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# Contents

<i>Nikolett FAZEKAS–Attila FÁBIÁN–Anikó NAGY</i> Analysis of Cross-Border Regional Homogeneity and Its Effects on Regional Resilience and Competitiveness. With the Western Transdanubian Region (HUN) and Burgenland (AUT) as Examples . . . . .	5
<i>Noémi HAJNAL</i> The Harmonization of Accounting. . . . .	29
<i>Ádám CSUVÁR</i> Justifiable Renewable Energy Usage from an Economic Angle. . . . .	45
<i>Krisztián RITTER–Henrietta NAGY</i> Analysis of Local Economic Development Capacity in Hungarian Rural Settlements . . . . .	57
<i>Kenneth O. IKENWA–Abdul-Hammed A. SULAIMON–Owolabi L. KUYE</i> Transforming the Nigerian Agricultural Sector into an Agribusiness Model – the Role of Government, Business, and Society . . . . .	71
<i>Ignatius Ikechukwu UCHE–Olusoji GEORGE–Wuraola ABIOLA</i> Counterproductive Work Behaviors: a Socio-Demographic Characteristic-Based Study among Employees in the Nigerian Maritime Sector . . . . .	117
<i>Tünde PATAY</i> A Comparative Analysis of Migration Policies: (Best) Practices from Europe. . . . .	139



# Analysis of Cross-Border Regional Homogeneity and Its Effects on Regional Resilience and Competitiveness

With the Western Transdanubian region (HUN)  
and Burgenland (AUT) as examples

Nikolett FAZEKAS,<sup>1</sup> Attila FÁBIÁN,<sup>2</sup> Anikó NAGY<sup>3</sup>

<sup>1</sup> Alexandre Lamfalussy Faculty of Economics, University of Sopron, Sopron, Hungary

E-mail: niki.fazekas@gmail.com

<sup>2</sup> Alexandre Lamfalussy Faculty of Economics, University of Sopron, Sopron, Hungary

E-mail: fabian.attila@uni-sopron.hu

<sup>3</sup> Paul Heim Children's Hospital, Budapest, Hungary

E-mail: anagydr@gmail.com

**Abstract.** The resilience of a region may affect how it reacts to economic crises and exogenous shocks. In a complex study, it is not sufficient merely to have knowledge of all the macro-indices of the regions, but it is also necessary to study internal micro-structures. This study introduces the regional homogeneity index, using a novel approach and as yet unused indicators by means of the example of two neighbouring NUTS 2 statistical regions. The results can be useful for understanding the regions' economic development. The methodology and indicators created may also be suitable for European regional pilot research projects.<sup>1</sup>

**Keywords:** homogeneity, heterogeneity, regional resilience, competitiveness, Western Transdanubia, Burgenland

**JEL Classifications:** R11, R12, R58

## 1. Introduction

In recent years, many international studies (Dawley et al., 2010; Foster, 2010; Gunderson & Holling, 2002; Martin & Simmie, 2010) have concentrated on research into the resilience of regions. In their analyses, they were looking for an answer to how the regions react to the economic challenges of the business environment. Studies and models found in the literature (Martin, 2010; Pendall et al., 2007) usually interpret and examine the whole region as a single entity. The

1 The research was accomplished with the support of the Pallas Athéné Geopolitical Foundation.

indices used in the models track the temporal changes of the economic indicators concerning the whole region.

In the course of the foregoing regional studies, numerous questions have remained unanswered: When analysing competitiveness, is it proper to examine the region inherently as a single entity? Do the homogeneity and heterogeneity of regions influence their resilience and competitiveness? Which new endogenous variables could influence the resilience and competitiveness of regions? Is it possible to create a new methodology starting from the territorial level (lower than the regional) with which answers could be obtained to these questions? How could all these be incorporated into a regional development policy?

To answer these questions, the authors were looking for the most important indicators which define the strength of a region and play a role in obtaining a successful response to crisis situations. According to the authors' basic suppositions, the social and economic homogeneity of the regions play an important role in this. In this research, two regions have been analysed on the NUTS 2 level (second planning and statistical level of the Nomenclature of Territorial Units for Statistics developed by the European Union), the Burgenland region in Austria and the Western Transdanubian region in Hungary, and the NUTS 3 territories (third level of NUTS, Hungarian counties and Austrian political districts) located within the NUTS 2 regions. 225 surveys from Western Transdanubia and 74 from Burgenland proved to be suitable for analysis.

The indices most typical of the region were examined for determining environmental and corporate functioning using factor analysis and their territorial distribution within the region using cluster analysis. The study compared the results obtained with official statistical data (KSH-TEIR;<sup>2</sup> Statistik Austria; Bundesministerium für Verkehr, Innovation und Technologie<sup>3</sup>). The extent to which the given region is homogeneous or heterogeneous was measured according to the results of the factor analysis. For further investigations and analyses, the authors propose a new methodology and a regional homogeneity index.

At the beginning of the study, it was assumed that with regard to their (economic, social, etc.) development the NUTS 2 planning and statistical regions do not always consist of NUTS 3 territories which are on an equal level or are developing at the same pace; the resilience of the regions and the way they react to crisis are determined by the development level, response capability,

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2 Központi Statisztikai Hivatal – Országos Területfejlesztési és Területrendezési Információs Rendszer [Hungarian Central Statistical Office – National Local Developmental and Integrational Information System].

3 Federal Ministry of Austria for Transport, Innovation and Technology.

and resilience of the NUTS territories which frame them. The interaction of these areas influences the resilience level of a region.

A more detailed examination of the territorial structures making up the region was considered to be necessary in order to receive a more realistic picture of the competitiveness and resilience of the regions.

It was assumed that besides the indicators which fundamentally influence the resilience of the regions (“hard elements”) there also exist other indices not primarily of an economic nature (“soft elements”), which can be coupled with the adaptability of the regions and thus influence their resilience as well.

It is believed that the indices deemed most important by the local society may be defined in every region, and these indices have an effect on the environmental, economic, social, and cultural development of the location and on companies’ adaptability and their own development.

In the authors’ opinion, the indices most closely associated with the development of individual regions may be defined using this new methodology as well as their influence on the homogeneity or heterogeneity of the regions.

The remainder of the paper is organized as follows. The next section expounds in detail what is known so far about regional resilience, competitiveness, and homogeneity. Section 3 describes the definition of a homogeneous or heterogeneous region, and Section 4 presents the bases of the applied methodology. Section 5 presents the principal component and cluster analysis, Section 6 describes the regional homogeneity index (RHI) and Section 7 the results. Section 8 contains the comparative analysis of the Western Transdanubian and Burgenland regions. Finally, Section 9 concludes, and Section 10 recommends further research opportunities.

## **2. On Regional Resilience, Competitiveness, and Homogeneity**

In the international literature, the concept of regional resilience has been approached differently by many authors (Foster, 2007; Hill et al., 2008; Christopherson et al., 2010; Hassink, 2010). It has also been interpreted and defined in a variety of ways. The investigation of regional resilience is a new line of research, which is still in an initial phase even for the researchers who have been dealing with the topic. There is no settled, universally accepted definition either.

Path dependence theories set up in the course of resilience investigations have examined the historical background to the development of crises (Pendall, 2007), the effect of the vision created by certain social systems on the development

of a region (Grabher, 1993), and the structural change ensuing in the region (Martin, 2010). The success of the structural change, however, depends on how local companies and institutions are able to form an alliance.

For decades, the international literature has been dealing with the concept of competitiveness, and there are international institutions and periodically or continuously published international studies which have specialized in ranking the various countries of the world in terms of their competitiveness.

The measurement of competitiveness is a complex analysis, difficult to measure with only one indicator, but it can give us an overview of the skills and development level of a given area (Lengyel, 2000).

### **3. A Homogeneous or Heterogeneous Region**

When the homogeneity of a region was defined by the authors, the demarcation of the given area was based on the similarity principle. If a spatial structure was characterized by identical economic, social, and natural elements as well as similar values, which exist continuously and permanently, then we have been dealing with a homogeneous region or area, but if these features visibly differed or diverged from one other, then it would be considered a heterogeneous region. The homogeneity or heterogeneity of a region was established by using statistical and mathematical methods.

We definitely need a partition of spaces since homogeneous space does not exist. “Social space is generated by human acts, but humans are different from the perspective of their age, gender, educational level, mother tongue, religion, habits, tastes and a million other factors” (Dusek, 2004); so, in general, spaces should be considered as heterogeneous.

Examples of the indicators used for the examination of regional inequality and orderliness are the dual indicator (Éltető–Frigyes index), weighted relative scatter, logarithmic scatter, the Hoover index and its “relatives”, and the Gini index. Each indicator takes different factors into consideration, but it is difficult to use them for wide-ranging regional comparative analysis (Nemes Nagy, 2009).

### **4. Methodology**

The proper selection and weighting of index numbers is a key issue. Indices which were characteristic of the region as a whole were chosen, were independently weighted, or, in the case of indicators, used for comparing the regions. These specific indices were made independent of the size of the region and capable of depicting individual changes as a function of time.



The questionnaire method was chosen for framing the indicators. By means of 30 questions asked in the employed questionnaire survey, it was examined how the regions' residents judge the situation and adaptability of their own region. The structure of the questionnaire was compiled on the pattern of the worldwide "GLOBE" survey, which is a cultural survey extending to 62 countries with the aid of distinctive culture variables and socio-economic development indicators (Bakacsi, 2006), with the very significant difference that the questions were focused on the micro-level – in the present case, on the town level. The NUTS 2 regional level data were composed by collecting the data systematized at the NUTS 3 level. Although with the questionnaire method the answers are rather subjective, this subjectivity was considered very important as in the case of an answer given in a regional crisis situation the motivation and willingness to develop shown by workers in the towns can be crucial. In the analysis, these subjective answers were also compared in a random check with the official statistical data in order to assess whether the picture formed in the minds of the regions' residents was corroborated by the official statistical data.

## **5. Principal Component and Cluster Analysis**

The population of the Western Transdanubian Region is 3.5 times that of the Burgenland Region, and the number of towns is 2.5 times as much. 225 questionnaires from the Western Transdanubian Region (77.3% of the respondents coming from settlements with over 3,000 residents) and 74 from the Burgenland Region (36.5% from settlements with over 3,000 people) could be included in the investigation, with 8,970 data points in total being subject to examination. The interrelationship and connection of the data with each other and their influence on one another was discovered by correlation analysis, clarification of the data set was performed by principal component analyses, and regional grouping of the obtained results was carried out by cluster analyses. The correlation matrix value of the data included in the examination was 450 items. In the examination of the regions, those of the indices for responses given to external influences or crises which could be highlighted by the performed principal component analysis were the ones which are in close correlation relationship with one another and which are the most characteristic of the given region. 6 principal components were determined in the Western Transdanubian Region and 2 principal components in the Burgenland Region. With the cluster analyses, however, the regional distribution of these closely correlated indices was determinative. For the given region, those of the most characteristic indices according to the respondents were subjected to further examination, which decisively determine the economic and social condition of the region

and for which regular, periodic, and officially provided statistical data were also available. Besides these, certain process indicators appeared which cannot always be expressed with exact index numbers, but they still have an influence on the economic processes and social image of the region. These components refer to, for instance, the sophistication, morale, and satisfaction of the region's population and form an important part of the investigation into the region. The investigations were also extended to how much of a role is played in the development of the individual regions by traditions, community beliefs, systems of cultural norms in communities, and behaviour patterns inherited and passed on to descendants.

## 6. Regional Homogeneity Index (RHI)

Since usage of the listed indices is limited, in this study, an index has been elaborated which can be used for measuring regional inequality and could also be equally suitable for the examination of various features of individual regions. Having designated the “regional homogeneity index” (RHI), it does not depend on the unit of measurement for the parameters, and it can be used uniformly because it shows the homogeneity or heterogeneity of the given area by the divergence from the average value and – patterned after analysis of variance – by the 30 percentage change from the quotient of the average value.

In examining a certain economic indicator, for instance, the temporal change in economic development, the following has been determined based on the answers given in the questionnaire:

The average of the results from the answers in the NUTS 2 region (*Figure 1*), which is a total of the answers given on a scale from 1 to 7, divided by the number of persons who filled in the questionnaire:

$$\bar{x}_R = \frac{\sum_{i=1}^n x_i}{n} \quad \begin{array}{l} R = \text{the given NUTS 2 region} \\ n = \text{number of elements in the NUTS 2 region} \end{array}$$

Source: the authors' own editing

**Figure 1.** *Average of the answers from the NUTS 2 region*

The average of the results from the answers in the NUTS 3 territories (*Figure 2*), which is a total of the answers given on a scale from 1 to 7, divided by the number of persons who filled in the questionnaire:

$\bar{x}_{T_1} = \frac{\sum_{j=1}^m x_j}{m}$	$T_1$ = the first NUTS 3 region tested $m$ = number of elements in the first NUTS 3 region
$\vdots$	
$\bar{x}_{T_r} = \frac{\sum_{k=1}^o x_k}{o}$	$T_r$ = number of NUTS 3 regions $o$ = number of elements in the given NUTS 3 region $n = m + \dots + o$

Source: the authors' own editing

**Figure 2.** Averages of the answers from the NUTS 3 territories

The above formulae define, first of all, the averages of the results for all the NUTS 2 regions examined with respect to the targeted indices (*Figure 1*); then, following this, they test how big the average is for the NUTS 3 regions making up the NUTS 2 regions, i.e. within the NUTS 2 regions, with respect to the same targeted indices. The average of the result for every NUTS 3 region located in the examined NUTS 2 regions has been calculated (*Figure 2*).

The extent of the differences between the results of the NUTS 3 and NUTS 2 territorial averages (*Figure 3*), which consists of the disparities between the average  $R$  of the NUTS 2 region and each of the averages of the NUTS 3 territories:

$ RAE_1  = \bar{x}_R - \bar{x}_{T_1}$	$RAE_1$ = the difference of the first NUTS 3 region from the average for the NUTS 2 region $R$ = given NUTS 2 region $T_1$ = the first NUTS 3 region tested
$\vdots$	
$ RAE_r  = \bar{x}_R - \bar{x}_{T_r}$	$RAE_r$ = the difference of the $r^{\text{th}}$ NUTS 3 region from the average for the NUTS 2 region $R$ = given NUTS 2 region $T_r$ = $r^{\text{th}}$ NUTS 3 region tested $r$ = number of NUTS 3 regions

Source: the authors' own editing

**Figure 3.** Formulae for the difference from the region average

With the above formulae, therefore, it can be calculated how big the differences are between the average of the results obtained in the NUTS 2 region and the averages of the results for the NUTS 3 regions making up that NUTS 2 region. These differences have been recorded. For the sample variance analysis, the acceptable limiting value of the difference was set at 0.3. This limiting value may also be defined in other ways, of course, but in general it is advisable for the limiting value to be smaller than the difference from the average and 30% of the quotient of the average. If  $|RAE_r| \geq 0.3$ , then the given NUTS 3 region exceeds the limiting value of 0.3, which means the results of the given NUTS 3 region average deviate by 30 or more percent from the average of the NUTS 2 region. These excess values were marked within the NUTS 2 region with *KE* (number of critical deviations, “Kritikus Eltérés” in Hungarian) (*Figure 4*).

$\frac{KE}{r} = RHI_a$	<ul style="list-style-type: none"> <li>• <i>RHI</i> = region homogeneity index for a variable within the principal component</li> <li>• <i>KE</i> = number of critical deviations</li> <li>• <i>a</i> = number of principal component variables</li> <li>• <i>r</i> = number of NUTS 3 regions</li> </ul>
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Source: the authors' own editing

**Figure 4.** Formula for the regional homogeneity index (*RHI*) for the variables in the principal components

With respect to the variable within the principal component, the above formula shows the average number of “critical deviations” of the average of the results for the NUTS 3 regions within a given NUTS 2 region from the average results of the NUTS 2 region.

The *RHI* was calculated for every single principal component variable, which means “a” times, the *RHI* value being expressed as a percentage (%) in all cases (*Figure 5*).

$\frac{\sum_{i=1}^a RHI_i}{a} = RHIF$	<ul style="list-style-type: none"> <li>• <i>RHI</i> = region homogeneity index for a variable within the principal component</li> <li>• <i>a</i> = number of principal component variables</li> <li>• <i>RHIF</i> = region homogeneity index for the whole principal component</li> </ul>
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Source: the authors' own editing

**Figure 5.** Formula for the regional homogeneity index, calculated for the whole principal component

If all of the NUTS 3 territorial data in a NUTS 2 region are *within* the limiting value, the region is considered to be *homogeneous*.

If less than 35% of the NUTS 3 territorial data in a NUTS 2 region diverge from the regional average to a greater extent than the limiting value, the region is considered to be *weakly heterogeneous* (mildly unsettled).

If more than 35% but less than 70% of the NUTS 3 territorial data in a NUTS 2 region diverge from the regional average to a greater extent than the limiting value, the region is considered to be *heterogeneous* (unsettled).

If more than 70% of the NUTS 3 territorial data in a NUTS 2 region diverge from the regional average to a greater extent than the limiting value, the region is considered to be *strongly heterogeneous* (highly unsteady).

The differences from the average calculated with the regional homogeneity index provide the opportunity to examine not only the homogeneity but also the direction and extent of the difference from the average, thus enabling a deeper analysis of the region.

With the help of this method, the homogeneity or heterogeneity of a region can be easily estimated. It must be accepted, however, that only an informative picture, a first impression of a region can be obtained using this method with regard to the fact that the behaviour of individual areas may be defined to varying degrees of strength by many indices.

## 7. Results

### *Principal Component Analysis of the Western Transdanubian Region*

During the principal component analysis of the data, 30 variables and 225 item numbers were processed. In the analysis of the correlation matrix, the strength of the correlations between the variables was weak or moderately strong in general, the highest correlation value being 0.740. Of the 420 values in the matrix, 266 values were below the smallest significance level of 0.05, which is 63.33%, and 214 were below 0.01, which is 50.95% of the variables. The items located on the diagonal in the anti-image correlation matrix and in the principal component analysis – the MSA (*measure of sampling adequacy*) values corresponding to these were between 0.556 (educational level) and 0.858 (cultural development). The examination of the KMO criterion (Kaiser–Meyer–Olkin criterion) came out to 0.731, which means that the data are adequate for the principal component analysis, as was also confirmed by Bartlett's test ( $\chi^2 = 1433.665$ ,  $df = 153$ ,  $p = 0.00$ ).

In order to determine the number of principal components, the Varimax rotation method was used with Kaiser normalization. Of the 30 variables, 18 proved to be relevant indices at a factor weight limit of 0.4, and in the end 6 principal

components were determined, the cumulative variance of which was 68.81%. The variances of the individual principal components fell between 12.89% and 10.16%, which were found to be adequate in every case. Each constituent of every principal component has a positive value in the rotation matrix, so its importance exercises a positive effect on the given area or cluster.

**Table 1.** *Regional and settlement-environmental characteristics of the Western Transdanubian Region – the constituents of the principal components*

<b>Principal components</b>	<b>Weight*</b>	
Area development and presence of interest representation	Purposefulness of town development	0.755
	Representation of residents' interests with the regional leadership	0.708
	Economic development of the region in the past 5 years (2009–2014)	0.679
	Cultural development of the region in the past 5 years (2009–2014)	0.501
Presence of educational and cultural programmes	Extent of education above the basic level (8 years) in the region	0.741
	Organization of cultural programmes in the region	0.717
	Attitude of the population to the importance of further education	0.710
Equal opportunities and lack of corruption	Equal opportunity for women with secondary school graduation certificate at most	0.833
	Equal opportunity for women with diploma/degree	0.767
	Lack of corruption among regional leadership	0.763
Healthy population with good living standards	Low morbidity rate in the region	0.811
	Significance of healthy lifestyle among the population	0.664
	Population's standard of living in the past 5 years (2009–2014)	0.531
Future- and environmentally aware population	Effect of company activity on the region's development	0.843
	Development of environmental awareness in the region in the past 5 years (2009–2014)	0.649
	The population's future awareness	0.589
Adequate infrastructure	The road network and road conditions in the region	0.831
	Infrastructure development in the region in the past 5 years (2009–2014)	0.826

\*Note: at a communality value above 0.500 and a factor weight limit of 0.400

Source: authors' own editing

In the 6 principal components, 18 variables were found which were in close relationship and thus played a dominant role in determining the regional and settlement-environmental characteristics of the Western Transdanubian Region (*Table 1*).

*Cluster Analysis of the Western Transdanubian Region (Using Ward's Method)*

Following the examination of the principal components, the occurrence of the most important characteristics in the settlements of the given region was investigated with cluster analysis. The cluster analysis was carried out using Ward's method, in consideration of the fact that no prior information was available regarding the number of clusters to be formed; so, the hierarchical analysis method was the procedure to be chosen. When classifying the settlements in detail at the cluster level, a total of 255 settlement data were classified into 4 clusters (*Table 2*).

The examination of the settlements classified into the clusters showed that in general the major cities of the region have significant dominance and that these possess positive power for determining development, whilst the small settlements lag behind the above cities, which represent a driving force for the region. The detailed cluster analyses enable a detailed examination of the connection systems between the cities.

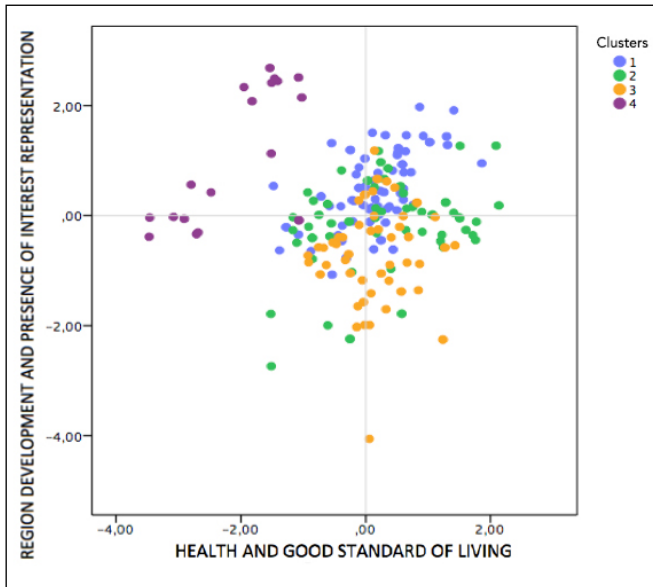
**Table 2.** *Clusters defined on the basis of the regional and settlement-environmental characteristics of the Western Transdanubian Region*

Principal components	1 (79 items)	2 (67 items)	3 (59 items)	4 (20 items)
Regional development and presence of interest representation	0.4127	-0.1637	-0.6985	0.9787
Presence of educational and cultural programmes	0.2769	0.2388	-0.3922	-0.7367
Equal opportunities and lack of corruption	0.7592	-0.3884	-0.3260	-0.7358
Health and good standard of living	0.1284	0.2846	0.2124	-2.0872
Appropriate future and environmental awareness	0.1981	-0.9542	0.9192	-0.2975
Adequate infrastructure	0.5058	-0.6563	-0.0137	0.2411

Source: authors' own editing

During the hierarchical cluster analysis, the cluster with the largest positive cluster value may be regarded as the definitive factor for the region (e.g. the 4<sup>th</sup> cluster in the principal component: "Regional development and presence of interest representation").

