures the total volume of materials directly utilized in economy and includes the annual quantity of raw materials extracted from the domestic territory of the focal economy, plus all physical imports minus all physical exports.

In Romania the resource productivity decreased by 40% in the period 2000-2009 (gradual decrease), while in EU-27 it increased in average by 17% (Eurostat, 2012). This tendency shows the low efficiency of the production processes, correlated with the predominance of the medium and low technological level. In 2009, the labor productivity decreased sharply and the resource productivity increased significantly (Figure 3). The DMC decrease is mainly associated with the decline in constructions, metallurgical industry, manufacture of coke and refined petroleum products, manufacture of chemicals and chemical products and also in other sectors with high consumption of material resources.



Source: Eurostat database.

Figure 3. Labour productivity and resource productivity in Romania (% change on previous year)

In the specific conditions for 2009, the labor productivity per person employed in Romania was 42.9% from EU-27 average, the hour productivity was 43%, and the resource productivity was only 34%. The essential solution for obtaining favorable structural changes and an increase of economic competitiveness is given by the investments in activities that produce higher value added, regardless of the sector.

According to a study published in July 2012 by the company Roland Berger Consultants, based on a sample of 300 Romanian and German companies, more than half of the respondents from Romania consider that a new risk for recession exists and 68% expect that the sovereign debt crisis will have a much stronger negative impact on the Romanian economy. To remark is the fact that in 2011, 52% of the Romanian respondents state that the economic crisis from 2008-2009 helped them boost the competitiveness in the long term through restructuring. Besides the actions to increase sales, managers give priority to programs for cutting costs and increase efficiency. In their opinion, the biggest problems which are slowing down the growth are the insufficient available qualified staff for demanded qualifications and the liquidity deficit.

3. Contributions of industry to the economic growth

In the period 2002-2007, the contribution of industry to the economic growth was almost all the time surpassed by the contribution of the services sector. This is mainly due to structural changes at the national economy level, since services became an attractive sector for investments, by having a decisive role in the sustainable economic growth (development of telecommunication

infrastructure). Also the financial sector and transports had an important share to economic growth in the period 2000-2008.

The industry had a decisive role in attenuating the economic contraction in 2010, contributing with +1.2 percentage points to the GDP change (Table 1). In 2011 the positive trend continued, the contribution of this sector to the GDP increase in 2011 representing more than half from the total.

Table 1

Contribution of the economic sectors to economic growth

(%)

	GDP	Agriculture, forestry, fishing	Industry	Constructions	Services	Net taxes on the products
2009	-6.6	-0.2	-0.3	-1.1	-3.6	-1.4
2010	-1.6	-0.4	1.2	-0.8	-1.1	-0.5
2011	2.5	0.7	1.3	0.3	-0.1	0.3

Source: National Statistic Year-Book 2011, Monthly Statistical Bulletin, January 2012. National Institute of Statistics (NIS).

We can notice that the manufacturing industry had the largest influence on industrial production in the analyzed period. It increased significantly comparing with the base year 2005, contributing to the positive dynamics of industrial production in the period 2005-2011, but having also a decisive role in the economic contraction in 2009 (Table 2).

Table 2

Industrial production indices, by main activities

(2005=100%)

(%)

	2006	2007	2008	2009	2010	2011*
Total	109.3	120.6	123.8	116.9	123.4	130.3
Mining and quarrying	102.4	100.8	100.7	88.7	82.6	86.3
Manufacturing industry	112.5	126.1	130.1	121.6	128.9	136.1
Energy, water, gas	92.3	96.3	96.6	103.4	111.8	118.8

*estimations based on the data from Monthly Industrial Statistics, 12/2011, NIS.

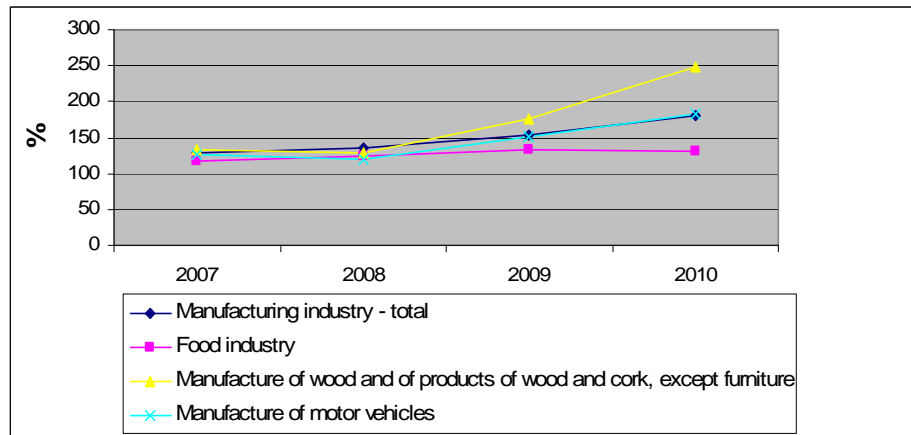
Source: 2011 Statistical Yearbook.