The scatter of the principal component values in a negative direction (e.g. 3<sup>rd</sup> and 4<sup>th</sup> cluster) shows that there is a significant difference in the settlements within the region in the assessment of the importance of development and a healthy lifestyle. On the scatter chart produced from this (*Figure 6*), the powerful scatter of the principal component elements is clearly seen, which indicates the division or heterogeneity of the region from this point of view.



Source: authors' own editing, using SPSS

**Figure 6.** Examination of the environmental characteristics of the Western Transdanubian Region – the scatter of the principal component elements by cluster within the principal components “Regional development and presence of interest representation” and “Health and good standard of living”

#### *Principal Component Analysis of the Burgenland Region*

The principal component analysis was performed with 75 item numbers and the same 30 variables. In the correlation analysis, weak and in a few cases moderate correlation values were obtained, the highest being 0.661. Of the 420 values in the matrix, 157 (below the significance level of 0.05) and 104 (below the significance level of 0.01) values proved to be significant (which is 37.38% and 24.76% of all the values), which means that relatively few factors correlated with one another.

Taking into account the principal component analysis information loss criteria and those related to its MSA values and after testing the data set four times, 6 variables proved to be suitable for analysis. The KMO criterion (0.787) and Bartlett's test ( $\chi^2 = 128.800$ ,  $df = 15$ ,  $p = 0.00$ ) confirmed the adequacy of the



data. The MSA values of the anti-image correlation matrix fall between 0.835 (health consciousness) and 0.661 (corruption). When using the Varimax rotation method, two principal components were determined, where 67.94% of the total information content was retained, which can be regarded as acceptable, and the variances of the individual principal components were 41.73% and 26.22%. The values obtained with the orthogonal rotation procedure feature positively in the matrix, thus exercising a positive influence on the Burgenland Region (Table 3).

**Table 3.** *Regional and settlement-environmental characteristics of the Burgenland Region – constituents of the principal components*

Principal components		Weight*
Settlement and infrastructure development, presence of healthy lifestyle	Purposefulness of town development	0.857
	Infrastructure development in the region in the past 5 years (2009–2014)	0.797
	Motivation for town development among the residents	0.776
	Significance of a healthy lifestyle for the residents	0.690
Environmental awareness and lack of corruption	Lack of corruption among regional leadership	0.865
	Environmentally aware development of the region over the past 5 years (2009–2014)	0.772

\* Note: at a communality value above 0.500 and a factor weight limit of 0.650

Source: authors' own editing

#### *Cluster Analysis of the Burgenland Region (Using Ward's Method)*

The cluster analysis classified the 74 element numbers into two clusters – the positive and negative values of these can be seen in Table 4.

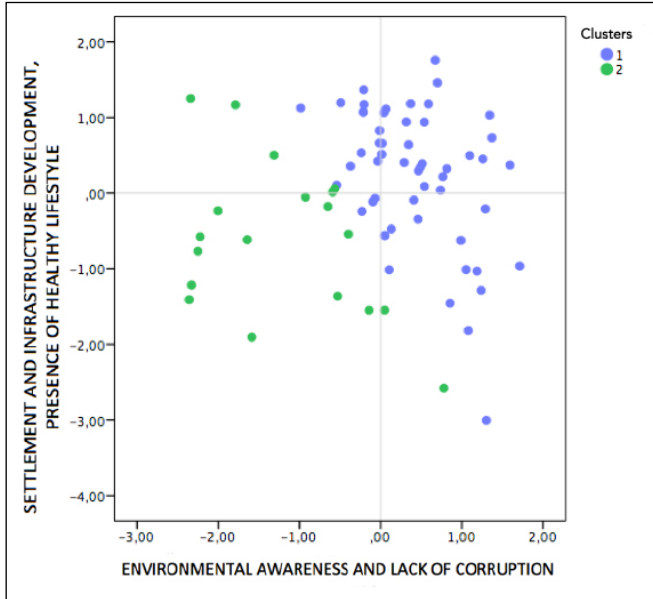
**Table 4.** *Clusters defined on the basis of regional and settlement-environmental characteristics for the Austrian Burgenland Region*

Principal components	1 (55 items)	2 (19 items)
Settlement and infrastructure development, presence of healthy lifestyle	0.2099	-0.6076
Environmental awareness and lack of corruption	0.4147	-1.2005

Source: authors' own editing

The results point back to the principal component results previously determined for the region, as the dominant cluster with the largest number of elements

carries the same values, according to which the importance of environmental awareness and the lack of corruption here too show a correlation with settlement and infrastructure development and with the presence of a healthy lifestyle.



Source: authors' own editing, using SPSS

**Figure 7.** Examination of the environmental characteristics of the Burgenland Region – the scatter of the principal component elements by cluster within the principal components “Environmental awareness and lack of corruption” and “Settlement and infrastructure development, presence of healthy lifestyle”

The divergent negative values of primarily the north Burgenland towns belonging to the 2<sup>nd</sup> cluster show a looser connection of the indices belonging to both principal components, all this suggesting that those who were questioned in the Burgenland Region are not of a fully uniform opinion on settlement and infrastructure development and on environmental awareness. Even so, these two principal components were conceived as a highlighted question based on the overall close connection in the whole region, which is caused by the dominance of the 1<sup>st</sup> cluster with its large number of elements. All this is clearly seen in *Figure 7*, where the elements of the two clusters are sharply separated from one another, at the same time showing scatter in the positive and negative directions.

## 8. Comparative Analysis of the Western Transdanubian and Burgenland Regions

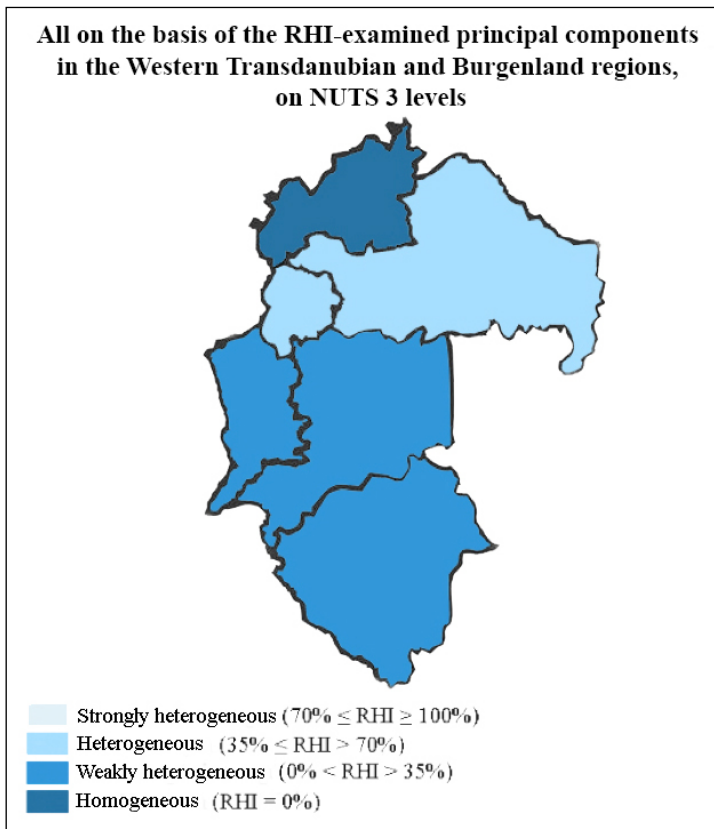
The homogeneity investigations performed on the principal components defined the following results for the two NUTS 2 regions (*Table 5*).

**Table 5.** Combined examination of the principal components analysed in the Western Transdanubian and Burgenland regions, on NUTS 3 territorial levels

<b>Combined examination of the principal components analysed in the Western Transdanubian region, on NUTS 3 levels</b>						
<b>NUTS 3</b>	“Area development and presence of interest representation”	“Healthy population with good living standard”	“Existence of business culture”	“Developed companies, healthy, future-conscious and tradition-keeping employees”	RHI (average of principal components, percentage (%))	Characterization
<i>Győr-Moson-Sopron County</i>	0%	33.33%	80%	60%	43%	heterogeneous
<i>Vas County</i>	25%	0%	80%	20%	31.25%	weakly heterogeneous
<i>Zala County</i>	25%	33.33%	0%	60%	29.8%	weakly heterogeneous
<b>Combined examination of the principal components analysed in the Burgenland region, on NUTS 3 levels</b>						
<b>NUTS 3</b>	“Environment consciousness and lack of corruption”	“Existence of local and infrastructural development, healthy lifestyle”	“Developed business culture and public safety”	“Developed working conditions, infrastructure, and community participation”	RHI (average of principal components, percentage (%))	Characterization
<i>North Burgenland</i>	0%	0%	0%	0%	0.00%	homogeneous
<i>Central Burgenland</i>	25%	0%	33.33%	100%	39.58%	heterogeneous
<i>South Burgenland</i>	0%	0%	66.67%	0%	16.67%	weakly heterogeneous

Source: the authors' own editing

The principal components listed by NUTS 3 region in *Table 1* are depicted on the map below (*Figure 8*). As it can be seen, only the respondents from North Burgenland have a similar, homogeneous opinion about their region. Based on the heterogeneous results from the neighbouring Győr-Moson-Sopron County, it can be stated that this Hungarian county needs greater development to attain closer contact with the neighbouring homogenous region and to design and implement more dynamic cross-border schemes and improvements. The same can be said about the Central Burgenland district, the development of which would not only further common developments and cooperation in the cross-border area, but it could also serve the joint interests of the Austrian NUTS 2 province.



Source: the authors' own editing

**Figure 8.** Analysis of all of the principal components investigated on the basis of the regional homogeneity index in the Western Transdanubian and Burgenland regions, on the NUTS 3 level

Weakly heterogeneous results were obtained from the analyses of the South Burgenland district, Vas and Zala Counties, which are likewise immediate neighbours. In these NUTS 3 regions, minor developments are also needed in order to achieve closer, more resilient cross-border cooperation.

## **9. Conclusions**

From a development policy angle, it is not sufficient merely to be familiar with regional indices, but as detailed a knowledge as possible of the inner structure of the region is also necessary. Using a complex methodology, the internal attributes of a region which would otherwise be difficult to measure may be recognized and investigated. New indicators may be configured, which make a complex definition of the competitiveness, flexibility, and efficiency of a region as well as a more successful regional development policy, more precise and sensitive. The methodology and indicators thus developed may be useful in the future for research uses in European regional-level “pilot” projects.

It has been proven empirically that in the regions studied, based on the most important economic and social characteristics, the NUTS 3 units do not all have identical vitality, and the values of their indices do not correspond to those of the NUTS 2 level indicators. The study has determined the most important properties typical of the regions investigated as well as their distribution within the region. A close relationship has been demonstrated in the regions studied between development and the main characteristics of the region, as detected in the principal component analyses. The study has determined the homogeneity of the regions studied and found that both national and regional data are available for defining economic efficiency. At the same time, the NUTS 3 data provided by the population and needed for examining additional indicators which define the life of the regions are very difficult to access and are incomplete in some areas.

It has been confirmed that the spatial structures making up the regions may differ from one another, the groups of major characteristics defining their development as obtained by the principal component analysis are also different, but those typical of the region in question and the distribution of these gave differing results by cluster analysis within each group of attributes. It has been confirmed that investigation and analysis of the spatial structures making up the regions are necessary in order to gain a realistic picture of the competitiveness and flexibility of the regions.

By examining the regional principal components obtained by correlation analysis and principal component analysis, the research has confirmed that, besides the indicators of an economic nature, there are important “soft” indicators in all the regions, which could be linked with the development of the regions.

In the regions studied, it is possible to determine the regional, environmental, and business qualities considered to be the most important by the surveyed population, and based on their correlations the research has ascertained that the economic and social development in all the regions studied may be linked with public awareness about development and with future environmental awareness and motivation. In addition, the economic development of the region could be correlated with the impact of business activities.

Methods were selected for performing a complex analysis of the regions used as a sample in order to determine the indicators which could best be correlated with the development of individual regions, the relationship strengths of these, the distribution of relationship strengths within a region, as well as regional heterogeneity and homogeneity. A series of formulae can be worked out for uniformly defining the flexibility, competitiveness, and efficiency of the regions, but this requires further complex analysis, to lay the groundwork for which it could be proposed the following, additional opportunities for research into the calculation methodology to be studied.

## **10. On the Way towards a Reinterpretation of Regional Competitiveness**

The methods of investigation employed may open up a new way into examining the competitiveness of the regions. In the authors' view, the competitiveness of a region depends on adaptability, which itself depends on how flexible the region is, how quickly it can respond to external and internal changes.

The resilience of the region, the indices defining the flexibility can thus be linked with the competitiveness of the region and the indicators defining this. Therefore, it was investigated which indicators may play a role in the resilience of the individual regions according to the people who live there (the question being asked in an indirect sense) and whether these may really be proposed as a new research line in determining the competitiveness of the regions.

As Professor Imre Lengyel writes: competitiveness can be predicted mainly by the growth of market share, profitability, and business success (Lengyel, 2000). The definition of the prosperity indicator is the subject of further research; according to some authors, changes in prosperity can be measured in terms of the results of economic policy (e.g. profit, price index, unemployment, export, etc.) (Batey–Friedrich, 2000). Regional competitiveness is thus defined fundamentally by the effectiveness of a region, namely the economic efficiency and the prosperity thus achieved. According to the authors' proposal, the correlation between

effectiveness, economic efficiency, and prosperity can be written as follows (Figure 9):

$E_R = E_{ER} \cdot W_R$	$E_R$ = regional effectiveness $E_{ER}$ = regional economic efficiency $W_R$ = prosperity of the regional population
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Source: the authors' own editing

**Figure 9.** Formula for regional efficiency

The territorial or regional economic efficiency can be measured by the change over time in the totality of goods produced (GDP) per capita in a given period in the area in question, that is, by how quickly the area is developing over time and how the economy and fiscal capacity of the region are changing. Temporal changes in GDP per capita measured in purchasing power standards (PPS) is an indicator which can be used in territorial units, regions, countries, or even smaller geographical units within a region (e.g. counties) for the sake of comparison. If the test is performed within a country, the GDP and the GDP (PPS) are obviously the same.

In terms of profitability, a region's development may be classified as uniform (homogeneous) or non-uniform (heterogeneous). The goods produced and the degree of economic development also depend on the economic structure of the regions and the sectoral distribution of companies, i.e. in what proportions are the companies operating in the region divided up into agricultural, industrial, and service sectors.

Based on this theory, the following formula can be created for regional economic efficiency:

$E_{ER} = \Delta \frac{GDP(PPS)_R}{P_R}$	$E_{ER}$ = regional economic efficiency $\Delta \frac{GDP(PPS)_R}{P_R}$ = changes in GDP per capita as Purchasing Power Standards (PPS)
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Source: the authors' own editing

**Figure 10.** Formula for regional economic efficiency

The temporal changes to and the extent of regional economic efficiency can be measured using the following formula:

$$\Delta \frac{GDP(PPS)_R}{P_R} = \frac{GDP(PPS)_{Rt}}{P_{Rt}} = \frac{GDP(PPS)_{R(t-i)}}{P_{R(t-i)}}$$

t = the year in question  
t-i = i<sup>th</sup> year before the year in question  
GDP(PPS)<sub>R</sub> = GDP of the region as Purchasing Power Standards (PPS)  
P<sub>R</sub> = population of the region

Source: the authors' own editing

**Figure 11.** Formula for the temporal changes to the economic efficiency of a region

With the above formulae (*Figure 10* and *Figure 11*), the economic efficiency of a region ( $E_{ER}$ ) is determined based on the temporal changes in the GDP per capita measured as PPS.

The reactions of the regions to crisis situations, however, depend not only on territorial efficiency but also on the speed and nature of changes and response, which has been formulated as regional resilience (Foster, 2010; Hassink, 2010; Christopherson et al., 2010). Regional development indicators typical of individual countries have also been defined (Srebotnjak et al., 2014). Besides regional efficiency ( $E_R$ ), therefore, regional resilience ( $R_R$ ) is also a determining factor in the efficiency analysis of crisis situations ( $K_R$ ). These can be defined by the following formula:

$$R_R \cdot E_R = K_R$$

$R_R$  = regional resilience  
 $E_R$  = regional efficiency  
 $K_R$  = regional crisis efficiency

Source: the authors' own editing

**Figure 12.** Formula for a region's crisis efficiency

The above formula shows that the responses given by a region to crises, i.e. the crisis efficiency ( $K_R$ ), is influenced both by the efficiency of the region ( $E_R$ ), which is a function of economic efficiency ( $E_{ER}$ ) and the prosperity of the population ( $W_R$ ), and the resilience of the region ( $R_R$ ) (*Figure 12*).

Regional resilience ( $R_R$ ) can be influenced by the homogeneity or heterogeneity of the regions (*RHI*) as well as by their adaptability ( $A_R$ ). The following formula can therefore be written for regional resilience:



$$R_R = A_R \cdot RHI$$

$R_R$  = regional resilience  
 $A_R$  = regional adaptability  
 $RHI$  = regional homogeneity index

Source: the authors' own editing

**Figure 13.** Formula for a region's resilience

The resilience of a region ( $R_R$ ) depends on the extent of the differences between the state of development and the efficiency of the areas making up the regions (RHI) and how great the adaptability of the region is ( $A_R$ ) to the crisis, i.e. how quickly it is able to correct a disadvantageous situation (Figure 13).

When studying the competitiveness of a region ( $C_R$ ), the crisis efficiency of a given region ( $K_R$ ) is compared with the crisis efficiency of the other regions or with the average for the regions. As a formula:

$$C_R = \frac{K_R}{K_{Ri}}$$

$C_R$  = regional competitiveness  
 $K_R$  = regional crisis efficiency  
 $K_{Ri}$  = arithmetic mean of the regional crisis efficiencies in the regions studied

Source: the authors' own editing

**Figure 14.** Formula for a region's competitiveness

Substituting the foregoing formulae into the formula for competitiveness, the following is obtained:

$$C_R = \frac{K_R}{K_{Ri}} = \frac{R_R \cdot E_R}{R_{Ri} \cdot E_{Ri}} = \frac{A_R \cdot RHI \cdot E_R}{A_{Ri} \cdot RHI_i \cdot E_{Ri}} = \frac{A_R \cdot RHI \cdot E_{ER} \cdot W_R}{A_{Ri} \cdot RHI_i \cdot E_{ERi} \cdot W_{Ri}}$$

$C_R$  = regional competitiveness  
 $K_R$  = regional crisis efficiency  
 $K_{Ri}$  = arithmetic mean of the regional crisis efficiencies in the regions studied  
 $R_R$  = regional resilience  
 $R_{Ri}$  = arithmetic mean of the regional resiliencies in the regions studied  
 $E_R$  = regional efficiency  
 $E_{Ri}$  = arithmetic mean of the regional efficiencies in the regions studied  
 $A_R$  = regional adaptability  
 $A_{Ri}$  = arithmetic mean of the regional adaptabilities in the regions studied  
 $RHI$  = regional homogeneity index  
 $RHI_i$  = arithmetic mean of the regional homogeneity indices in the regions studied  
 $E_{ER}$  = regional economic efficiency  
 $E_{ERi}$  = arithmetic mean of the regional economic efficiencies in the regions studied  
 $W_R$  = prosperity of the regional population  
 $W_{Ri}$  = arithmetic mean of the prosperities of the regional populations in the regions studied

Source: the authors' own editing

**Figure 15.** Formula for a region's competitiveness – in detail

The above formula illustrates well that when examining the competitiveness of a region ( $C_R$ ) the complex comparative analysis of another or several other regions is necessary, in which the extent of the crisis efficiency of the region must be examined in comparison with the other (or the others) ( $K_R/K_{Ri}$ ). The crisis efficiency ( $K_R$ ) can in turn be expressed with the regional resilience ( $R_R$ ) and the regional efficiency ( $E_R$ ). When comparing the regional resilience ( $R_R$ ), it is proposed that the regional adaptability ( $A_R$ ) and the regional homogeneity index ( $R_{HI}$ ) be examined. The regional efficiency ( $E_R$ ) can in turn be expressed with the regional economic efficiency ( $E_{ER}$ ) and the prosperity of the population living there ( $W_R$ ).

In the formula for competitiveness, economic efficiency ( $E_{ER}$ ) can be determined according to *Figure 9* and further substituted.

In the course of further research, the principal component analyses defined by the methods described may take us closer to clarifying and justifying the above competitiveness and flexibility equations as well as to justifying additional indices, significant from the point of view of the region's crisis efficiency ( $K_R$ ).

It is essential to try out the *methods* used in the study and to do further research on the proposed *regional homogeneity index* within the scope of regional pilot projects on a European level in order to ascertain whether this idea is suitable for comparing a larger number of regional units. The results may help with comparative analysis of regional competitiveness. All this could provide motivation for collective development and ensure new grounds for efficient distribution and usage of cross-border resources.

The efficiency of the NUTS 3 regions within a NUTS 2 region needs further investigation in order to produce a comparative economic efficiency analysis and to determine the prosperity of the regional population. These studies could help to find indicators that can be used to determine the adaptability and resilience of the regions.