The main activities that are positively influencing the trend of the manufacturing industrial production are:

- Food industry;
- Wood processing;
- Automobile manufacturing.

The activity with the biggest positive influence on the industrial production is "Manufacture of motor vehicles and trailers" due to the success of the local automobile constructor Dacia mainly on the external markets, but also on the domestic market.

In the period 2000-2010, as we can observe in Figure 4, the labor productivity in industry increased, as well as in the three activities mentioned above.



Source: Statistical yearbook 2011, NIS.

Figure 4. Indices of labour productivity per employee (2005=100%)

In 2009, the labor productivity at national economy level decreased by 4.7% comparing with 2008 and in 2010 with 0.2% comparing with 2009. On the other hand, the labor productivity in industry rose by 15% in 2009 comparing with 2008 and by 16% in 2010 comparing with 2009. This highlights the fact that industry was a sector with efficiency above the national average, being able to decisively contribute to the recession attenuation in 2010 and to the economic revival in 2011.

The excellent result registered by the industry is mainly due to production efficiency. Thus, the number of employed persons in industry dropped by around 10%, and the gross value added registered an increase of about 5% in 2010 comparing with 2009. In 2011, the number of persons employed in industry has been stabilized, and the gross value added rose by approximately 2%.

For a complete analysis of the industry dynamics and its role in the national economy, we will analyze in the following the investment dynamics in industry. The role of investment is determinant in stopping economic crisis situations and in revival of economic activities (Welfens, 2008, p. 109). According to the estimations made by DeLong and Summers (1991), an increase in investment by one percent will naturally lead to a growth of 1/3 from that percent. At microeconomic level the permanent orientation of economic agents on investments constitute a mandatory condition for keeping in economic competition and modernization.

According to Figure 5, net investments in the manufacturing industry had in the period 2001-2007 a sustained growth tendency. The interest for mining and quarrying has been activated only starting with 2005.



Source: Statistical yearbook 2010, NIS.

Figure 5. *Indices of net investment in industry in Romania, 2001-2007(2000=100 %)*

In 2009 net investments in the manufacturing industry declined by 32.8%, and in the next year decreased by another 20.8%. Thus the increase of productivity in 2009 and 2010 (Figure 4) is mainly due to employment restructuring and less to production modernization.

In 2010 we can remark an increase by 88% of investment for the production and distribution of electric energy, gas, hot water and air conditioner. This is mainly due to the investors' interest for the energy sector. Investments have also increased in the sector for water treatment and waste recovery, which are targeted by the EU and have deadlines to fulfill the imposed requirements. This fact has a positive impact on sustainable economic growth, since this kind of investment has an immediate effect on employment, but also on the environment.

Even if the industry had a comparatively better evolution during the crisis years, it has an increased vulnerability when confronting global economic conditions. Industry has a strong tendency of re-export and, respectively, has a weak domestic market with low absorption degree for industrial supplies. According to the estimations of first 3Q's in 2012, industrial production dropped by 0.2%, under the impact of the economic stagnation in EU. The increase of domestic demand and the consolidation of some segments of industrial production with higher added value constitute long term solutions for the industry to sustain the economic growth.

Conclusion

The economic crisis has been predictable for some economists, because in the history of modern capitalism crises are the rule, and not the exception. Hard budgetary constraints brought by the crisis can impose austerity measures,

which force restructuring in a short term. This is happening especially if the previous expansionary policies have already led to important budgetary deficits, thereby the demand stimulation becomes unsustainable.

Romania followed a restructuring process specific to the period of transition to market economy, which is not fully finalized. In the period of sustained economic growth, based on consumption stimulation, changes occurred in the structure of the main activities which determined an increase of productivity. However productivity is still much lower than the EU average.

The crisis shock affected in the first place constructions, commerce and tourism. The source for the GDP recovery in 2010 and 2011 was the industry, which demonstrates that it can contribute to a healthy economic growth. The positive evolution of industrial production is closely related to labor productivity and investments in this sector, with the condition of more orientation towards activities with higher value added, based on innovation and non-polluting production methods and having a higher degree of product sophistication and qualification level of the employed persons. Another condition is the internal market consolidation for industrial goods produced in Romania.

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