Taking these into account, it would be possible to benchmark the competitiveness of the regions. Furthermore, it would be possible to resolve the differences between the states of development of the cross-border territories. All this could encourage joint development and provide new foundations for the allocation and use of cross-border resources.

## References

- Bakacsi, Gy. (2006). Kultúra és gazda(g)ság – A gazdasági fejlődés és fejlettség és a GLOBE kultúra változóinak összefüggései. *Vezetéstudomány* 38(1, special ed.): 35–45.
- (2012). A Globe-kutatás kultúráváltozóinak vizsgálata faktoranalízis segítségével. *Vezetéstudomány* 43(4): 12–22.

- Batey, P.; Friedrich, P. (2000). *Regional Competition*. Berlin: Springer-Verlag. 3–33.
- Christopherson, S.; Michie, J.; Tyler, P. (2010). Regional resilience: theoretical and empirical perspectives. *Cambridge Journal of Regions, Economy and Society* 3(1): 3–10.
- Dawley, S.; Pike, A.; Tomaney, J. (2010). Resilience, adaptation and adaptability. *Cambridge Journal of Regions, Economy and Society* 3(1): 59–70.
- Dusek, T. (2004). A területi elemzések alapjai. *Regionális Tudományi Tanulmányok* 10. ELTE, Regionális Földrajzi Tanszék–MTA–ELTE Regionális Tudományi Kutatócsoport, Budapest. 63–89.
- Foster, K. A. (2007). A case study approach to understanding regional resilience. *Working Paper Series* 8. University of California, Berkeley.
- (2010). *Regional resilience: how do we know it when we see it? Conference on urban and regional policy and its effects*. Washington D. C. Retrieved on: 16. August 2014, from: <http://regional-institute.buffalo.edu/Includes/UserDownloads/Foster%20DC%20Presentation%20v2%20May%202010.pdf>.
- Gunderson, L. H.; Holling, C. S. (2002). Resilience and adaptive cycles. In: Gunderson, L. H.; Holling, C. S. (eds), *Panarchy: understanding transformations in human and natural systems*. Washington D. C.: Island Press. 25–62.
- Grabher, G. (1993). The weakness of strong ties: the lock-in of regional development in the Ruhr Area. In: Grabher, G. (ed.), *The embedded firm: on the socio-economics of industrial networks*. London: Routledge. 255–277.
- Hassink, R. (2010). Regional resilience: a promising concept to explain differences in regional economic adaptability? *Cambridge Journal of Regions, Economy and Society* 3(1): 45–58.
- Hill, E. W.; Wial, H.; Wolman, H. (2008). Exploring regional economic resilience. *Working Paper Series* 4. University of California, Berkeley.
- Lengyel, I. (2000a). A regionális versenyképességről. *Közgazdasági szemle* 47(12): 962–987.
- (2000b). Porter-rombusz: a regionális gazdaság fejlesztési stratégiák alapmodellje. *Tér és Társadalom* 14(4): 39–86.
- (2010). *Regionális gazdaságfejlesztés. Versenyképesség, klaszterek és alulról szerveződő stratégiák*. Budapest: Akadémiai Kiadó.
- Lengyel I.; Rechnitzer, J. (2000). A városok versenyképességéről. In: Horváth, Gy.; Rechnitzer, J. (eds), *Magyarország területi szerkezete és folyamatai az ezredfordulón*. Pécs: MTA RKK. 130–152.
- (2004). *Regionális gazdaságtan*. Budapest–Pécs: Dialóg Campus Kiadó.
- Martin, J.; Simmie, R. (2010). The economic resilience of regions: towards an evolutionary approach. *Cambridge Journal of Regions, Economy and Society* 3(1): 27–43.

- Martin, R. (2010). Roepke lecture in economic geography – rethinking regional path dependence: beyond lock-in to evolution. *Economic Geography* 86(1): 1–27.
- Martin, R.; Sunley, P. (2006). Path dependence and regional economic evolution. *Journal of Economic Geography* 6(4): 395–437.
- Nemes Nagy, J. (2005). Nemzetközi és hazai tendenciák a területi elemzésben. *Területi Statisztika* 1: 7–14.
- (2009). *Terek, helyek, régiók. A regionális tudomány alapjai*. Budapest: Akadémiai Kiadó.
- Nyugat-Dunántúli *Operatív Program 2007–2013*. Retrieved on: 16 October 2014, from: [http://www.terport.hu/webfm\\_send/316](http://www.terport.hu/webfm_send/316).
- Pendall, R.; Foster, K. A.; Cowell, M. (2007). Resilience and Regions: Building Understanding of the Metaphor. *Working Paper Series* 12. University of California, Berkeley.
- Sajtos, L.; Mitev, A. (2007). *SPSS kutatási és adatelemzési kézikönyv*. Budapest: Alinea Kiadó.
- Statistik Austria. (2013). *Österreich – Zahlen – Daten – Fakten 2013/14*. Wien: Statistik Austria.
- Srebotnjak, T.; Gradmann, A.; Porsch, L.; Hametner, M. (2014). *An indicator for measuring regional progress towards the Europe 2020 targets – executive summary*. Brussels: Committee of the Regions of the European Union.

# The Harmonization of Accounting

Noémi HAJNAL

Department of Economics, Faculty of Economics and Human Sciences, Sapientia  
Hungarian University of Transylvania, Miercurea Ciuc  
E-mail: hajnalnom@gmail.com1

**Abstract.** The development and configuration of the regulatory framework of the accounting systems in Romania and Hungary took place in different ways. Among the reasons for the diversities in these countries' accounting systems, the following can be certainly mentioned: different purposes of taxation, legal structure, the accountancy's connection with the corporate law and family law, diversification on corporate financing policy, and cultural heterogeneity. Both countries quickly caught up with the international accounting harmonization standards. The adaptation of the international accounting standards has many advantages and disadvantages; these have been discussed in several previous researches. This paper aims at comparing the Romanian and Hungarian states' accounting regulations from the early 1990s, which were implemented in order to harmonize the states' accountancy regulations with the international standards, and their impact on the economy, based on secondary analysis.

**Keywords:** harmonization, accountancy, IAS, IFRS, accounting standards

**JEL Classifications:** M41 Accounting

## 1. Introduction

The main goal of accounting is to provide information for the stakeholders who come into contact with the economic entity. This information has a crucial role in the stakeholders' decision-making process. Providing this information is possible through preparing and publishing the annual account. In order to justify the existence of accounting, the stakeholders and their interests need to be specified first. According to OECD (1987), the primary stakeholders are the companies' owners who want to be informed about the profitability and equity of the company. The management and the employees are stakeholders as well; they are also concerned about the company's profitability. Along with them, the lenders and business partners must also be mentioned, who want to track the company's finances, together with the experts who analyse the finances, while last but not least there are customers and the competitors.

The stakeholders' needs for information are irreconcilable; therefore, the accounting's external regulation is necessary. Accounting regulations are expected to ensure the financial statements' conformity with the reliability- and comparability-related requirements generated by information asymmetry. Information asymmetry appears on a market – in this case on a financial market – when there is uncertainty regarding an investment's or a product's quality. According to Akerlof (1970), there can be “lemons” and “plums” on a market.

Accounting has become more and more important as the “language of business”. Speaking this common language, companies publish their operational information, numbers. Through globalization and its completion, the need for comparable accounting data has come more and more to the front. In other words, globalization flow has certainly had an influence on the harmonization process in accounting (Mamić Sačer, 2015).

The main purpose of the paper is to overview the history of accounting harmonization and the steps and efforts that have been made in order to harmonize accounting on global and country level (Romania, Hungary). Then, it presents Romanian and Hungarian accounting along with the regulation systems' harmonization processes. The harmonization of accounting and the review of Hungarian and Romanian accounting regulations have been in the focus of researchers. The Romanian financial reporting was analysed e.g. by Lapteş and Popa (2013). The Romanian public accounting's evolution was also analysed by e.g. Nistor and Filip (2008) reflecting on the period of 1989–2008, Deaconu and Buiga (2011) covering the post-communist period (1991–2009). Albu et al. (2011) and Deaconu (2006) research the possibility of international accounting standards' implementation for small and medium-sized enterprises in Romania. The Hungarian accounting's history and the international standards' adoption were also analysed by Deák (2005), Borbély (2007b), Kardos and Madarasi Szirmai (2013), and Vajay (2015). Evolution of the accounting system in both countries was analysed by Borbély (2007b). The present paper attempts to overview the evolution of accounting harmonization; it also presents a comparison of Romanian and Hungarian national regulations in terms of their accounting, including the steps made towards harmonization. The accounting systems' analysis reflects upon the period starting from the 1940s to the present.

The paper begins by presenting the antecedents of the harmonization process, which is then followed by the description of the accounting standards and the international overview of the harmonization process. After an overview of the accounting standards, the article reflects upon the adoption of the accounting system and standards in Romania and Hungary. Finally, after drawing a parallel between these two countries regarding the way of how they introduced the national accounting standards, there follows the impact of standard adoption and conclusion.

## 2. Antecedents of the Harmonization

A company's subsidiaries, which are located in other countries than the parent company, have to prepare financial statements according to specific guidelines. These financial statements have different structure, and they are built in a different way regarding their content; therefore, their performance is hardly comparable for owners, investors, authorities, or other decision-makers. Along with the emergence of multinational companies, the capital market of certain countries became more and more open. Complex and unknown operations appeared, and the need for a common language of business has grown (Epstein & Mirza, 2002). Unifying accounting, as a common performance-measuring language, became a global ambition. As the result of a common business language, the specific business solutions are headed in the same direction. According to Bosnyák (2003), accounting is able to influence and determine the economic behaviour, and as a progressive approach accounting emphasizes the better understanding and explanation of the economic reality rather than only describing it.

## 3. The Harmonization Process

There are three main regulation systems regarding the accounting standards (Deák, 2005):

- US GAAP<sup>1</sup> is the most famous accounting principle; it expanded beyond the US borders a long time ago. However, the US GAAP would be politically unacceptable in many countries (Nobes, 2013).
- IASC – the International Accounting Standards Committee was set up in 1973. The committee's main goal was to create unified International Accounting Standards (IAS).
- The European Union (EU), where the public regulation of accounting started from the 1970s.

The most probable winner of the *global standards* title was either the IAS or the US GAAP. The EU's regulation system was not properly elaborated; therefore, the EU recognized that it should take a side and join the standard creation process. Finally, through Directive 2001/65/EC, the EU decided to join the IAS and submitted its candidacy to the IASB. The "Norwalk Agreement" was the next step towards the global standards. This agreement was made between the

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1 US GAAP – Generally Accepted Accounting Principles – are those accounting principles which were generally accepted and adopted by the United States Securities and Exchange Commission (SEC). In parallel with the socio-economic evolution, the series of national GAAPs develop as particular countries' accounting principles (Deák, 2005).

Financial Accounting Standards Board (FASB) of the USA and IASC in order to establish the convergence of the US GAAP and IAS (FASB, 2002).

Behind the accounting regulations' standardization, there is a second harmonization, similar to the US GAAP and IAS convergence. The latter's (harmonization) goal is to support the free movement of capital through international investments and presence on the markets of their countries. This was a significant step forward, while until then only the financial statements made according to specific national principles (e.g. American) could be adopted in that particular country (e.g. USA). Therefore, the statements had to be translated according to the target country's regulation standards (Deák, 2005). This meant additional work, cost and also required wider knowledge.

The next step towards the harmonization process was that the IASC amended its constitution and became International Accounting Standards Board (IASB). Along with the IAS (International Accounting Standards), the IFRS (International Financial Reporting Standard) denomination was introduced. The standards previously published by the IASC remained, while the new ones got the IFRS name.<sup>2</sup> The first IFRS was published in 2003 (Majoros, 2010).

The EU received the IAS/IFRS consolidated statement creation procedure, which is mandatory for companies present in stock markets. From the beginning of 2007, every EU Member State has adopted that third parties can prepare financial statements according to US GAAP without translation to IFRS. Another major step was taken in June 2007, when the SEC and the EU decided to collaborate more closely in order to develop a global accounting system. As a result of this agreement, since 15 November 2007, foreign companies in the American stock market can choose between US GAAP and IFRS as accounting principles when preparing their financial statements (Majoros, 2010).<sup>3</sup>

According to IASB (2015), the IFRS Standards are assigned for use worldwide by more than a thousand countries. However, the IFRS was heavily criticized mainly because of the framework concept and their independence in decision-making (Fekete et. al, 2008).

It would be a mistake to draw hasty conclusions based on the number of jurisdictions which adopted the IFRS approach because among those countries which declared their intent to converge their own national regulations with the IFRS many had heterogeneous accounting systems and were situated on different stages of the convergence roadmap (Kazainé, 2008).

The most important milestones of accounting harmonization are listed in *Table 1*.

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2 [www.iasplus.com](http://www.iasplus.com).

3 The SEC adopts the financial statements according to the IFRS – published by IASB; however, these are not equal with the standards adopted by the EU. This solution is disapproved by the European Parliament (Gulyás, 2014).



**Table 1.** *Global accounting harmonization milestones*

<b>Year</b>	<b>Milestones</b>
<b>1960s</b>	Requesting international standards. <sup>4</sup>
<b>1973</b>	The International Accounting Standards Committee (IASC) was established.
<b>1970</b>	The First Company Law Directive (68/151/EEC) was modified. The amendment reflects upon the disclosure of company-level information and accounting legislation in the European Union.
<b>1978</b>	Developing the Accounting Directives of the European Union.
<b>1995</b>	Through implementing the Accounting Directives, the EU does not achieve total harmonization; therefore, it changed its strategy and committed itself to using the IAS.
<b>1995–2000</b>	“Core Standards” project IASB – developing the central standard set which will be proposed to global actors. In 2000, IOSCO <sup>5</sup> adopted the national accounting standards.
<b>2001</b>	The Directive 2001/65/EC of the European Parliament, among others, permits the use of the method known as “fair value accounting”. The IFRS Foundation and the International Accounting Standards Board were established. IASB → IASC; IAS → IFRS.
<b>2002</b>	FASB and IASB signed “The Norwalk Agreement” in order to achieve compatibility. Regulation (EC) No 1606/2002 harmonizes financial accounting by prescribing the obligatory utilization of IFRS for those companies that are present on trade markets in the EU.
<b>2005</b>	The EC proposed that all member countries adopt IAS/IFRS for consolidated accounts from 2005.
<b>2007</b>	The SEC allowed the acceptance (SEC, 2007) of the financial statements prepared using IFRS.
<b>2008</b>	G20 calls IASC and FASB to resolve the convergence issues.
<b>2009</b>	IFRS for SMEs.
<b>The national accounting legislation is more and more pushed into the background (a few examples)</b>	
<b>2006</b>	China working on the convergence of their standards with IFRSs – voluntary adoption of IFRS by public companies. <sup>6</sup>
<b>2007</b>	Canada GAAP → IFRS.
<b>2011</b>	Canada commences the use of IFRS standards.
<b>2012</b>	Russia, Argentina, and Mexico launch the use of IFRS standards.
<b>2015</b>	Introduction of IFRS and IFRS for SMEs in the following countries: Angola, Canada, Colombia, Hungary, India, Japan, Norway, Pakistan, Saudi Arabia, Thailand, Ukraine, United Arab Emirates, and Uruguay (Pacter, 2016).

Source: author’s own creation

4 The significance of international accounting increased after World War II as the result of the development of economic integration and the growth of the “cross-border capital flow” (FASB, 2013).

5 IOSCO – International Organization of Securities Commissions.

6 China as the world’s biggest emerging country carries out a convergence procedure of the national standards and IFRS, which is followed by various people (academics, regulators, etc.) (Lee et al., 2013).

In the international literature, there are several well-known academics who deal with the impact of the IFRS introduction. The general point of view is that those countries tend to adopt and implement IFRS which have a weaker investor lobby, and the IFRS is a tool for improving this lobby (Hope et al., 2006; Shipper, 2005). According to Pownall and Shipper (1999), a good investor lobby means the importance of implementing IFRS in countries with developed accounting regulations.

## 4. Accounting System and IFRS Adoption in Romania

Romania made huge efforts regarding the implementation of the International Financial Reporting Standards (Fekete et. al, 2008). The implementation of the accounting standards in Romania is, on the one hand, urged by the EU membership. Globalization and the increasing cross-border operations are considered further external factors which lead to the adoption and application of the accounting standards. On the other hand, there is a more important, internal reason to improve the Romanian accounting system by considering and adopting the international harmonization process. There was an aspiration to get a “comparative advantage” for Romanian companies by adopting IFRS. Since IFRS represent globally accepted standards, they have international significance and are revised by experts. By implementing IFRS, Romanian companies which are present on international capital markets considered the adoption as a financial leverage (Ionaşcu et. al, 2014).

According to Lapteş and Popa (2013), the Romanian accounting does not have an exact form or structure – from 1990, it has been “in a constant search of identity”. This is true indeed. However, today, the Romanian accounting is euro-compatible, but it has made a long journey from the western- (French, Italian, and German) and, later, Soviet-inspired accounting system to the IFRS (*Table 2*). In the followings, there is a brief overview of the IFRS’s impact on Romanian accounting.

Accounting has played several different roles since its existence. The first was a managing tool – traders used the predecessor of today’s accounting system to administer their businesses. Creditors and the state were interested in the tax calculation, which can be performed by using data collected from financial statements. Accounting was also a controlling tool, an instrument used during the communism to control the country’s production according to the national plan (Ionaşcu et al., 2014). The companies often manipulated the accounting data to achieve the plan, e.g. using the unfinished production (Borbély, 2007b).

**Table 2.** Milestones of the Romanian accounting system

<b>Period</b>	<b>Romanian accounting system</b>	<b>Users of accounting information</b>
<b>before 1949</b>	<b>Western-inspired</b> No national chart of accounts	<i>Traders, creditors, the state</i>
<b>1949–1989</b>	<b>Soviet-type</b> There is a national chart of accounts and a legislative perspective on accounting.	<i>The state</i>
<b>1990–1998</b>	<b>French-inspired (from 1994)</b> – Partially adopted European accounting directives  Building an accounting system in line with the European Union's requirements. Law No 82/1991 on the accounting system: Financial reporting obligation of economic entities – Government Ordinance No 65/1994	<i>The state, credit institutions, companies</i>
<b>1999–2005</b>	<b>Hybrid accounting</b> – (French- and Anglo-Saxon-inspired accounting in partial conformity with IFRS)  Romanian accounting regulations not compliant with EU requirements as regards IFRS. 2001: The adoption of the first Corporate Governance Code of Bucharest Stock Exchange, IFRS voluntarily adopted by companies on the trade market. Accounting regulations in conformity with European directives were adopted by unlisted companies. Order No 306/2002 of MPF: simplified financial reporting for SMEs.	<i>The state, credit institutions, companies</i>
<b>2006–2011</b>	<b>Dual accounting system</b>  The 4 <sup>th</sup> European directive → all individual accounts, EU-IFRS → voluntary for consolidated accounts of listed companies and banks. 2006: Company Law →Mandatory adoption of corporate governance principles. 2008: The adoption of the new Corporate Governance Code of Bucharest Stock Exchange, replacing the previous code from 2001.	<i>The state and credit institutions, companies</i>
<b>2012–2015</b>	<b>Full EU-IFRS-compliant accounting system</b>  Order No 1802/2014 of MPF <sup>7</sup> – for quoted companies and banks (consolidated and individual accounts). IFRS accounting regulations in conformity with national accounting regulations.	<i>The state and credit institutions, companies</i>

Source: author's own creation based on Ionaşcu et al. (2014) and Bogdan et al. (2004)

The reform of the Romanian accounting started with Law No 82/1991, which has been amended several times but still remained the framework of the

7 Ministry of Public Finances.

accounting regulation and is in force until today (Fekete et. al, 2008). The aim of the law is the institutionalization of accounting as socio-economic activity.

The accounting system installed in 1994 was totally based on France's National Accounting Plan from 1982 (Plan Comptable Generale, PCG) insofar as "the entire Romanian legislation is based on the French financial accounting (including all its static accounting particularities, its fiscal and macroeconomic objectives)" (Richard, 1995: 317). This approach suited the country's centralization approach, the new capitalist needs, and the EU's expectations (4<sup>th</sup> Directive) (Neag, 2000).

The Ministry of Finance, as a single accounting ruler, in 2001, reacting to real market needs and external experts' advice (experts from the Institute of Chartered Accountants of Scotland – ICAS), decided that the Romanian accounting system had to meet the international regulations (IAS) (King, 2001). In the beginnings (early 2000s), using the IAS was a drag for the entities – they were forced to adopt and use the IFRS. Many of them could not use it and could not bear the additional word and time spent preparing the financial statements. From January 2006, the regulation was amended (Ministry of Public Finance Order No 2005/1752), and the Romanian accounting system clearly acts upon the European 4<sup>th</sup> and 7<sup>th</sup> directives. Therefore, in case the EU directives act upon the international regulation, the Romanian regulation is in harmony with the IFRS (Fekete, 2008).

The development stages of IFRS application in Romania are summarized in *Table 3*. From 1990 till 2012, the IFRS adoption was voluntary. The national accounting regulations also included the IFRS's voluntary use since 2006 (MPF, 2006). In this term, the voluntary use of IFRS meant a "separate set of financial statements" (Ionaşcu et. al., 2014), and since 2012 listed entities in Romania are expected to provide "individual financial statements" annually.

**Table 3.** *Adoption of IFRS in Romania*

<b>Period</b>	<b>Adoption</b>	<b>Features of IFRS adoption</b>
<b>1990–1998</b>	<b>Voluntary full adoption</b>	No IFRS-compliant financial statements are authentic in relation with national institutions.
<b>1999–2005</b>	The harmonization with the IFRS is mandatory.	Consolidated financial statements.
	Individual financial statements: <i>2001: Banks and insurance companies</i> <i>2002: Brokerage companies</i> <i>2003: Large non-financial entities</i>	The IFRS was partially applied. Financial statements in conformity with harmonization regulations.

Period	Adoption	Features of IFRS adoption
2006–2011	<b>Voluntary full IFRS adoption</b> , fact included in the Romanian accounting regulations.	
		Mandatory conformity with the IFRS. Consolidated financial statements: <i>2006: Banks</i> <i>2007: Listed companies</i>
2012–2014	<b>Voluntary full IFRS adoption</b> , fact included in the Romanian accounting regulations.	Full EU-IFRS-compliant accounting system for listed entities for consolidated and individual accounts.
		Mandatory conformity with IFRS. Consolidated financial statements: <i>Banks</i> <i>Listed companies</i> <i>2011–2013: Brokerage companies</i> <i>2012–2013: Insurance companies (limited experiment, 11 entities)</i>

Source: author's own creation based on Ionaşcu et al. (2014)

Even if the relevant accounting standards were adopted and implemented in Romania, there is a lack of significant elements regarding “the support of the infrastructure”. The main concern is caused by the financial statements’ quality (Lapteş & Popa, 2013).

## 5. Accounting System and IFRS Adoption in Hungary

Similarly to the case of Romania, before 1990, Hungary belonged to the socialist territory. Therefore, the economy of both countries shares common aspects. When Hungary was admitted to the European Union, the transition of accounting regarding the requirements of the market economy was already in progress (Borbély, 2007b).

The base of the new accounting system is Law No 28/1991. In Romania, the accounting law was also passed in 1991; however, it did not bring immediate changes. Rather, it created a legal-conceptual framework which was filled with content only three years later, after long professional and political debates (Fekete et al., 2008). In Hungary, since 1991, besides the taxation purposes, the owners’ and lenders’ interests have been at the centre of accounting regulation; however, the primary aspect of taxation and economy’s control was eliminated (Kazainé, 2008).

In 2004, the Hungarian Accounting Standards Board was set up in order to create standards. However, the process was not successful and needed a fresh start in 2011, but, after all, no independent standard has come out yet (Vén, 2015).

There are no substantial differences between the principles of the national regulations and the international accounting standards; the only differences can be found at the level of details (Kazainé, 2008); so, Hungarian regulations are in line with the international principles.

**Table 4.** *The milestones of Hungarian accounting regulations*

<b>Year</b>	<b>Hungarian accounting regulation</b>
<b>1947</b>	First national chart of account which is compulsory. Before 1947 in Hungary, only a few companies used particular charts of accounts, developed according to their own concepts.
<b>1954</b>	Decree of the Financial Ministry. The Financial Ministry's legal order determined the compulsory content of the companies' financial reports. The accounting's first conceptual approach.
<b>1968</b>	Decree XXXIII. Besides setting the structure of the financial statement, it was also crucial to standardize its contents (cost calculation, cost price calculation, accounting balance sheet, income statement regulation).
<b>1989</b>	The transition of the practical Hungarian account started.
<b>1991</b>	Law XVIII. According to the Law's Preamble, for the performance of economy, there is necessary for stakeholders to have available financial statement information. The availability of this information is essential for making decisions.
<b>2000</b>	Act C. The basis of the Hungarian accounting system is Act C, 176 § – the section about accounting standards along with EU directives. The above mentioned section of Act C, among others, deals with the determination of the financial statements' structure on the basis of company size.

Source: author's own creation based on Kardos & Madarasi-Szirmai (2013)

In 2013, a process started in order to map the kind of conditions that could ensure the use of IFRS for several economic entities when preparing their individual (stand-alone) financial statements (Molnár, 2014). Currently in Hungary, on the basis of EC Regulation No 1606/2002, only those companies have to provide consolidated financial statements in conformity with the IFRS which are listed on the stock market. However, recently, the possibility to apply IFRS standards to individual financial statement has been introduced as well (Vajay, 2015). The ordinance of the Hungarian government (1639/2014, XI. 14.) on the preparation of individual financial statements in conformity with IFRS regulations deals with the extension of IAS/IFRS approval constraints. The suggested schedule of the adoption is summarized in *Table 5*.

**Table 5.** *Suggested schedule of IFRS adoption*

Entity type	IFRS introduction in:		
	2016	2017	2018
<b>Credit institutions</b>	x	<i>Mandatory</i>	<i>Mandatory</i>
<b>Insurance companies and other financial entities</b>	Optional	Optional	Optional
<b>Listed companies' individual or separate financial statements</b>	Optional	Mandatory	Mandatory
<b>Companies applied in preparation of consolidated financial statements in conformity with IFRS, based on parent company's decision</b>	Optional	Optional	Optional
<b>Other large entities</b>	x	Optional	Optional

Source: author's own creation based on Molnár (2015), cited in Vén (2015)

According to the present plans, at the beginning of the so-called *transitional period*, the application of the standards would be voluntary, and after a few years it will be mandatory.

Vajay (2015) is concerned about the IAS/IFRS appliance in case of additional activities such as international standards and taxation systems convergence, its impact on tax incomes, data, information retrieval, and the decrease of administration work.

## 6. The Impact of IFRS Adoption

The regulation systems of Hungary and Romania are macro-based, meaning that the system's control is carried by the authorities. Both are also continental type, the regulation's principles are *de jure euro-compatible*. The two country's accounting system was adapted, and, like the most transitional economies, they used a West-European national accounting system as a pattern to develop their own national system (Borbély, 2007a); and as transitional economies the harmonization of accounting standards began with the IAS/IFRS and EU Directives (King et al., 2001).

## 7. Conclusions

As Mamić Sačer (2015) states, the most distinctive particularity of the accounting system in the 21<sup>st</sup> century is the harmonization process. Nevertheless, national regulations still determine a country's accounting system, wherefore these systems

remain incomparable. The regulations of the accounting harmonization focus on consolidated financial statements. However, the total harmonization of the accounting system is a long process, even if the countries had already taken crucial steps towards the convergence of financial statements and towards the improvement of their comparability.

In Romania and Hungary, most economic entities are small and medium-sized enterprises. However, in both countries, the IAS/IFRS application is mandatory for those companies which are listed in the European Union's stock market, but the main goal of standard harmonization is to spread out the IAS/IFRS appliance at the level of insurance, credit institutions, and small and medium-sized enterprises.

As it was mentioned in the introduction, globalization has had a major impact on national accounting regulations. Although the Romanian and Hungarian small and medium-sized enterprises are concerned with national regulations in terms of their accounting, multinational companies' data retrieval is regulated mainly by international standards.

## References

- Akerlof, G. A. (1970). The market for lemons: quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 84(3): 488–500.
- Albu, C. N.; Albu, N.; Fekete, Sz. (2010). The context of the possible IFRS for SMEs implementation in Romania: an exploratory study. *Accounting and Management Information Systems* 9(1): 45–71. Retrieved on: 7 April 2017, from: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1769991](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1769991).
- Bogdan, V.; Farcaș, M.; Scorțe, C. (2004). Evoluția reformei contabile românești [The evolution of Romanian accounting]. *Analele Universității din Oradea* [The Annals of the University of Oradea, Economic Sciences], 90–98. ISSN 1582-5450. Retrieved on: 7 April 2017, from: <http://steconomiceuradea.ro/anale/volume/2004/19.pdf>.
- Borbély, K. (2007a). A számvitel információ megbízhatósága néhány átmeneti gazdaságban [The reliability of the accounting information in some transition economies]. In: *Versenyképesség – Fejlődés – Reform. Konferencia a Tudomány Napja alkalmából* [Science Day Conference]. University of West Hungary, Sopron.
- (2007b). *Hosszúra nyúlt átmenet? Magyarország, Románia és Szlovákia számviteli szabályozó rendszerei és a vállalkozások éves beszámolójának megbízható és valós képe a kilencvenes évek elejétől 2005-ig* [Lengthy transition]. PhD dissertation. Széchenyi István University, Győr.



- Bosnyák, J. (2003). *Számviteli értékelési eljárások hatása a vállalkozások vagyoni, jövedelmi és pénzügyi helyzetére* [The effect of evaluation methods on the financial position, performance and cash flows of entities]. PhD dissertation. Corvinus University, Budapest.
- Deaconu, A. (2006). Standarde contabile pentru întreprinderi mici și mijlocii [Accounting standards for small and medium-sized enterprises]. *Congresul al XVI-lea al Profesiei Contabile din România: Profesia contabilă și globalizarea* [XVI Romanian Accounting Profession Congress: the Accountancy Profession and Globalization]. Bucharest, 15–16 September 2006, CECCAR, 305–314.
- Deaconu, A.; Buiga, A. (2011). Accounting and the environmental factors – an empirical investigation in Post-Communist Romania. *Accounting and Management Information Systems* 10(2): 135–168. Retrieved on: 7 April 2017, from: [ftp://ftp.repec.org/opt/ReDIF/RePEc/ami/articles/10\\_2\\_3.pdf](ftp://ftp.repec.org/opt/ReDIF/RePEc/ami/articles/10_2_3.pdf).
- Deák, I. (2005). A globalizálódó számvitel [Accounting in globalization]. SZTE Gazdaságtudományi Kar Közleményei. In: Katalin Botos (ed.), *Pénzügyek és globalizáció* [Finances and globalization], 201–214. Retrieved on: 16 August 2016, from: [http://www2.eco.u-szeged.hu/penzugytani\\_szcs/pdf/konyv3/Deak.pdf](http://www2.eco.u-szeged.hu/penzugytani_szcs/pdf/konyv3/Deak.pdf).
- Epstein, B. J.; Mirza, A. A. (2002). *Nemzetközi számviteli standardok. Magyarázatok és alkalmazások* [Interpretation and application of international financial accounting standards]. Budapest: Perfekt Gazdasági Tanácsadó, Oktató és Kiadó Rt.
- FASB (2002). *Memorandum of understanding “The Norwalk Agreement”*. Retrieved on: 15 August 2016, from: <http://www.fasb.org/news/memorandum.pdf>.
- (2013). Comparability in international accounting standards – a brief history. Retrieved on: 15 August 2016, from: <http://www.fasb.org/jsp/FASB/Page/SectionPage&cid=1176156304264>.
- Fekete Sz.; Matisz D.; Pete I. (2008). Az IFRS-ek alkalmazása Romániában. Mit mond a gyakorlat? [Application of IFRS in Romania. What does it look like in practice?]. *Economists’ Forum*. Retrieved on: 21 June 2016, from: [http://epa.oszk.hu/00300/00315/00065/pdf/EPA00315\\_Kozgazdasz\\_Forum\\_2008\\_02.pdf](http://epa.oszk.hu/00300/00315/00065/pdf/EPA00315_Kozgazdasz_Forum_2008_02.pdf).
- Gulyás, É. (2014). *A pénzügyi lízing számviteli keletkezésének problémái a hazai és nemzetközi szabályozás keretei között* [Problems of handling accounting for financial leasing within the framework of domestic and international regulations]. PhD dissertation. Kaposvár University, Kaposvár. Retrieved on: 5 June 2016, from: [http://www.gtk.ke.hu/tartalom/doktori/Ertekezes\\_Gulyas\\_Eva.pdf](http://www.gtk.ke.hu/tartalom/doktori/Ertekezes_Gulyas_Eva.pdf).
- Hope, O.-K.; Jin, J.; Kang, T. (2006). Empirical evidence on jurisdictions that adopt IFRS. *Journal of International Accounting Research* 5(2): 1–20.
- IASB (2015). *What are IFRS standards?* Retrieved on: 11 June 2016, from: <http://www.ifrs.org/about-us/pages/what-are-ifrs.aspx>.

- Ionaşcu, M.; Ionaşcu, I.; Săcărin, M.; Minu, M. (2014). IFRS adoption in developing countries: the case of Romania. *Accounting and Management Information Systems* 13(2): 311–350. Retrieved on: 5 June 2016, from: [http://www.cig.ase.ro/revista\\_cig/fisiere/13\\_2\\_6.pdf](http://www.cig.ase.ro/revista_cig/fisiere/13_2_6.pdf).
- Kardos, B.; Madarasi-Szirmai, A. (2013). Accounting in Hungary. *EAA Newsletter* 3: 18–22. Retrieved on: 15 June 2016, from: <http://www.eaa-online.org/userfiles/file/17%20-%20Accounting%20Tradition%20in%20Hungary%20-%20Sept%202013.pdf>.
- Kazainé Ónodi, A. (2008). Nemzetközi számvitel kérdései vállalati nézőpontból [International accounting-related questions in corporate point of view] *Műhelytanulmány* 104. [Occasional Paper]. ISSN 1786-3031. Retrieved on: 12 July 2016, from: <http://edok.lib.uni-corvinus.hu/298/1/Kazaine104.pdf>.
- King, N.; Beattie, A.; Cristescu, M.; Weetman, P. (2001). Developing accounting and audit in a transition economy: The Romanian experience. *The European Accounting Review* 10(1): 149–171.
- Lapteş, R.; Popa, A. F. (2013). The dynamics of the Romanian financial reporting. *Economic Sciences (Scientific Annals of the “Alexandru Ioan Cuza” University of Iaşi)* 60(1): 1–19.
- Lee, E.; Walker, M.; Zeng, C. (2013). Does IFRS convergence affect financial reporting quality in China? *ACCA Research Report No 131*. Retrieved on: 25 July 2016, from: <http://www.accaglobal.com/content/dam/acca/global/PDF-technical/financial-reporting/rr-131-002.pdf>.
- Majoros, Gy. (2010). *A magyar számviteli szabályozás értékelése a vezetői számvitel beszámoltatási rendszerének továbbfejlesztésével* [Evaluation of the Hungarian accounting regulation considering the development of the reporting system of the management accounting]. PhD dissertation. Szent István University, Gödöllő.
- Mamić Sačer, I. (2015). The regulatory framework of accounting and accounting standard-setting bodies in the European Union member states. *Financial Theory and Practice* 39(4): 393–410.
- Ministry of Public Finance (MFP) (2006). Ordinul MFP nr. 1121/2006 privind aplicarea Standardelor Internaţionale de Raportare Financiară [Order of the Minister of Public Finance No 1121/2006 regarding the application of International Financial Reporting Standards]. *Monitorul Oficial* [Official Journal of Romania] 602/12.07.2006.
- Molnár, Cs. (2014). IFRS-ek hazai bevezetése – folyik a döntés-előkészítő munka [The IFRS’ introduction in Hungary]. *Számvitel – Adó – Könyvvizsgálat (SZAKma)* [Accounting – Tax – Audit (SZAKma)] 55(6). Retrieved on: 21 July 2016, from: <http://szak-ma.hu/szamvitel/ifrs-ek-hazai-bevezetese-folyik-a-dontes-elokeszito-munka-100035>.

- (2015). Döntés-előkészítő folyamat az IFRS-ek hazai bevezetésére [Decision-making preparation for IFRS introduction in Hungary]. *Számvitel – Adó – Könyvvizsgálat (SZAKma)* [Accounting – Tax – Audit (SZAKma)] 57(2): 65–67.
- Neag, R. (2000). *Romanian accounting reform between the French and Anglo-Saxon models*. Bucharest: Economic Publishing House.
- Nistor, C. S.; Filip, C. (2008). *The evolution of public accounting in Romania in the post-communist period*. Retrieved on: 6 April 2017, from: <https://ssrn.com/abstract=1107774>.
- Nobes, C. (2013). International variations in IFRS adoption and practice. *ACCA Research Report No 124*. Retrieved on: 9 July 2016, from: <http://www.accaglobal.com/content/dam/acca/global/PDF-technical/financial-reporting/rr-124-001.pdf>.
- OECD (1987). *The relationship between taxation and financial reporting*. OECD Publishing.
- Pacter, P. (2016). *Pocket guide to IFRS standards: the global financial reporting language*. IFRS Foundation. Retrieved on: 15 July 2016, from: <http://www.ifrs.org/Use-around-the-world/Documents/2016-pocket-guide.pdf>.
- Pownall, G.; Schipper, K. (1999). Implications of accounting research for the SEC's consideration of international accounting standards for U.S. security offerings. *Accounting Horizons* 13: 259–280.
- Richard, J. (1995). The evolution of the Romanian and Russian accounting charts after the collapse of the communist system. *European Accounting Review* 4(2): 305–322.
- Schipper, K. (2005). The introduction of international accounting standards in Europe: implications for international convergence. *European Accounting Review* 14(1): 101–126.
- SEC (2007). *SEC takes action to improve consistency of disclosure to U.S. investors in foreign companies*. Immediate release. Retrieved on: 9 August 2016, from: <https://www.sec.gov/news/press/2007/2007-235.htm>.
- Vajay, J. (2015). A számvitel nemzetközi harmonizációja az 1970-es évektől napjainkig [The international harmonization of accounting from the 1970s to the present days]. *Journal of Economy & Society* 7 [Special edition]: 88–99.
- Vén K. (2015). Az IFRS bevezetése az egyedi beszámolóknak Magyarországon [The introduction of IFRS in individual financial statements]. *Számvitel – Adó – Könyvvizsgálat (SZAKma)* [Accounting – Tax – Audit (SZAKma)] 55(6). Retrieved on: 6 July 2016, from: [http://szak-ma.hu/data/cikk/10/806/cikk\\_100806/Ven\\_Krisztina\\_Az\\_IFRS\\_bevezetese\\_az\\_egyedi\\_beszamolokban\\_Magyarorszagon.pdf](http://szak-ma.hu/data/cikk/10/806/cikk_100806/Ven_Krisztina_Az_IFRS_bevezetese_az_egyedi_beszamolokban_Magyarorszagon.pdf).





# Justifiable Renewable Energy Usage from an Economic Angle

Ádám CSUVÁR

PhD Student

Kaposvár University, Faculty of Economics  
Department of Regional Studies and Statistics  
40 Guba S. St, H-7400 Kaposvár  
E-mail: csuvar.adam@ke.hu

**Abstract.** Worldwide, there is a huge demand for the application of renewable energy technologies mainly due to the current environmental problems that mostly originated from our fossil-based energy system. This study is aiming at presenting areas which require a bigger share of renewables from the global energy mix but only for economic reasons. We highlight that these alternatives can bear with advantageous economic effects compared to the non-renewable ones. We take into account renewables-based business opportunities, and then we discuss the positive effects of renewables on economic development. Finally, we look at the issuant security of energy supply and talk about beneficial labor market impacts caused by renewable energies.

**Keywords:** renewable energy, energy economics, energy policy

**JEL Classifications:** O13, Q42, Q43

## Introduction

The Earth's population is showing an intensively growing figure. According to certain forecasts, by 2100, more than 11 billion people might be living on our planet (United Nations, 2015). If we consider only the physical needs of these people, it is purely a serious challenge to provide an appropriate quantity and quality of food, drinking water, accommodation, etc. to them. And still we have not even considered further needs which necessarily come with our "compulsory" consumption. As, parallel to this, a huge economic growth is present in the Far- East, several areas of Africa, and South America – the rate of this economic growth is higher than in the case of developed countries, and in a few decades it would dramatically change the current economic roles (PwC, 2015). Reviewing the abovementioned facts, considering it as a whole, the result

is not really surprising: a huge growth of energy demand can be forecast, which cannot be satisfied using current practices and without facing fatal problems.

Fossil fuels provide the basis for the energy system of the Earth. 85% of our current energy production is made up of non-renewable energy sources (BP, 2016), which carry several environmental, economic, and political risks. If we rely on the fossil fuels the same way, we will face more and worse environmental catastrophes, geopolitical conflicts, or even wars, which would also lead to the realization of a pessimistic proof forecasting not 10 billion but a total of only 2–3 billion people by the end of the century. To avoid the fulfilment of the ominous outlook, it is essential to restructure our current energy structure. We will replace non-renewable energy sources with renewable ones.

But we also have to see that the dangers of using fossil fuels do not only come in the form of environmental damages. These risks and problems are not harmful to the natural environment alone. Several contradictions appear both economically and strategically, which could be reduced with the help of renewable sources.

In the following, we intend to review areas which justify the use of alternative technologies for some economic reasons. The novelty of this study appears in that it simultaneously covers different areas of the economy, areas that are strongly affected by renewables. The disadvantage arises from the same approximation; the broad spectrum makes it impossible to deeply explore each area. There have been many articles that approach these issues separately, but we do not know of any papers that would match them altogether. Amri (2017), Al-mulali et al. (2013), Ohler and Fetters (2014), Rafindadi and Ozturk (2017), and Bhattacharya et al. (2017) soundly dealt with the connection between renewables and economic growth. Frankfurt\_School-UNEP\_Centre/BNEF (2015), Smartinvest (2015), IRENA (2016a), and Christensen and Hain (2017) analysed the renewable energy investment opportunities. The employment impacts caused by renewables were examined by Bezdek (2009), Lehra et al. (2016), UCSUSA (2013), Zhao and Luo (2017), Garrett-Peltier (2017), and Sari and Akkaya (2016). Silva et al. (2016), Tóth (2014), Mathiesen et al. (2011), and Kumar (2016) investigated the role of renewable energies in the security of energy supply.

After this introduction, the body of the essay, “Results and discussion” follows. In its first subsection, we discuss the “Economic problems of fossil fuel dominancy”; then, we move on to have a look at some “Business opportunities with renewables”. In the third subsection, we explicate the “Stimulation of economic development” by renewables. Finally, we summarize the benefits of energy security and the issuant employment caused by renewable energies in the “Enhancing the security of energy supply” and “Expansion of employment” subsections. At the end of the paper, we summarize our ideas in the last section titled “Summary and conclusions”.

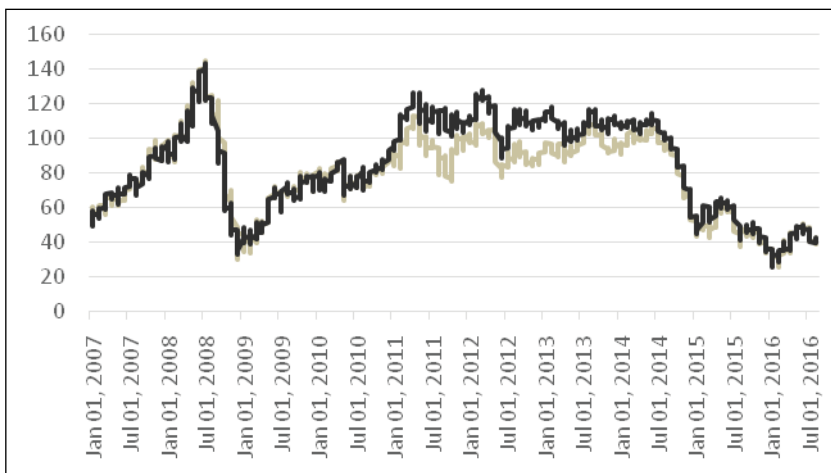
We would also like to add that the usage of renewable energy can have partly disadvantageous effects on economy (e.g. boosting prices, difficult schedule

keeping, system integration costs, and anomalies); however, the purpose of this paper is not to account for these effects; so, we will deal with them only tangentially.

## Results and Discussion

### Economic Problems of Fossil Fuel Dominancy

The usage of fossil fuels significantly took part in the evolution of global warming and resulted in several political conflicts. Nevertheless, we could discover further problems while paying a bit more attention to the wholesale energy market. The world market price of petroleum – and the closely related natural gas – is highly dependent on the supply and demand principles and on speculations, due to which the price is unpredictable even in the short run. This situation can become more complicated thanks to the political actions (“oil weapon”) and the business strategies of giant companies. *Figure 1* clearly demonstrates the irregular, unforeseeable fluctuation of market prices. Although the graph shows only the oil price, the pricing of fossil fuels and their replacement nature in energy production determines a connection between them, which also means that the three products’ (oil, coal, and gas) prices affect one another and follow a similar trend (Csermely, 2016).



Source: IEA, 2016

**Figure 1.** Changes in the price per barrel of WTI (grey) and Brent (black) crude oil (USD)

The situation is problematic because, besides oil being a key raw material in several industries, it is also an essential standard in world economy, a relevant commodity in the exchange market, which is why it influences most of economic life in a direct or indirect way. Oil crises (1973, 1979, 2014) pointed out every time that this dependency should be decreased. Initially, a few affected regions could create a spill-over effect through complicated interregional relations, which could influence all parts of the world, determining this way the inflation, investment volume, disposable income, etc. Export-dependent Venezuela is a perfect example nowadays; the inflation was 121% in 2015 (World Bank, 2016) due to the depressed oil prices.

The radical price volatility and crises of fossil fuels always lead us to the conclusion: their role played in the world market should be decreased. This step should start with the diversification of global energy structure, as currently 80% of energy is powered by fossil fuels. Renewable energy would take the leading role in the diversification because it can be found everywhere on Earth (even if not in the same potential), and its application would not result in (significant) negative externalities (apart from a few exceptions such as hydroelectric power plant, certain geothermic wells, biomass, etc.). After the initial installation, the “fuel” for the production is already available for free (except biomass); so, the variable cost of the production is very low.

### **Business Opportunities with Renewables**

Not only the economic results are stressed by the unforeseeable volatility but its impact determines the investment behaviour as well. At first glance, the fact might seem surprising that despite the fall of oil (fossil) prices renewable energy investments expanded in a wider range than non-renewables during last year (Nyquist, 2015). Considering the renewables as replacement products, economic logic would state that a certain price stress, pressure of return would lead to the usage of more innovative, more costly technology; definitely not in the case of low prices. But real life shows various different examples.

Year 2015 might bring a watershed in terms of energetic structure alteration considering that this was the first year when the volume of renewable energy investments of developing countries exceeded the same volume as that of developed countries; moreover, it was the first time when the ratio of renewable electricity investment (53.6%) was higher than the investment ratio of fossil-based power plants (Frankfurt\_School-UNEP\_Centre/BNEF, 2015).

This is, of course, not the result of an error or a coincidence; there is logic behind the facts if we take a closer look. On the one hand, due to the (supra) national expectations (e.g. EU2020, China) and subsidies, the renewable energy – primarily electricity – projects provide a rapid return and a low risk investment



(REKK, 2014). Their expansion and pricing can be more easily estimated and show a more solid picture than that of the fossil fuels (Richter, 2013). As Al-mulali et al. (2013: 209) write, “the constant fluctuation in the price of fossil fuels encouraged many countries in the world to increase their investment on renewable energy”.

This predictable and (often) regulated market environment initiates special investment forms open for “anyone”. For instance, one of the investment forms can be a green chip, which covers the shares of an environmentally conscious company; or a green bond, where the money collected after issuing the bonds is surely invested in “sustainable projects”. The latter one was issued exceeding 48 billion dollars in 2015, which was also a record compared to last years’ figures (REN21, 2016). We shall also mention the yieldcos, which stands for the subsidiaries of corporations dealing with renewable energy offering attractive dividends (Smartinvest, 2015).

The yields of domestic power plants are also not negligible – they show a better return rate; so, this area is getting more attractive to the public with savings just like the community plants, which means that committed people with savings are willing to pre-finance a “renewable project” – besides an appropriate business structure –, which is finally rented by the operator in the long run (Smartinvest, 2015). Furthermore, it can be stated that there is a growing willingness shown by investment banks, retirement funds, and insurance companies in the direction of renewable energy investments (Frankfurt\_School-UNEP\_Centre/BNEF, 2015).

On the other hand, due to technological development and economies of scale in production, the installation cost of the alternative energy is constantly decreasing. The unit cost of the electricity produced by solar cells decreased by 58% between 2010 and 2015 (IRENA, 2016), and significant cost decrease can be observed in the case of other technologies too. This way, in a few areas having outstanding facilities, considering pure market conditions, the renewable energy projects can compete with the technologies based on non-renewable resources. With this tendency, the lack of considerable financial capital might not be a limiting factor in the investments, especially if the forecast is coming true, according to which by 2025 the investment cost of solar technology can decrease by 59% (IRENA, 2016). Obviously, a considerable price decrease is very likely in terms of other methods as well, which will progressively diminish the disadvantage of alternative energy.

In short, we can say the mentioned examples share that the basic driving force of the investments is not reaching economic stability or protecting the environment but purely validation of self-interest and desire for profit, which can be fulfilled even more often by the renewable-based constructions. The investment volume – regardless of its motivation – is having an effect on the economic performance, the state of environment, and it can also push them into the direction of development.

## **Stimulation of Economic Development**

The excessive expansion of renewable capacity does impact the world or a national economy performance. Based on the calculations of International Renewable Energy Agency (IRENA) (2016a), GDP will increase by 0.6–1.1% due to the doubling of renewable energy capacity by 2030. Al-mulali et al.'s (2013) work states that in most cases GDP and renewables determine and affect each other's volume. Chien & Hu (2007) demonstrate that the growing use of renewable energies develops macroeconomic performances.

As in conventional cases the investment itself increases the value of Gross Domestic Products, it increases the output of the energy sector and the employment. By reducing the fossil import, it stimulates the foreign trade balance to be active. Although investments can operate as an engine of economic growth, they can also limit the two typical driving forces of the improvement (Pöyry/Camecon, 2014).

The renewable energy is still in an active innovation phase, and so, considering the regular costs, they are not competitive compared to fossil fuels, but they are more preferable thanks to the subsidies by the state (Fodor, 2013). The charges of the subsidy are involved in the retail prices; so, that is eventually paid by the public and/or the industrial sector. Higher energy prices worsen the competitiveness of the industrial sector and its export, so, the foreign trade balance as well. High prices limit public consumption, which could serve as another pillar for economic growth besides export. We will add that high prices can be also considered as a driving force of the energy efficiency investments. On the other hand, investments require import technology, which can also worsen the foreign trade balance. Summarizing the effects, we would finally get to a net positive effect in terms of GDP (Domac, Richards, and Risovic, 2005).

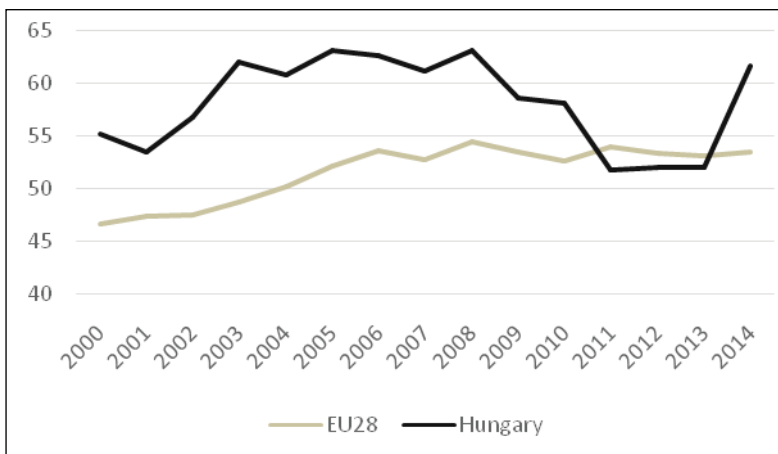
## **Enhancing the Security of Energy Supply**

Several papers (e.g. European\_Union, 2006; REKK, 2011) handle stable energy supply of a certain territory as an economic dimension; so, in the upcoming sections, it is reviewed what roles can be played by the alternative production methods. An energy system is said to be secure if the required energy is available in the proper amount and quality besides acceptable risks (Gács et al., 2006). The need for secure supply is getting more important due to modernization and urbanization, plus the service sector is getting more dominant.

Apart from a few countries (such as Iceland or Norway), fossil-based energy systems are in use worldwide, but most of the countries do not own a proper amount of resources that could meet their own needs, and so they cover their demand by means of international trading.

Figure 2 presents the tendency of energy import dependency with regard to Hungary and the EU-28. Ignoring the impact of the global crises on energy consumption, we can discover that the energy dependency of both territories is continuously growing, although concerning Hungary the ratio of import is way above the EU average. Hungary covers 61.7% of the total consumption by importing energy resources.

Hungary's natural resources are not able to meet self-sufficiency requirements, but its dependency can be mitigated if the country can boost the domestic energy ratio in the energy mix (*internal security of supply*). The nuclear-coal-green scenario of National Energy Strategy 2030 (NFM, 2012) is aiming to achieve this goal.



Source: Eurostat, 2016

**Figure 2.** Energy dependency rate of Hungary and the EU-28 (%)

In our opinion, as the technology and the fuel of the nuclear plant is also coming from (Russian) import, this will not improve self-sufficiency largely, sustainably – even if the uranium is storable in a relatively big amount, in contrast with the exploitation of the domestic coal and lignite reserve, which is controversial to the environmental sustainability due to its negative environmental effects. As Hungary has an outstanding potential regarding a few renewable energy sources (geothermic, solar, biomass), it would be reasonable to use renewables in order to enhance the country's security of supply. Renewables are able to reduce import dependency and diversify the portfolio of energy sources as well as decrease the overall risk of energy supply (Mathiesen et al., 2011; Kumar, 2016).

Based on the results of an international research studying 12 EU countries (mostly Central Eastern European countries, including Hungary), it can be stated that in case

of achieving the 2030 energy efficiency and renewable energy goals,<sup>1</sup> the natural gas demand of the countries could be reduced by 20% (Tóth et al., 2014).

## **Expansion of Employment**

The spread of renewables is not negligible in terms of available job opportunities either because it covers the area of equipment production, maintenance, design, research and development, consultancy, and marketing. As for IRENA (2016b) calculations in 2015, the number of employees working directly or indirectly in the renewable industry exceeded 3 million, out of which the photovoltaic energy section had the biggest share of employment. It will be highlighted that the mentioned socio-economic impact can be interpreted as rather a positive externality than a direct action.

The production can reach a large segment of the population. The least special but the most labour-dependent biomass can provide jobs to unskilled workers, replacing social expenses. Qualified people can be employed in areas requiring unique skills and conditions such as the production, design, and development of products in the solar or wind energy section. Locally accumulated know-how can create an exportable industrial segment, which can even become a determinant part of the national economy (such as in Spain, Denmark, or Germany). Additionally, production aiming at foreign market has a multiplicative effect on employment, rather than as if it aimed at domestic markets alone (Bezdek, 2009; Lehra et al., 2016).

Another positive effect is that the production of renewable energy equipment is more labour-intensive than fossil technologies; it requires twice as much worker per one invested dollar (UCSUSA, 2013). According to Garrett-Peltier (2017: 446): “the EE<sup>2</sup> and RE<sup>3</sup> industries generate nearly three times as many jobs as FF<sup>4</sup> industries, for the same level of spending”. The second largest job creator in the sector is the biomass production (IRENA, 2016b), which is suitable for enhancing the economic and social prospects of rural areas (e.g. Brazil), as it is fixed to a certain territory.

## **Summary and Conclusions**

The present study aims at summarizing the most important positive economic impacts connected to the application and spreading of renewables. We first reviewed the weaknesses of the energy system exposed to fossil fuels and the world

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1 [https://ec.europa.eu/clima/policies/strategies/2030\\_en](https://ec.europa.eu/clima/policies/strategies/2030_en).

2 Energy efficiency.

3 Renewable energy.

4 Fossil fuel.

economy that they have overtaken. It has been concluded that the diversification of the energy mix with renewables would be able to diminish the dependency of non-renewables, which would be reasonable due to reoccurring crises, political conflicts, and price stability problems.

Subsequently, it has been shown that renewable-based construction is gaining more relevance than a business, investment opportunity; due to this, it shows a more predictable picture than non-renewables. Furthermore, the profitability of renewables is continuously improving parallel to their decreasing cost.

Then, their advantages have been demonstrated on the macroeconomic level because they can initiate economic growth by means of investments. It can also have a positive effect on the output of energy and industrial sector, foreign trade balances, or even the consumption of the population, which are all contributing to economic growth.

Expanding their capacity can increase a certain region's secure energy supply with the diversification of energy structure and can diminish the demand for non-renewables only available by import.

Finally, the impact on employment was analysed. It is not negligible that a large segment of the population can work in various areas from agricultural raw material production to research and development. While in the former case mostly rural areas and unskilled workers can benefit, in the latter case, cities with developed infrastructure and skilled workers can gain profit.

## References

- Al-mulali, U.; Fereidouni, H. G.; Lee, J. Y.; Sab, C. N. (2013). Examining the bi-directional long run relationship between renewable energy consumption and GDP growth. *Renewable and Sustainable Energy Reviews* 22: 209–222.
- Amri, F. (2017). The relationship amongst energy consumption (renewable and non-renewable) and GDP in Algeria. *Renewable and Sustainable Energy Reviews* 76: 62–71.
- Bezdek, R. (2009). *Green Collar Jobs in the U.S. and Colorado*. Colorado: American Solar Energy Society.
- Bhattacharya, M.; Churchill, S. A.; Paramati, S. R. (2017). The dynamic impact of renewable energy and institutions on economic output and CO2 emissions across regions. *Renewable Energy* 111: 156–167.
- Blazejczak, J. (2014). Economic effects of renewable energy expansion: A model-based analysis for Germany. *Renewable and Sustainable Energy Reviews*. 1079.
- BP. (2016). BP Energy Outlook 2016 edition. *Outlook to 235*. BP plc.
- Chien, T.; Hu, J. L. (2007). Renewable energy and macroeconomic efficiency of OECD and non-OECD economies. *Energy Policy* 35: 3606–3615.

- Christensen, J. L.; Hain, D. S. (2017). Knowing where to go: The knowledge foundation for investments in renewable energy. *Energy Research & Social Science* 25: 124–133.
- Csermely, Á. (23 March 2016). Gázarak szabadesésben. *Guruló Hordó*. [http://gurulohordo.blog.hu/2016/03/23/gazarak\\_szabadesesben](http://gurulohordo.blog.hu/2016/03/23/gazarak_szabadesesben).
- Domac, J.; Richards, K.; Risovic, S. (2005). Socio-economic drivers in implementing bioenergy projects. *Biomass and Bioenergy* 28: 97–106.
- European Commission. (April 2013). Member States' energy dependence: an indicator-based assessment. *European Economy*. Brussels: European Commission.
- European Union. (2006). *Green paper: a European strategy for sustainable, competitive and secure energy*. Brussels: European Union.
- Fodor, B. (2013). Kihívások és lehetőségek a hazai megújulóenergia-szektorban. *Vezetéstudomány* 51.
- Frankfurt School-UNEP Centre/BNEF. (2015). *Global trends in renewable energy investment*. Frankfurt.
- Gács, I. et al. (8 April 2006). Magyarország primerenergia-hordozó struktúrájának elemzése, alakításának stratégiai céljai. *Az új magyar energiapolitika tézisei a 2005–2030 közötti időszakra – 9. fejezet*. Budapest: Gazdasági és Közlekedési Minisztérium.
- Garrett-Peltier, H. (2017). Green versus brown: comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using an input-output model. *Economic Modelling* 61: 439–447.
- IEA. (2011). *Energy Policies of IEA Countries – Hungary*. France: International Energy Agency.
- IRENA. (June 2016). *The power to change: solar and wind cost reduction potential to 2025*. United Arab Emirates: IRENA.
- (2016a). *Renewable energy benefits: measuring the economics*. United Arab Emirates.
- (2016b). *Renewable energy and jobs – annual review 2016*. United Arab Emirates.
- Kumar, S. (2016). Assessment of renewables for energy security and carbon mitigation in Southeast Asia: the case of Indonesia and Thailand. *Applied Energy* 163: 63–70.
- Lehra, U.; Mönniga, A.; Missaouib, R.; Marroukib, S.; Salem, G. B. (2016). Employment from renewable energy and energy efficiency in Tunisia – new insights, new results. *Energy Procedia* 93: 223–228.
- Mathiesen, B. V.; Lund, H.; Karlsson, K. (2011). 100% renewable energy systems, climate mitigation and economic growth. *Applied Energy* 88(2): 488–501.
- NFM. (2012). *Nemzeti Energiatérkép 2030*. Budapest: Nemzeti Fejlesztési Minisztérium.

- Nyquist, S. (June 2015). *Lower oil prices but more renewables: What's going on?* McKinsey & Company. Available at: <http://www.mckinsey.com/industries/oil-and-gas/our-insights/lower-oil-prices-but-more-renewables-whats-going-on>.
- Ohler, A.; Fetters, I. (2014). The causal relationship between renewable electricity generation and GDP growth: A study of energy sources. *Energy Economics* 43: 125–139.
- PÓYRY/CAMECON. (March 2014). *The values of wind energy to Ireland*. UK: Pöyry Management Consulting (UK) Ltd.
- PwC. (February 2015). *The world in 2050*. PwC.
- Rafindadi, A. A.; Ozturk, I. (2017). Impacts of renewable energy consumption on the German economic growth: evidence from combined cointegration test. *Renewable and Sustainable Energy Reviews* 75: 1130–1141.
- REKK. (2011). *Security of energy supply in Central and South-East Europe*. Budapest: Aula Kiadó.
- REKK. (2014). A megújuló alapú villamosenergia-termelés támogatási rendszereinek problémái és az uniós reform elképzelések. *Jelentés az energiapiacokról* 18.
- REN21. (2016). *Renewables 2016 – Global Status Report*. Paris.
- Richter, M. (2013). Business model innovation for sustainable energy: German utilities and renewable energy. *Elsevier: Energy Policy* 62: 1231.
- Sari, A.; Akkaya, M. (2016). Contribution of renewable energy potential to sustainable employment. *Procedia – Social and Behavioral Sciences* 229: 316–325.
- Silva, R. C.; Neto, I. de M.; Seifert, S. S. (2016). Electricity supply security and the future role of renewable energy sources in Brazil. *Renewable and Sustainable Energy Reviews* 59: 328–341.
- Smartinvest. (2015). *Befektetés az energetikába*. Budapest.
- Tóth, B. (October 2014). Towards 2030 – how can renewables and energy efficiency improve gas security in selected Member States? *Dialogue on a RES policy framework for 2030*.
- UCSUSA. (May 2013). How renewable electricity standards deliver economic benefits. *Renewables: Energy You Can Count On*. Union of Concerned Scientist.
- United Nations, D. o. (2015). *World population prospects: the 2015 revision*. New York: United Nations.
- Zhao, X.; Luo, D. (2017). Driving force of rising renewable energy in China: environment, regulation and employment. *Renewable and Sustainable Energy Reviews* 68: 48–56.





# Analysis of Local Economic Development Capacity in Hungarian Rural Settlements

Krisztián RITTER,<sup>1</sup> Henrietta NAGY<sup>2</sup>

<sup>1</sup> Associate professor, Deputy Director – Institute for Regional Economics and Rural Development, Faculty for Economic and Social Sciences, Szent István University Gödöllő, [ritter.krisztian@gtk.szie.hu](mailto:ritter.krisztian@gtk.szie.hu)

<sup>2</sup> Associate professor, Vice-Dean – Institute for Regional Economics and Rural Development, Faculty for Economic and Social Sciences, Szent István University Gödöllő, [nagy.henrietta@gtk.szie.hu](mailto:nagy.henrietta@gtk.szie.hu)

**Abstract.** Besides local economic development (LED) theories, especially LED practices have a growing importance nowadays. By a primary research involving more than 400 actors (local governments, local entrepreneurs, local agencies), the necessary competencies, practical experiences, and the field of further skills and extension concerning cooperation in economic development of localities were analysed. Summing up the research results, both local governments and local entrepreneurs have certain lack of competence that has to be improved, while the need of this exercise (and LED as a whole) for an appropriate financial background and a national strategy/policy is well-emphasized by the answers of the actors.

**Keywords:** innovation, local economic development, rural areas, rural economy

**JEL:** O18, P25, R00

## Introduction

Localization is one of the most important forces forming the economic space, while local places connect to the global economy in several ways. The role of the local level is emphasized by the two main principles of the EU's territorial policy: subsidiarity and decentralization. Based on these principles, the decisions and actions have to be done on that level which has the optimal overview and competency for that. The literature of LED does not have a commonly agreed term for “local” (see e.g. Dicken, 2003; Lengyel, 2003; Nemes-Nagy, 1998, Swinburn

et al., 2004; Temple, 1994). As a specific approach in this paper, local is defined on the settlement (local government) level.

The role of the local governments in local economic development planning is underlined even in the Hungarian and international literature (e.g. Douglas, 2005; Martin, 2001; Ritter, 2000; Swinburn et al., 2004.) Meanwhile, based on the declining local possibilities, the economic analysis of the small rural settlements, and concerning the findings of national and international researches aiming at settlement and territorial development (e.g. Byrden & Hart, 2004; G. Fekete, 2005; Káposzta, 2014; Picchy, 1994; Ritter, 2014), our hypothesis was that smaller settlements have only partial competencies for LED.

Based on subsidiarity and decentralization, decisions and execution should be delegated to the level where the highest competency is available to carry out the tasks. Due to such principles, the responsibility of the local level increases, while more and more local demands, ideas, and resources are activated. Strengthening local competence is important in moderating the national level to be able to cross the national borders (Rechnitzer & Smahó, 2006).

“Locality” is also important because local associations may balance the impacts of globalization, while its various impacts on everyday life are perceived by mass population rather in their local/regional appearance (Agg & Nemes Nagy, 2002). The importance of the regional and local units has already been emphasized in the National Spatial Development Concept (Országos Területfejlesztési Konceptió–OTK, 2005) as well, declaring that the basic aim is to enable the regions and cities of Hungary to become more competitive, thus contributing to the economic and social catch-up of the country to the European Union average. Regional competitiveness focuses on the ability of regions to attract and keep external resources as well as to improve the competitiveness of the regional players while building up an efficient regional structure. In order to improve the competitiveness of enterprises, a harmonized regional development is needed (e.g. location, informatics, accessibility, finances, consultancy, qualified human resource, public administration, etc.). To attract and keep the qualified population in the region, viable environment, positive regional image, high-quality services, adequate cultural and retail supply are necessary in addition to the proper jobs. To use development funds locally, an active, flexible, and efficient management is needed which is able to generate, realize competitive projects and represent its interests in the partnership-based development policy. The key to competitiveness is the cooperative ability of the region’s actors. Therefore, encouraging regional economic cooperation (e.g. research institutes, multinational companies, cooperation of SMEs and consultancy firms) is of high importance (OTK, 2005).

Today’s economic spatial structure is shaped by both globalization and localization. Basically, the importance of the national level has relatively

decreased, and regions and local actors often enter the global economy directly (without the intermediary role of the national level). Based on the operation of the companies, it can be stated that local level plays an important role not only in the case of local businesses and SMEs (offering most of the local jobs) but also in the case of transnational companies. From a company success point of view, local approach is really important since real interference into the economic processes can be realized at the local level (Bajmóczy, 2011). This brings the need for local development strategies to the frontline that is based on endogenous resources, encourages the cooperation of local actors, and is built in a bottom-up manner (Káposzta, 2014; Nagyné, 2007) as the typical philosophy of EU's LEADER program (see Kassai & Farkas, 2007).

Local economy comprises harmonized and conscious actions, activities, people, institutions, resources, and procedures based on and motivated by local conditions. Its development is a planned interference into the economic processes to achieve sustainable local development. It aims at creating a sustainable local economy, a well-operating internal market for local businesses, and at providing an adequate standard of living and jobs for the local population (Mezei, 2006a; Swinburn et al., 2004).

In this paper, against the usually general approach of regional economy, the settlement level is considered to be "local". Under the present economic, social, and environmental conditions, the key to success for any settlement is whether it is able to adapt to the ever-changing local, national, and international market economy. Local Economic Development is applied where strengthening of the local economic capacities, improvement of the businesses' competitiveness and productivity are in the focus. The key factor is the involvement of local actors who participate either as initiators or formulators and supporters of external development ideas, and that depends highly on the social capital (see e.g. Kassai, 2014; Molnár, 2013; Tóth & Jóna, 2012). Interfering into the market processes can be carried out only based on community approval; thus, local municipalities cannot be left out from the local economic developments. However, to achieve success, additional contributors are also needed since it should be based on the cooperation of the business sphere, the community, and the local government.

Cooperation has an important role in LED. One of its important features is that local actors (economy and society) cooperate to encourage local economic activities, do actions which fit the local conditions, based on local resources so that they could meet present and new demands as well. The common thinking of the business sphere, the local government, and the local population and their common actions can help the local community to maintain the local values and use the opportunities while adapting to the changing local and external conditions, improving adaptability. Local actors do not reject the cooperation with the surrounding environment;

moreover, they strive to achieve “symbiosis” by sharing work and functions with the external economy. Therefore, local economy is somehow “introvertal” since it aims at meeting the local demand by local businesses, but, of course, it is embedded into a broader economic environment.

One important factor of adapting to globalization is how strong the link is between the local organizations and institutions, while the local development success also depends on the strong coalition and institutional cooperation of local players (Horváth, 2000). It requires organized cooperation. Experiences (e.g. Bogárdi & Molnár, 2014; Mezei, 2006b; Némédiné & Neszmélyi, 2015; Swinburn et al., 2004) prove that local governments have significant coordination, mediation, and initiative role due to the low level of organization in the case of other actors (civil and business sphere). International experience clearly emphasizes the role of local governments in relation with the development of rural areas as well (e.g. Douglas, 2005; Martin, 2001).

Local economy can be developed by human, financial, or infrastructural instruments – the most efficient method is if several instruments and methods are combined without priorities and compile a conscious program built on each other. Among the instruments, professional literature names community development, production and sale of local products, development of local businesses, financing local economy, encouraging local collaborations and local economic activities of municipalities, social economy, vocational training based on local needs and interest as well as shaping the approach of population and entrepreneurs. Like other spatial development activities, planning is a key priority in local economic development. The result of planning is the elaboration of a strategy. Therefore, it is extremely important for a settlement to have such a strategy since efficient developments can only be realized along well-planned strategies. However, based on national and international research results (e.g. Lengyel, 2003; Ritter, 2014), we should state that due to the lasting impacts of the economic crisis and the limited local resources, small settlements usually do not have enough competencies to fulfil such tasks.

This is the reason why this paper concentrates on settlement level as “local” and tries to investigate the necessary competencies, practical experiences, and the field of further skills and extension concerning the cooperation in economic development.

The “Material and Methods” section introduces the main aims, the conditions, and circumstances of the research with detailed methodology. The “Results and Discussions” section focuses on the most relevant and important results of the primary research, while in “Conclusions” the paper tries to sum up useful statements and suggestions based on the results and experiences.

## **Material and Methods**

This research provided help to project ED\_13-1-2013-0020 („Képzési rendszer megvalósítása az önkormányzatok gazdaságfejlesztési feladatainak támogatására” – Creating an educational system helping the economic development activities of local governments), which defines a training serving the joint preparation of local governments, entrepreneurs, and civil organizations, with special focus on economic and entrepreneurship studies as well as management and organizational competencies supporting the cooperation of the participants. First, the conditions, competencies as well as the roles of the participants had to be surveyed. Accordingly, the survey had the following aims:

- To examine how well the participants are prepared and what practical experience they have in economic development;
- To see how the players evaluate each other;
- To see in what economic sectors they have good or bad experience and which best practices they consider useful;
- To see what practice they have in cooperation and with what results.

This research concentrated on two groups, namely the local governments and the local businesses/entrepreneurs (as well as the associations representing their interest). The role of local governments is unquestionable in the local economic development, while businesses have two roles: on the one hand, they actively take part in it; on the other hand, they are its target group as well. It is necessary to achieve common thinking and to enable the actors to learn about each other's situation and intentions before they start working together. Therefore, it is inevitable for the employees of local governments to learn entrepreneurship and business to enable them to cooperate. In addition, it is necessary for the businessmen to change their attitudes and to develop their competencies about settlement operation, legislation as well as settlement/regional development. Based on the abovementioned, our aim was to find out the preparedness and practical experience of players in economic development tasks, how they evaluate each other, and what the necessary competencies are to achieve success.

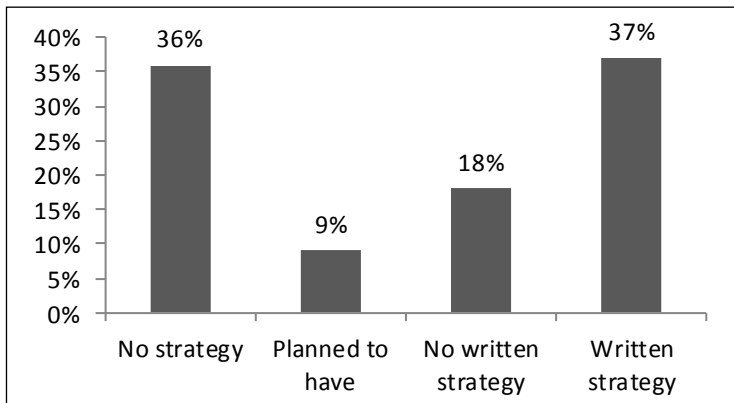
Peripheral rural areas with a low number of population are characterized by facing problems in local economic development (see e.g. Káposzta et al., 2010; Mezei, 2006b). In accordance with it, we intended to examine settlements with population under 3,000. We defined the sample in the counties by the number of settlements under 3,000 (compared to the number of settlements in each county), the number of people living in such settlements compared to the total population. In order to achieve national representability in the survey, settlements and businesses had been selected randomly. The local business associations in the selected area were targeted directly. During the survey, we intended to question

the government officers and the businessmen from the same settlements so that we can compare their responses and find out the cooperation between them. During the primary research, we used questionnaires and in-depth interviews as well. The research was carried out by the colleagues and students of the Szent István University in October and November 2015.

## Results and Discussions

This paper focuses on the major results of the research. 210 local governments, 210 local businesses, and 57 regional affiliations/representatives of three organizations (Entrepreneur-Development Foundations, Chamber of Commerce and Industry, Chamber of Agriculture) were questioned. All the settlements have population under 3,000. 80% of the settlements are with population under 2,000. 40% of the local governments had fewer than 5 full-time employees, 29% had 6–10 employees, while 87% of the governments did not employ anybody/did not have any departments that were expert in economic development. 65% of the entrepreneurs employed 5 or fewer people, 16% employed 6–15 people, 7% employed 16–45 people, and only 2% had over 45 employees.

Thus, it can be stated that most of the respondents were from the SME sector. We examined whether despite the availability of experts local governments had local economic development strategies<sup>1</sup> (Figure 1).



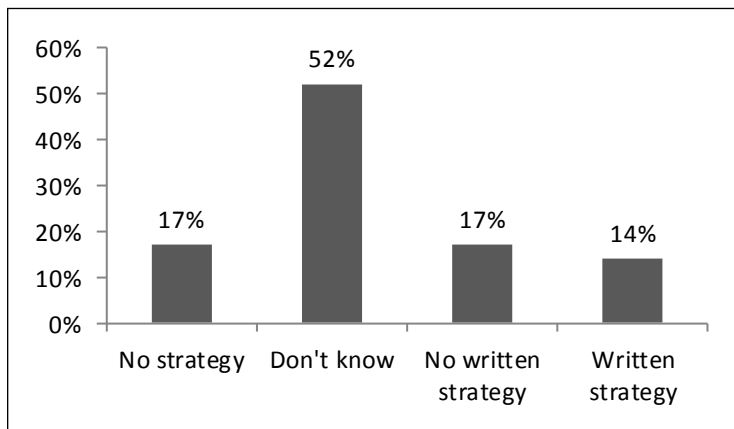
Source: own research and calculation, 2015

**Figure 1.** The share of local governments having economic development strategy (%)

<sup>1</sup> The elaboration of strategy might not have direct relationship with the fact if there are experts available or not since strategies might be elaborations by external consultants as well.

37% of the local governments reported that they had written economic development strategy,<sup>2</sup> while 36% did not have such at all. 9% was planning to prepare the strategy in written form or electronically. 18% were operated by some strategy which was not in writing.

Overall, it can be stated that only two-fifths of the settlements had their economic development strategy documented. We intended to compare the existence of strategy with the opinion of local businesses (*Figure 2*).



Source: own research and calculation, 2015

**Figure 2.** Responses of entrepreneurs about the economic development strategies of the local governments (%)

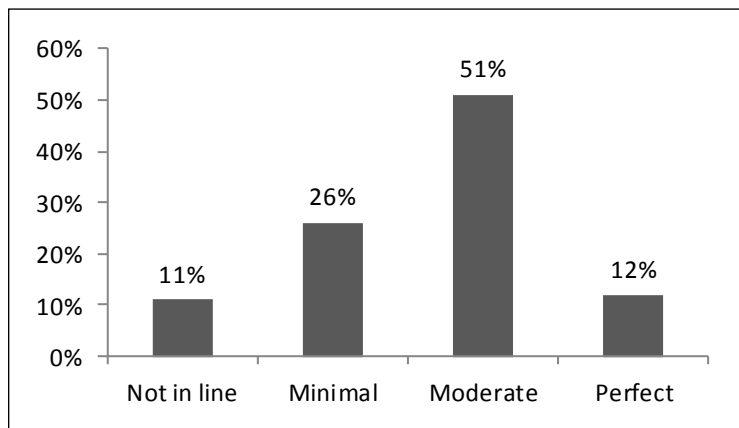
14% of entrepreneurs thought that the settlement had economic development strategy in written form, while 17% said there was no existing strategy. 52% did not know about strategy or did not have information about the development strategy. 17% thought that there was a strategy, but it was not in writing.

We also asked the local governments (having no written form) about the lack of strategy, and 34% defined the lack of funds or human resource, while 19% mentioned the low number of employees as the reason. Other reasons were e.g. the lack of need for the strategy or that the conditions and endowments of the settlement are not proper for such strategies or just it is not required by the law.

It was also important to see what opinion the two spheres have about their relationship and about the harmony between their plans. According to 50% of the local governments (*Figure 3*) and 35% of businesses (*Figure 4*), the harmony is quite moderate. 22% of the businesses said that the plans of the local government

<sup>2</sup> 52% of those with a strategy had it prepared in 2015. In 2014, less than 40% had strategy. Just 8% prepared it in 2013 or even earlier.

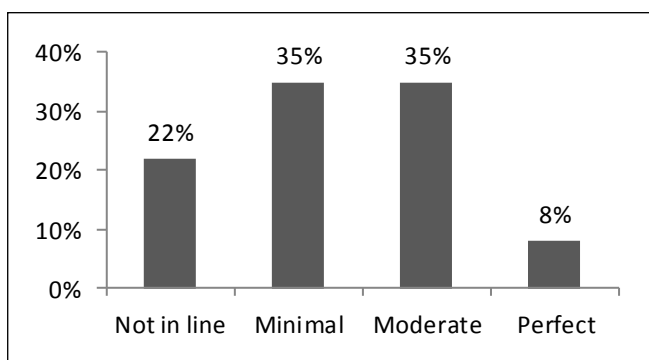
and the businesses were not in line, while 11% of the local governments had the same opinion.



Source: own research and calculation, 2015

**Figure 3.** Responses of the local governments about the harmony between the activities of the government and the local businesses (%)

However, it should be emphasized that 12% of the local governments, while only 8% of the businesses thought that there was total harmony between the plans and actions of the two spheres.



Source: own research and calculation, 2015

**Figure 4.** Responses of the local businesses about the harmony between the activities of the government and the local businesses (%)



Local governments mentioned as reasons for poor collaboration e.g. the lack or low number of businesses, the small size of businesses, the economic power of businesses, or the fact that the profiles of the businesses did not justify the cooperation. The different interests, the lack of communication due to the unconcern of the other party were also mentioned. According to the businessmen, the local governments do not have any idea how to manage a settlement economically. Many respondents said that there was a lack of experts, proper attitude, qualification, and coherence.

That is why it is important to see how the players consider (from 1 to 4) the competencies and knowledge of the other actors in relation with economic development (*Table 1*).

**Table 1.** *The evaluation of knowledge necessary for economic development by actors*

Actors of economic development	Responses by local governments		Responses by businesses	
	Mean	Deviation	Mean	Deviation
Local government	2.64	0.84	2.29	0.87
Local businesses	2.57	0.78	2.59	0.77
Other regional businesses	2.71	0.78	2.61	0.79
Professional associations	2.62	0.82	2.58	0.96
Civil organizations	1.95	0.78	1.99	0.79
Central government	<b>3.31</b>	0.75	<b>2.75</b>	0.94
Local population	1.79	0.72	1.61	0.75
External experts, consultants	<b>3.14</b>	0.80	<b>2.94</b>	0.91
Higher educational institutions, research centres in the region	<b>3.09</b>	0.85	<b>2.77</b>	0.98

*Note: rank 1–4 (1: to a small extent, 4: to a large extent)*

Source: own research and calculation, 2015

According to the opinion of the local governments, the central government has the most proper knowledge (3.31) necessary for economic development. The knowledge of external experts, consultants (3.14) as well as of the higher educational institutions and research centres (3.09) is adequate, which could be a good basis for defining the economic development priorities. Other businesses in the regions (2.71), local governments (2.64), professional organizations (2.62), and the local business sphere (2.57) received only satisfactory evaluation from the local governments for their knowledge. Based on the responses, civil organizations and the local population had

the least knowledge; however, in our opinion – regarding the embeddedness of local developments –, their importance in elaborating strategies cannot be questioned.

Businessmen said that external experts and consultants had the most necessary competencies. They are followed by the higher educational institutions and research centres in the region (2.77), the government (2.75), other businesses in the region (2.61), the local business sphere (2.59) as well as the associations representing interests (2.58). Local governments had only average knowledge, while civil organizations and local population had the least knowledge. In the questionnaire, we intended to find out what actors the respondents had had cooperated with during local development projects (*Table 2*).

**Table 2.** *Share of collaborators and the most active collaborators among the respondents (%)*

Collaboration with:		Local gov.	Businesses
Local government/local government of other settlements	Collaborated	<b>27</b>	<b>39</b>
	Most active	12	18
Local businesses	Collaborated	<b>21</b>	<b>38</b>
	Most active	14	11
Other businesses in the region	Collaborated	<b>23</b>	24
	Most active	3	4
Professional organizations	Collaborated	12	23
	Most active	5	2
Civil organizations	Collaborated	13	<b>36</b>
	Most active	4	10
County-level government	Collaborated	8	<b>32</b>
	Most active	3	7
Local action group (leader)	Collaborated	14	28
	Most active	3	9
Touristic organizations	Collaborated	12	24
	Most active	4	3
Clusters	Collaborated	7	10
	Most active	2	2
Higher educational institutions, research centres	Collaborated	8	16
	Most active	1	3

*Note: more than one answer could be marked as a collaborator, while only one could be indicated as the most active collaborator.*

Source: own research and calculation, 2015

The respondents could mark more than one answer, but the most active cooperating partner had to be indicated. As for the local governments, they had the most common collaboration with other local governments, local and regional businesses, while the rarest collaboration was with clusters or higher educational institutions. As for the local businesses, they cooperated the most with the local government, other local businesses and civil organizations, while the rarest collaboration was with clusters.

We considered it inevitable to see what actions and measures would serve the strengthening of the collaboration between the local governments and the local business actors. Respondents had to mark the three most important instruments (*Table 3*).

**Table 3.** *Distribution of proposed actions to improve cooperation (%)*

Instruments to develop cooperation	By local government	By businesses
	(%)	
Development of communication channels	55	59
Regular meetings	30	25
Informal share of information	32	39
Administrative assistance	17	31
Organizing joint courses	23	22
Organizing common free-time/cultural programs	36	22
Strengthening the involvement of businesses in local decision-making	36	<b>62</b>
Common idea-generating activities (e.g. idea box, brainstorming)	<b>51</b>	37

*Note: more than one answer (max. 3) could be marked*

Source: own research and calculation, 2015

Local governments emphasized the development of communication channels (regular information, meetings, e-mails – 55%), common brainstorming (51%), while 62% of entrepreneurs saw the key to cooperation in strengthening the local businesses and 59% would have welcomed the development of communication channels.

## Conclusions

The most important conclusion that can be drawn from our research is that in small (and mainly rural) settlements there is a lack of capacity and expertise

which would be necessary to carry out local developments. In addition, local businessmen do not have the necessary knowledge to understand the settlement development issues, which are much broader than the company's ones. Overall, there is a lack of ability that would bring about economic development based on local cooperation. In order to create cooperation – which is regularly emphasized in theories –, both players should learn each other's competencies and activities to be able to take part in the complex actions of local economic development.

All in all, for two-thirds of the entrepreneurs, the settlements where they are located do not provide a local economic frame/strategy for their activities. Regarding planning the future, more attention should be paid to the communication between the local governments and the businesses since if businesses do not know whether the settlement has a strategy or not, it is like if there were not any at all.

Both local governments and businesses were questioned about how important they considered innovations and learning new skills/competences in their own field. 94% of the local governments and 90% of the businesses thought that innovation and improving competences were important. It were the only issue in which they agreed nearly 100%.

Collaboration can be observed between the two parties; however, not in a structured and organized form and not in economic development. They usually cooperate ad-hoc. The players responded that there was a moderate harmony between their activities. They considered a key task to create and emphasize mutual interest.

Those who are the most involved and interested in local (!) economic development believed that external players, the government, external experts, or the higher educational institutions were the key to success. On the one hand, this highlights that small settlements could not adopt the endogenous local development approach yet, while, on the other hand, it calls the attention to the potential role of universities in initiation – especially in improving competencies.

As a conclusion, the most important problems that should be addressed are the development of communication channels, the strengthening of the local businesses, and brainstorming. None of the parties considered important organizing joint courses. However, we highly encourage such initiatives – especially based on the former research findings.

Based on our research, we suggest the development of cooperation between the two parties, the improvement of competencies/skills as well as the elaboration of the necessary strategy and raising the necessary funds.

## References

- Agg, Z.; Nemes Nagy, J. (2002). A politika térségi és helyi szintjei [The regional and local levels of politics]. In: Bernek Á. (ed.), *A globális világ politikai földrajza* [Political geography of the global world]. Budapest: Nemzeti Tankönyvkiadó, 385–430.
- Bajmóczy, Z. (2011). *Bevezetés a helyi gazdaságfejlesztésbe* [Introduction to local economic development]. Szeged: JATEPress.
- Bogárdi, T.; Molnár, M. (2014). The barriers to economic development through the example of a Hungarian internal periphery. *Vestnik Apk Stavropolya/ Agricultural Bulletin of Stavropol Region* 1(1): 52–55.
- Bryden, J.; Hart, K. (eds.) (2004). *Why local economies differ: the dynamics of rural areas in Europe*. New York: Edwin-Mellen Press.
- Dicken, P. (2003). *Global shift. Reshaping the global economic map in the 21<sup>st</sup> century*. London: SAGE.
- Douglas, D. (2005). The restructuring of local government in rural regions: a rural development perspective. *Journal of Rural Studies* (21): 231–246.
- G., Fekete É. (2005). Új esély a perifériának? [New chance for the peripheries?] *Falu-Város-Régió* 1–2: 44–46.
- Horváth, Gy. (2000). Partnerség az Európai Unió regionális politikájában [Partnership in the EU's regional policy]. *Tér és Társadalom* (1): 11–26.
- Kassai, Zs. (2014). Measuring social capital in rural development partnerships. In: Neszmélyi, Gy. I. (ed.), *Socio-economic and regional processes in the developing countries*. Gödöllő: SZIE Publishing, 167–175.
- Kassai, Zs.; Farkas, T. (2007). A LEADER+ program alulnézetből [The LEADER+ program from a bottom view]. *Comitatus* 17(5): 71–79.
- Káposzta, J. (2014). Területi különbségek kialakulásának főbb összefüggései [The main contexts of emerging territorial differences]. *Gazdálkodás* 58(5): 399–412.
- Káposzta, J.; Nagy, H.; Kollár, K. (2010). Borsod-Abaúj-Zemplén és Szabolcs-Szatmár-Bereg megye leghátrányosabb helyzetű kistérségeinek települési szerkezeti, foglalkoztatási jellemzői az EU csatlakozás óta eltelt időszakban [The settlement and employment characteristics of the most disadvantaged micro-regions in Borsod-Abaúj-Zemplén and Szabolcs-Szatmár-Bereg counties since the EU accession]. *Területi Statisztika* 50(6): 641–658.
- Lengyel, I. (2003). *Verseny és területi fejlődés: térségek versenyképessége Magyarországon*. [Competition and territorial development: competitiveness of regions in Hungary]. Szeged: JATEPress.
- Martin, J. (2001). Economic and community development through innovative local government. *Sustaining Regions* 1(1): 5–12.

- Mezei, C. (2006a). A helyi gazdaságfejlesztés fogalmi meghatározása [Definition of local economic development]. *Tér és Társadalom* (4): 85–96.
- (2006b): A települések versenyképességét befolyásoló helyi gazdaságfejlesztési gyakorlat Magyarországon [Practice of local economic development influencing settlement competitiveness in Hungary]. In: Horváth, Gy. (ed.), *Régiók és települések versenyképessége* [Competitiveness of regions and settlements]. Pécs: MTA RKK, 413–442.
- Molnár, M. (2013). Factors of success in case of local society. *Deturope: Central European Journal of Tourism and Regional Development* 5(3): 63–70.
- Nagné, M. M. (2007). A területi egyenlőtlenségek főbb összefüggései [The main correlations of territorial inequalities]. In: Káposzta, J. (ed.), *Regionális gazdaságtan* [Regional economy]. Debrecen: DE AMTC AVK, 166–205.
- Nemes Nagy, J. (1998). *A tér a társadalomkutatásban* [Space in social research]. Budapest: Hilscher Rezső Szociálpolitikai Egyesület.
- Némediné, K. K.; Neszmélyi, Gy. (2015). Aspects of spatial economic processes of disadvantaged areas in Hungarian and international perspective. *Romanian Review of Regional Studies: Journal of the Centre for Regional Geography* 11(2): 67–83.
- OTK (2005). *Országos Területfejlesztési Konceptió* [National Spatial Development Concept]. Budapest: Országos Területfejlesztési Hivatal.
- Picchy, A. (1994). The relations between central and local powers as context for endogenous development. In: Ploeg, J. D.; Long, A. (eds), *Born from within. Practice and perspectives of endogenous rural development*. Assen: Van Gorcum, 195–203.
- Rechnitzer, J.; Smahó, M. (2006). *Regionális politika* [Regional policy]. Győr: Széchenyi István University.
- Ritter, K. (2000). Az önkormányzati társulások, a településközi együttműködés jelentősége a terület- és vidékfejlesztésben [Importance of local governmental cooperations in territorial and rural development]. *Területi Statisztika* (1): 17–29.
- Ritter, K. (2014). Possibilities of local economic development (LED) in lagging rural areas. *Acta Carolus Robertus* 4(1): 101–108.
- Swinburn, G.; Goga, S.; Murphy, F. (2004). *A helyi gazdaságfejlesztés kézikönyve* [Handbook of local economic development]. Gütersloh: Bertelsmann Stiftung; London: UK DFID; Washington D. C.: The World Bank.
- Temple, M. (1994). *Regional Economics*. Basingstone: Palgrave Macmillan.
- Tóth, T.; Jóna, Gy. (2012). Concepts of the Territorial Capital. *Selye E-Studies* (3): 1–15.



# Transforming the Nigerian Agricultural Sector into an Agribusiness Model – the Role of Government, Business, and Society

Kenneth O. IKENWA,<sup>1\*</sup> Abdul-Hammed A. SULAIMON,<sup>2</sup>  
Owolabi L. KUYE<sup>3</sup>

<sup>1</sup>Department of Business Administration,  
University of Lagos, Akoka, Yaba, Lagos, Nigeria  
e-mail: kikenwa@unilag.edu.ng, alternate e-mail: kennethikenwa@gmail.com  
\*(corresponding author). Tel.: +234 (0) 805-465-4148

<sup>2</sup>Department of Business Administration,  
University of Lagos, Akoka, Yaba, Lagos, Nigeria  
e-mail: asulaimon@unilag.edu.ng, alternate e-mail: aasulaimon@gmail.com  
Tel.: +234 (0) 816-131-2021

<sup>3</sup>Department of Business Administration,  
University of Lagos, Akoka, Yaba, Lagos, Nigeria  
e-mail: okuye@unilag.edu.ng  
Tel.: +234 (0) 803-321-3491

**Abstract.** This paper proposes that the transformation of the agric sector into an agribusiness model will contribute to repositioning Nigerian economy from its backwater position in the world's economy. This proposition was investigated with the help of a review of literature and analysis of secondary time series data from the period of 2005–2014, which represented the contributions of the agricultural, manufacturing, oil and gas, and service sectors in Nigeria. One hypothesis was formulated and investigated with the *t*-test, correlation, and regression tests. The test results were positive and statistically significant at .05 alpha level, and they showed that agriculture has the potential to consistently have a significant effect in contributing to the growth of the Nigerian GDP both in the short and long run. These results justify the clarion call within the government and business sectors to diversify the economy and return to agriculture as the country's bedrock for economic stability, especially as global economy becomes more volatile, uncertain, turbulent, and ambiguous. To this end, six strategies and twelve policy recommendations are suggested towards the implementation of a Structural Adjustment for Agribusiness Promotion (SAFAP) in Nigeria, and this is to be implemented as an action plan for pursuing a nationwide agricultural revolution. The paper concludes that, in view of its Vision

20:2020 to be among the top twenty economies in the world, Nigeria can become positioned to be a major player in global economy by diversifying from an oil-dependent economy into agribusiness and agric trade.

**Keywords:** agriculture, transformation, economic development, government, business, society

**JEL Classification:** Q11, O11, O13

## 1. Introduction

“Today’s Nigeria has transitioned from being a self-sufficient country in food production and supply to being a net importer, spending \$11 Billion (USD) on the importation of rice, fish and sugar. It just makes no sense to me at all.” These were the words of Nigeria’s erstwhile Minister of Agriculture and rural development in the first quarter of 2015. It hides no rhetoric but affirms the potential of the Nigerian State to become not only a self-sufficient producer of both food and cash crops, but also a leading producer of food and fiber products for global export. Sadly, with the discovery of oil, Nigeria has largely become dependent on the importation of food to feed its growing population. The fact that the Nigerian agricultural sector is moribund cannot be overemphasized. This is not, however, to say that it contributes little or nothing to the nation’s Gross Domestic Product (GDP). But it must be said that the sector suffers from gross underutilization of capacity and low productivity output. However, amidst these facts are challenges which, if addressed from a strategic management and market-driven point of view, would translate to opportunities that could reposition Nigeria as a leader in the food and fibre global chain.

Considering these possibilities, the paper proposes a central thesis that the Nigerian agricultural system has the potential to replace the oil and gas sector owing to the fact that it is a major employer of skilled and unskilled labor and as a major contributor to Nigeria’s per capita income and economic growth by reducing poverty and adjusting balance of payments deficits if and only if the agricultural sector can be transformed into an agribusiness system. The aim of this paper is therefore to build a business case for and how the transformation of the Nigerian agricultural sector to an agribusiness system can be attained. Beyond this purpose, the paper intends to identify probable and reality-centered programs and strategies which will culminate in the way interventions and interactions of government, businesses, and society can result in a blueprint of strategic policies, which would aid the agric sector transformation as proposed in this paper. This transformation is imperative owing to the past and present macroeconomic advocacy by successive government administrations regarding the need to diversify the revenue base of the economy from a mono-product (oil and gas) export economy to a multi-product export economy.



Among other objectives, this paper will attempt to establish the multiplier effect that a transformed agricultural sector would have on the Nigerian economic and business landscape and will also give recommendations for the adoption or adaptation of the agribusiness model as a plan for returning the country to the path of sustainable national competitive and comparative advantage. The paper's analytical framework is guided by an attempt to respond to the following questions: *How can the prospects and benefits of transforming from an agricultural sector based on extraction, subsistence consumption, and produce export to an agribusiness system based on extraction, processing, and commercial export be harnessed in contemporary Nigeria?* The second question is connected to the first one: *What interventions of government, businesses, and society must be articulated and appropriated for an effective and efficient transformation from the present agricultural sector management to agribusiness?*

This paper is divided into ten sections. Section one introduces the main incentive, argument, objectives, and questions the paper addresses. Section two provides an overview of the agribusiness concept and the conceptual framework that establishes the central thesis and propositions presented in this paper. Section three examines in synopsis the trajectory of agricultural development in Nigeria, while section four focuses on the historical role of agriculture in promoting economic growth and development across the global landscape of both developing and developed countries. Section five comprises the presentation of a competitive and quantitative analysis of time series data over a ten-year period. This analysis also entailed the test of hypothesis connected to the central thesis of this paper. Section six examines some of the prospects that accompany agricultural transformation in Nigeria benchmarked upon the agribusiness model as well as the possible problems that ensue, while section seven discusses the roles of government, business, and society in Nigeria's agribusiness consolidation. The discussion in this section is also assisted by the presentation of a schematic diagram. Section eight highlights a total of six suggested strategies, which align with the strategic management and market-orientation approaches for improving the outcomes of integrated agribusiness models across Nigeria's agro-based and agro-allied firms. Finally, section nine includes policy recommendations for agribusiness system efficiency in Nigeria in view of the year 2020, while the concluding section summarizes the entire paper and ends with a strong position statement.

## **2. Overview of the Agribusiness Concept**

The concept of "agribusiness" is credited to have been first introduced by John H. Davis and Ray A. Goldberg in 1957. They defined the term agribusiness as "The sum total of all operations involved in the manufacture and distribution

of farm supplies, production operations on the farm; and the storage, processing and distribution of farm commodities and items made from them” (Davis & Goldberg, 1957: 2). Commenting on the definition and the publication of the authors which heralded the agribusiness concept, King, Boehlje, Cook, and Sonka (2010) affirmed that “The key insight articulated by Davis and Goldberg was that the food system needs to be viewed as an integrated system” (King et al., 2010: 554). They stressed further that “Management strategies and public policy initiatives designed to address problems in the food system would be doomed to failure if they focused on only one portion of that integrated system” (Ibid.). Still on Davis and Goldberg’s work, King et al. (2010) opined further that “Their [Davis and Goldberg’s] work stimulated new interest in the linkages between segments of the food system, in coordination across segments, in system-wide performance, and in strategy formulation in a context of interdependence” (Ibid.). The linkages highlighted here by King et al. (2010) form as it were the nucleus of the propositions in this paper as it concerns the Nigerian agricultural sector.

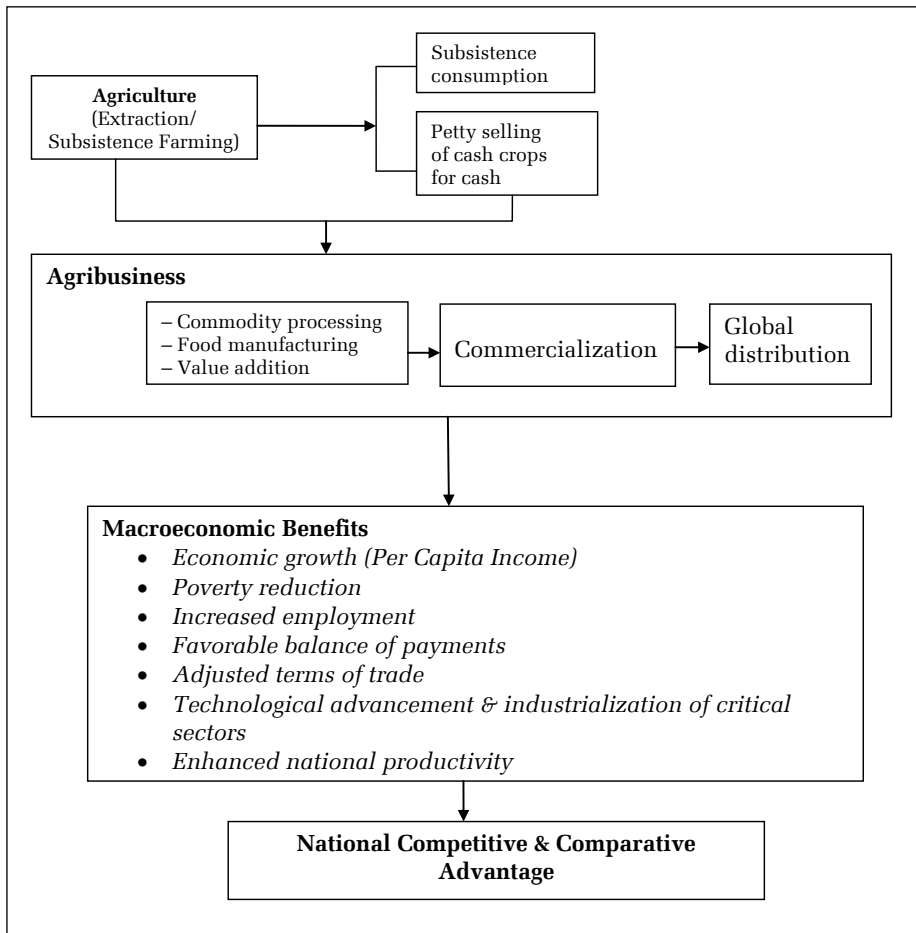
Bairwa, Kalia, Meena, Lakra, and Kushwaha (2014) refer to agribusiness as the business of agricultural production. According to them, “It includes crop production, seed supply, agrochemicals, farm machinery, distribution, processing, marketing and retailing of agricultural produce to ultimate consumers” (Bairwa et al., 2014: 1). In an attempt to justify their clarification of the concept, Bairwa et al. (2014) further maintained that “Agribusiness has evolved from agriculture and has become a vast and complex system that reaches far beyond the farm to include all those who are involved in bringing food and *fiber* to consumers” (Ibid.). Elsewhere, Ng and Siebert (2009) observe that since the seminal definition of agribusiness given by Davis and Goldberg (1957) agribusiness has subsequently been defined in various ways such as agro-industrialization (Boehlje, 1999; Cook & Chaddad, 2000), value, net chains (Lazzarini, Chaddad, Cook, 2001), or agriceuticals (Goldberg, 1999). Ng and Siebert (2009) stress that “These different definitions share a common emphasis for the ‘interdependence’ of various sectors of the agri-food supply chain that work towards the production, manufacturing, distribution, and retailing of food products and services” (Id.: 124). Agribusiness brings an expanded view to the practice of agriculture and to the concept of the food distribution chain. As such, Bell, Goldberg, Ning, and Weisser (2008) contend that the study of agribusiness, especially at Harvard Business School, gave birth to the notion of the “value-added food chain”. They emphasized further that during the decades over which the study and practice of agribusiness has evolved significantly, agribusiness has come to be seen not just as economically important but as a critical part of society.

Sonka and Hudson (1989) observe that the nature of agribusiness creates a sector-/system-related multiplier effect. By this, they mean that agribusiness is characterized by and can be described with three interdependent sectors in

a global food chain which represents a three-part system made up of: (i) the agricultural input sector, (ii) the production sector, and (iii) the processing manufacturing sector (Bairwa et al., 2014). Cook (1992) broadens this discourse by referring directly to Sonka and Hudson (1989) as suggesting that the food and agribusiness sector might be thought of as a sequence of interrelated subsectors made up of: (1) genetics and seed-stock firms, (2) input suppliers, (3) agricultural producers, (4) merchandizers or first handlers, (5) processors, (6) retailers, and (7) consumers. Cook (1992) stresses further that “Agribusiness is a complex system of the input sector, production sector, process-manufacturing sector, transport and marketing sector” (Id.: 2).

The conceptual clarification of agribusiness brings to the fore the strategic issues which are pertinent to what the transformation of the agricultural sector of a developing country or emerging market economy to an agribusiness sector/system portends. These issues lead to the development of a hypothetico-deductive model, which conveys the central thesis and propositions of this paper. Supporting this thesis, Bairwa et al. (2014), for example, categorically state that “Agribusiness is very important for developing countries....to capitalize on the benefits of globalization and face new challenges to enhance their economic growth” (Id.: 2). To further support the paper’s thesis, Goldberg (1991a) is reputed to have estimated that “...the food and agribusiness system is the largest economic system in the world representing 50 percent of the global labour force, 50 percent of global assets, and 50 percent of global consumer expenditures” (as cited in Cook, 1992: 11). Thus, presented below is the conceptual framework that establishes the central thesis and propositions promoted in this paper.

Agriculture, as presently practised in Nigeria, is largely dominated by subsistence and low-scale farming both of which are both pervaded with traditional forms and methods of farming. Suffice to mention that the extent to which the agribusiness model in a country is dominated by market-oriented family farms/firms or market-oriented corporate farms/firms or both is a function of the level of economic development in that country and the enabling operational environment for agribusiness to thrive. Nigeria being a developing country, its gradual integration has witnessed the adaptation by few market-oriented corporate farms/firms, as family-owned farms rarely exist in Nigeria, thus leaving a larger part of the sector to be dominated by subsistence and traditional farming in the rural areas. The resultant effect of this has been a sector characterized by low productivity, which in turn has made it impossible for Nigeria to appropriate a sector in which it has more comparative advantage in terms of factors and costs of production than other countries in Africa and beyond. This problem with its many attendant consequences creates not only an income gap for the country but also continues to have a negative effect on other macroeconomic variables. It has also promoted



Source: the authors (2016)

**Figure 1:** *Agribusiness Transformation Model*

a high rate of capital flight and it has in turn made Nigeria a dumping ground of processed agricultural products among other consequences.

One strategic macroeconomic variable and benefit of critical importance highlighted in *Figure 1* above is increased employment. At present, irrespective of the fact that the Nigerian agric sector is mostly dominated by subsistence farming and traditional farming techniques and approaches to produce preservation and distribution, the sector still accounts for nearly seventy percent of the total employment and productive occupations in Nigeria, even though for the most part those most engaged in agric-related endeavors live in the rural areas, and observations indicate that most agric-related trade is dominated within the cycles

of the informal economy. This statistic is suggestive of the fact that the sector is still besieged by high levels of unemployment and underemployment of both labor and other factors of production. This problem can be ameliorated by the transformation of the traditional agricultural sector into an agribusiness model, as such transformation is very much likely to improve value and supply chain activities, which will in turn necessitate the employment of more individuals, involvement of more firms, and consequently increased employment of other factors of production. Overall, this will have a multiplier effect on the economy by reducing the unemployment and underemployment rates of both labor and other factors of production.

Despite the above stated problems and challenges, some strategic contradictions are very much apparent. This is so given the fact that the agricultural sector – as it would be later discovered and elucidated upon in subsequent sections of this paper – has contributed positively and significantly to the Gross Domestic Product (GDP) of Nigeria in the last couple of decades. Such a contradiction seems to be at variance with the problems and challenges highlighted hitherto. But it should be categorically stated that instead of perceiving this quantitative observation as a contradiction, it should be seen as a pointer to the untapped potential of the sector. Hence, the argument in the paper is anchored on the need to transform the sector into a system benchmarked upon the agribusiness model for the purpose of better positioning it as a critical economic sector whose positive impact will adjust the fiscal shortages and collateral damages that have resulted from over-dependence on the oil and gas sector as Nigeria's major source of income, economic growth, and development. Therefore, we propose that agribusiness is a systematic model which would serve as a correcting factor to mitigate the forces that have made it impossible for Nigeria to pursue, gain, and sustain comparative and competitive advantage in the global agric trade.

### **3. Agricultural Development in Nigeria – History and the Present State of the Art**

Nigeria is a West African country situated in the Gulf of Guinea. In 1960, political independence was gained from Britain. As the most populous country in Africa, with an estimated population of above 170 million as at 2014, it currently has the biggest economy in Africa with a rebased GDP size in the excess of USD 500 Billion (National Bureau of Statistics [NBS], 2014). Nigeria has a land mass territory of 923,768 km<sup>2</sup>, 78% of which is land available for agricultural use, 37% of which is arable (CIA, World Fact Book, 2014). The country's agricultural base comprises a blend of food crops for local/subsistence consumption and cash crops

such as cocoa, peanuts, cotton, palm oil, corn, rice, sorghum, millet, cassava, yams, rubber, as well as livestock such as sheep, goats, pigs, fish, etc. As at 2014, it had a low Human Development Index (HDI) of 0.504, which is an increase from 0.471 in 2013. Its Multidimensional Poverty Index (MPI) for 2014 was 0.239, with a total of 43% of Nigerians estimated to be living in multidimensional poverty and 68% living below \$1.25 a day. As such, Nigeria is ranked 152 out of a total number of 185 countries on Human Development Indicators (UNDP, 2014).

Nigeria's agricultural sector has a rich history of development from mere subsistence farming to large-scale farming, for the extraction and production of cash and food crops for mass export and foreign exchange earnings in the late 1950s, up through the period of political independence from Britain, and until the discovery of crude oil in large exportable quantities. This discovery of oil turned out to be the curse that cast a dark spell on a once critical foreign exchange earning sector, the agric sector. Owing to what has come to be described as the "Dutch Disease", the agricultural sector has remained stagnant, and investment into modern mechanized farming techniques was almost abandoned at the opportunity cost of crude oil exploration. The sector remains full of potential and this is attested to in the NBS (2014) report on the sector, which documents the considerable regional and crop diversity that characterizes the sector. However, the report was also quick to pinpoint that the analysis of the sector is fraught with serious data problems. The NBS (2014) report states that the available statistics only provides a broad overview of development in agriculture, upon which some generalizations about the role of the sector in Nigeria's economic development and structural change can be made. This paper will hopefully contribute to bridging this gap.

Regardless of this admission of data adequacy problems, clearly documented in the NBS (2014) report is the fact that the agricultural sector in the 1960s was an important contributor to the country's GDP, foreign exchange earnings, general employment level, favorable terms of trade, balance of payments, and overall economic stability. With these in place, the sector facilitated in great leaps and bounds the required economic growth and the increase in per capita income needed for economic development. Abandoning the sector led to a substantial variation and long-term decline in the share of the sector's contribution to the national GDP from 60% in the 1960s to 48% in the 1970s and 22% in the 1980s (NBS, 2014). Ekerete (2000) records that as at 1974 the sector's share in the GDP had declined to 34%, while Olagbaju and Falola (1996) stated that as at 1996 the sector accounted for less than 5% of Nigeria's GDP. Currently, the sector accounts for approximately 20% of the Nigerian GDP (CIA, World Factbook, 2014).

However, the declining oil revenues, in addition to mismanagement and misappropriation of revenues accruing from the oil sector over the last three

decades, have led to a clarion call for the diversification of the Nigerian economy and a return to agriculture as the mainstay of the economy. Chigbu (2005) supports this call by reiterating that agriculture is the “engine house of world economies”. Chigbu (2015) stresses that “As a protagonist of agricultural development...Nigeria’s economic development can only be realistic through the total resuscitation of our agricultural sector” (Id.: 4). Chigbu (2005) is of the strong view that such resuscitation will propel the sector to produce food and fiber to feed the teeming millions of Nigerians. He maintains further that with such production the ensuing benefits will grow faster than the birth rate and will consequently reduce the death rate.

The present state of the art in the Nigerian agricultural sector appears to have maintained the same level of currency over the last three decades. But some significant and meaningful observable dimensions of growth are obvious, especially as the sector has been able to attract meaningful Foreign Direct Investments (FDI) and Foreign Portfolio Investments (FPI) in the last one and a half decades. Omole (1985) sounded the alarm about thirty years ago, emphasizing that the Nigerian economy as at the time of his publication had neither a firm agricultural nor a firm industrial base. He stressed further that “The power pump of the economy in the oil sector is threatened by excess supply in the world market and orchestrated by decline in prices” (Omole, 1985: 15). While Omole may have been considered back then as a lone voice crying from a self-imposed economic wilderness, his warnings have crystallized today in the global economy. Presently, the Nigerian government and people are coming to terms with the economic realities that accompany an unsustainable dependence on oil revenues.

The present state of the Nigerian agricultural sector shows that agricultural engagement is still predominantly domiciled in the rural areas, highly populated with small-scale farms; low penetration of mechanized farming practices; poor adaptation of modern technology to enhance produce and livestock output; inadequate agric capital and loans to encourage vertical integration; and, the most devastating of all, the sector has been plagued by high level of government policy summersaults and regulatory inconsistencies. Suffice it to say that the renewed emphasis to diversify the Nigerian economy and return to agriculture as its bedrock of growth and sustainable development necessitates that government, businesses, and the Nigerian society come together to confront the nearly insurmountable challenges and consumption patterns that have left the agric sector moribund. The leading challenge is the preference of Nigerians for foreign agricultural finished products. This is responsible in no small way for high import invoices, which in turn encourage capital flight, unfavorable terms of trade and consequently inhibit the export potential of the Nigerian agric sector.

For example, according to data obtained from the Nigerian Bureau of Statistics in 2015, by the end of the first quarter in 2015, a total of ₦738 billion (approximately \$3.69 billion USD) worth of agricultural products were imported into Nigeria, compared to a total value of agricultural exports within the same period from Nigeria worth 99.5 billion (approximately \$495 million USD). All of this amounted to agric trade deficits in the excess of ₦600 billion (\$3.2 billion USD). It is also important to reconcile the extent to which the agric sector has been impacted by Foreign Direct Investments (FDI).

In an empirical study, aimed at analyzing FDI in Nigeria, Ogbanje, Okwu, and Saror (2010) discovered upon analyzing the available secondary data that in the period of 1970–2007 the net flow of FDI to Nigeria discriminated against the agric sector notwithstanding the strategic position of the sector in the economy. On the other hand, the manufacturing and processing sector for the period under review was the most highly favored by net flow of FDI. This finding aligns with similar results reported by Fabayo (2003).

The findings reported by Ogbanje et al. (2010) contradict their stated *a priori* expectations, which assert that “The agricultural sector, owing to its strategic relevance to the Nigerian economy and its potential to attract foreign direct investment ought to have the highest mean net investment” (Id.: 18). To investigate this assumption, Ogbanje et al. (2010) hypothesized that the application of foreign investment available to the agricultural sector should have a significant relationship with the growth of the sector. This hypothesis is supported by Obansa and Madueke (2013), who reported in their study on agricultural financing and economic growth in Nigeria that there is a bidirectional causality between economic growth and agricultural financing. These statements align with the central thesis and argument proposed in this paper.

The discussion on FDI inflows to Nigeria as well as to other emerging market economies in Africa begs a question that is very important for Sub-Saharan African scholars to address, especially within the discourse on externally driven economic growth and development. For Nigeria in particular, the question must be asked: *How much FDI directed to Nigeria is actually genuine FDI?* It is obvious that a lot of distortions are apparent in the global FDI statistics. From the receiving end, it is important to appropriately classify genuine foreign investments and differentiate them from investments with clandestine interests. A position that stands to be corrected is that most foreign investment inflows to Nigeria fall under the classifications of Foreign Portfolio Investments (FPI), whose destinations are meant for Special Purpose Entities (SPEs). The OECD (2014) report on FDI corroborates this position. According to Kothe, Carly, and Gestrin (2014), the authors of the report “[SPEs] are typically holding companies [who] used to channel capital through countries without generating any real significant economic activity or employment” (Id.: 5).



Likewise, statistics from the World Bank does not suggest any position contrary to the one being advanced here. For instance, the World Bank record shows that FDI inflows as a percentage of Nigeria's GDP between 2010 and 2013 were 1.6, 2.1, 1.5, and 1.1 percent respectively. And net FDI outflows from Nigeria were 0.2, 0.2, and 0.3 percent respectively. The 2013 figure is not available. Thus, the variance between Nigeria's FDI inflow and outflow has only been arithmetic and not geometric in progression.

On the whole, despite the fact that statistical records from provisional data show that the contribution of the agricultural sector to Nigeria's GDP increased between 1996 and 2014 from 5% to approximately 20%, the sector is besieged at present with many problems and challenges. Many stakeholders agree that these collective problems are responsible for the below optimal productivity of the sector. The position in this paper is that although these problems and challenges hinder the productivity output of the sector, the introduction of an agribusiness model would contribute a great deal to confronting these bottlenecks and consequently to improving productivity output in the agric sector.

## **4. The Role of Agriculture in Economic Growth and Development**

Does the agricultural sector positively impact the economic growth and development of a developing country and in Nigeria's case a Less Developed Country (LDC)? Providing answers to this question requires a critical examination of extensive theoretical and contemporary empirical literature. In addition, historical evaluations of the economic gains and mileage that some developed countries have attained will be highlighted. Put together, the outcomes of these reviews would further lend credence to the argument proposed in this paper which focuses on the need to invest more in Nigeria's agricultural sector and in so doing employs an agribusiness model for improving the sector's productivity, global participation, and relevance in the 21<sup>st</sup>-century business landscape.

Before proceeding on this brief overview of literature, it is important to clarify the conceptual ambiguities, usually associated with the terms of economic growth and economic development. Economic growth has been defined as "The increased productive capabilities of an economy" (Arnold, 2005: 40). Elsewhere, McEachern (2006) defined it as "An expansion in an economy's production possibilities" (Id.: 6). Simply put, when per capita income and GDP increases in developing/less developed countries, economic growth is said to occur or to be occurring. Similarly, when per capita income and GDP increase in developed countries, such increase is described with the concept of economic development.

However, in the latter, fundamental positive and incremental modifications, transformation, and change are made, while in the structure of the economy and society an increase follows in per capita income. However, the position taken in this paper is that economic growth precedes economic development. Both terms will nonetheless be used interchangeably.

Harbinson and Myers (1959) identified four stages of economic development, which, according to them, represent the universal and inevitable process through which various human societies progress in a linear direction. This direction is from an agrarian to a traditional society onward to an industrialized society and finally to a democratic society. While the assumption of linear progress has been the major criticism of their theory, their proposition that all societies commence from the agrarian stage of development is not lacking in merit.

Rostow (1960) proposed a theory, highlighting five stages of economic growth, namely: (1) the traditional society, (2) the pre-conditions for take-off, (3) the take-off, (4) the drive to maturity, and (5) the age of high mass consumption. Of particular importance in his treatise is the first stage, that is the traditional society, which Rostow (1960) defined as “One whose structure is developed within limited production functions based on pre-Newtonian science and technology and as pre-Newtonian attitudes towards the physical world” (as cited in Jhingan, 2005: 123). According to Raj, Murherjee, Murkherjee, Ghose, and Nag (2007: 65), the traditional society is characterized by a large agricultural sector and hierarchical social structure, and its defined essence is that “it possesses a low ceiling of attainable output per head because of the backward nature of its technology”. Still, on the traditional society, Jhingan (2005) strongly commented that “Political power was concentrated in the regions, in the hands of landed aristocracy supported by a large retinue of soldiers and civil servants. More than 75 per cent of the working population is engaged in agriculture” (Id.: 123). These descriptions are characteristic to a large extent of the present-day Nigeria, even though it may be argued that some advancement in industrialization has been made in the country. Thus, with respect to the models of Harbinson and Myers (1959) and Rostow (1960), the underlying thread in both models is that economic growth and consequently development is founded upon agrarian beginnings.

Reynold (1975), for example, is of the strong view that agricultural development can promote economic development of underdeveloped countries in the following distinct ways: (1) by witnessing the supply of food available for domestic consumption and referring the labor needed for industrial development, (2) by enlarging the site of domestic market for the manufacturing sector, (3) by increasing the supply of domestic savings, and (4) by providing the foreign exchange earned by agricultural exports (as cited in Umaru & Zubairu, 2012). Jhingan (2005: 334) highlighted six ways in which agriculture contributes to economic development: (1) providing more food to a rapidly increasing population, (2) increasing the

demand for industrial products and thus necessitating the expansion of the secondary and tertiary sectors, (3) providing additional foreign exchange earnings for the import of capital goods for development through increased agricultural exports, (4) increasing rural income to be mobilized by the state, (5) providing productive employment, and (6) improving the welfare of the rural people. Johnson (1966), on the other hand, provided a set of primary criteria for appraising the contributions of agriculture to a nation's economy. These are: (1) the proportion of the population engaged in agriculture, (2) the share of agriculture in the Gross Domestic Product, (3) the proportion of the nation's responses devoted or employed in agricultural production, and (4) the contribution of the agricultural sector to foreign trade (as cited in Umaru & Zubairu, 2012).

Considering all the items and elements so far discussed, points alluded to in a section before this one on agricultural development in Nigeria, and which highlighted the past, and present roles that agriculture had and continues to play in Nigeria's economic growth and development are justified. Ogen (2003) maintains that the Nigerian economy could be described as an agrarian economy during the first decade after her independence from Britain and even before independence simply because agriculture served as the engine growth of the overall economy. Ogen (2003) further reckoned that "During this period, Nigeria was the largest producer of cocoa, largest exporter of kernel, and largest producer and exporter of palm oil" (as cited in Itodo, Apeh, and Adesina, 2012: 7). Ekerete (2000) considered this period as one in which the country was virtually self-sufficient in the production of food crops to feed the populace and to provide raw materials for industries and cash crops for export. Abayomi (1997) supports these viewpoints, stressing that the economic contributions of agriculture overshadowed all other economic sectors within this period, that is the first post-colonial decade.

Similarly, Itodo et al. (2012) reckoned that "From the standpoint of occupational distribution and contribution to GDP, agriculture was the leading sector in the early 60s as the contribution from the sector accounted for about 70% of Nigeria's GDP" (Id.: 7). Lawal (1997) commenting on the same period stated that "Despite the reliance of Nigerian peasant farmers on traditional tools and indigenous farming methods, these farmers produced 70% of Nigerian exports and 96% of its food needs" (as cited in Itodo et al., 2012). And even up till the present dispensation the agricultural sector is said to employ close to two-thirds of the Nigerian population in both formal and informal (i.e. organized and unorganized) networks of the sector (Oloyede, 2014). While there is a noticeable decline in agriculture's share of Nigeria's GDP since the 1970s and down to the 1980s, Ekpo and Umoh (2003) have stressed that this decline is not due to the increase in the industrial sector's contribution to the GDP but rather is due to the neglect of the agric sector (as cited in Umaru & Zubairu, 2012).

The economic trajectory that justified the claim of agriculture as a predictor of economic growth and development is further supported by postulations from two seminal authors whose works Obansa and Maduekwe (2013) make reference to – these are the works of Mody (1981) and Kuznet (1961). Mody (1981) was of the view that agricultural surplus is important for structural transformation accompanying economic growth. A pattern which is premised on the view credited to Kuznet (1961), who maintained that the agricultural sector should transfer to the non-agricultural sector the “surpluses of investible resources” generated in agriculture (as cited in Obansa and Maduekwe, 2013: 173). Omole (1985) gives an example of two countries as emphasis for a case study that attests to this pattern. According to Omole (1985), “The United Kingdom took over a century of agricultural and industrial revolution to develop itself into an industrial power by the nineteenth century, while the United States rapidly moved from the ravages of a civil war through an agricultural and industrial revolution within about three decades of the nineteenth century” (Id.: 118). While citing other countries, such as Brazil and South Korea, who have followed this pattern, Omole advocates that “The challenges of our economic development planning and implementation in Africa is to compress the gestation period of our agrarian and industrial revolution” (Omole, 1985: 119).

Commenting on this development pattern, Obansa and Maduekwe (2013) are of the view that the pattern suggests (implicitly and explicitly) that developing countries must extract resources from agriculture for a successful industrial development. Hence, Obansa and Maduekwe (2013) posit that “Agriculture financing not only removes financial constraints but also promotes investment and adoption of technology necessary to spur desired economic growth” (Id.: 173). These positions and advocated pattern align with the central proposition of this paper.

In rounding up the discussion on the role of agriculture in economic growth, it is necessary to examine a few empirical studies that have sought to establish the relationship between both variables and where possible ascertain the nature of casualty of this relationship. In a study which covered the time frame between 1980 and 2010, Gbaiye, Ogundipe, and Osabuohien (2013) investigated the impact of agricultural export on economic growth in Nigeria. They discovered that a long-run equilibrium relationship existed between agricultural exports and economic growth, and the relationship was elastic in nature. This led to the conclusion that a unit increase in agricultural exports would bring a more than proportionate increase in real GDP in Nigeria (Gbaiye et al., 2013). Umaru and Zabairu (2012) in their study, which covered the period of 1960–2010, examined the contributions of the agricultural and petroleum sectors to the growth and development of the Nigerian economy with the aid of some quantitative techniques. The results from their study revealed that while both sectors had a positive impact on economic growth and development of the economy, the agricultural sector contributed higher than the petroleum sector.

Suleiman and Aminu (2010) conducted a similar study, which examined the agricultural, petroleum, and manufacturing sectors. Results from their study indicated that the agricultural sector was contributing higher to the growth of the Nigerian economy than the petroleum and manufacturing sectors. Finally, as previously cited, Obansa and Maduekwe (2013), using some econometric techniques, discovered that there is a bidirectional causality between economic growth and agricultural financing and also between economic growth and agricultural growth. All these empirical results support the central proposition of this paper.

## **5. Competitive and Quantitative Analysis of the Nigerian Agricultural Sector**

Is the Nigerian agricultural sector competitive? Does the sector guarantee consistent incremental returns on investments? Can it create a diversified revenue base that would translate into inclusive economic growth? Is there an enabling environment to support agribusiness demands, growth, and consequently development? Does the past output and contributions of the sector to the Nigerian economy justify a present and future “accelerator model of investment” in the sector? Is the sector the promise of the country’s future? These economic and market-value-creation-, addition-, and extraction-related questions are critical in building premises to support the business case for the transformation of the Nigerian agricultural sector into an agribusiness sector.

One major objective to be achieved in this section is to establish with the aid of quantitative analyses the extent to which Nigeria as a nation can possibly reinvent and appropriate absolute or comparative advantages in the agricultural sector. The discussion here commences with a presentation and analyses of secondary time series data. Correlation and regression inferential test statistics will be used to establish the relationship between the agriculture, manufacturing, oil, and the service sectors and their impact on the GDP for the time frame from 2005 to 2014.

Indicated in *Table 1* below are data on the four critical sectors. The extent to which each sector affects the country’s GDP as well as the strength of relationship between the nation’s GDP performance is to be established with the Pearson correlation coefficient and simple linear regression tests in *Table 2* below. Pearson’s correlation and simple regression tests were administered to identify relationships and effects that are predictive and which give credence to the central thesis and proposition of the paper. The correlation and regression tests were done sector by sector but presented in an abridged form to facilitate and amplify ease of interpretation.

**Table 1.** *Data on GDP of agriculture, oil, manufacturing and service sectors (current basic price from 2005 to 2014)*

Year	GDP Current Basic Price (=N=Millions)	Agricultural Sector Current Basic Price (=N=Millions)	Oil Sector Current Basic Price (=N=Millions)	Manufacturing Sector Current Basic Price (=N=Millions)	Service Sector Current Basic Price (=N=Millions)
2005	14,572,239.12	4,773,198.38	5,664,883.21	412,706.60	1,620,112.00
2006	18,564,594.73	5,940,236.97	6,982,935.44	478,524.10	2,143,487.40
2007	20,657,317.67	6,757,867.73	7,533,042.60	520,883.00	2,502,832.00
2008	24,296,329.29	7,981,397.32	9,097,750.70	585,573.00	2,785,654.80
2009	24,794,238.66	9,186,306.05	7,319,262.70	612,614.10	3,106,821.20
2010	54,204,795.12	10,310,655.63	9,747,355.20	647,822.79	3,430,111.69
2011	63,258,579.00	11,593,434.13	15,515,548.93	694,784.72	3,846,593.40
2012	71,186,534.89	13,413,842.45	15,004,619.95	761,467.00	4,388,876.70
2013	80,222,128.32	14,709,104.92	10,296,327.22	7,233,322.42	28,648,636.24
2014	83,543,715.26	17,968,212.88	9,616,489.52	8,685,430.03	33,107,869.23

Source: Central Bank of Nigeria Statistical Bulletins. National Bureau of Statistics (NBS).

Table 2 above presents an abridged correlation and regression results. (Only important statistical coefficients were depicted in the table). The data used in this paper for the purpose of comparing the performance of the agriculture, manufacturing, oil, and service sectors vis-à-vis GDP are time series data which covered the period of ten years. Secondary data were obtained from the Central Bank of Nigeria (CBN) statistical bulletins and from the National Bureau of Statistics (NBS) archives. Results from the analysis statistically validate the central proposition in this paper. This position can be best appreciated by first converting the proposition into hypothetical statements. Therefore, the hypothesis below can be examined:

$H_1$ : *The agricultural sector will have a positive significant effect in contributing to the growth of the Nigerian Gross Domestic Product in the short run and long run and consequently outperform other critical sectors in the Nigerian economy.*

The t-statistic as well as the regression coefficient/means would be used to examine ( $H_1$ ). The obtained t-test for agriculture ( $t_{\text{obt}} = 9.073$ ,  $p < .05$ ) is larger than the table t-test value for  $(n-1) = df = 9$  observations, which is ( $t_{\text{tab}}(9) = 2.262$ ,  $p < .05$ , 2-tailed). Going by the decision rule, the null hypothesis should be rejected and the alternative hypothesis ( $H_1$ ) stated above is to be accepted. Similarly, at 1% level of significance ( $t_{\text{tab}}(9) = 3.250$ ,  $p < .01$ , 2-tailed), the null hypothesis will still be rejected. As such, a statistically significant basis for the diversification of the Nigerian economy with agriculture as the focal sector is justified.

**Table 2.** Correlation and regression analysis

SUMMARY OUTPUT						
Regression Statistics						
Multiple R Correlation						
<b>Agriculture</b>	0.9546					
<b>Oil</b>	0.7003					
<b>Mfg</b>	0.7127					
<b>Service</b>	0.7363					
R Square						
<b>Agriculture</b>	0.9114					
<b>Oil</b>	0.4905					
<b>Mfg</b>	0.5079					
<b>Service</b>	0.5421					
Adjusted R						
<b>Agriculture</b>	0.9003					
<b>Oil</b>	0.4268					
<b>Mfg</b>	0.4464					
<b>Service</b>	0.4849					
ANOVA						
	df	SS	MS	F	Significance F	
Regression						
Agriculture	1			82.3279	0.0000	
<b>Oil</b>	1			7.7027	0.0240	
<b>Mfg</b>	1			8.2954	0.0207	
<b>Service</b>	1			9.4742	0.1516	
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
<b>Intercept</b>						
<b>Agriculture</b>	-19070266.66	7635980.48	-2.4974	0.0370	-36678869.21	-1461664
<b>Oil</b>	-12000000	21638623	0.5382	0.6650	-62000000	38252651
<b>Mfg</b>	32529969	7923660	4.1054	0.0034	14257977	50801961
<b>Service</b>	30810332.3	7889852	3.9050	0.0045	12616300	49004364

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SUMMARY  
OUTPUT

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**Independent  
Variables**

<b>Agriculture</b>	6.2942	0.6936	9.0734	0.0000	4.6945	7.8938
<b>Oil</b>	5.9079	2.1286	2.7753	0.0240	0.9991	10.8167
<b>Mfg</b>	6.3005	2.1923	2.8739	0.0207	1.2450	11.3561
<b>Service</b>	1.7199	0.5587	3.0780	0.0151	0.4313	3.00855

*Note: dependent variable (Gross Domestic Product), independent variables (Agriculture, Oil, Manufacturing and Service sectors), confidence interval = 95%, level of significance = 5%*

The regression results also reinforce the above finding with regard to ( $H_1$ ). This is in view of the fact that, considering the number of years under review (2005–2014), the agricultural sector explained over 90% of the variations in Nigeria’s GDP. The effect of agriculture in explaining over 90% of Nigeria’s GDP was shown to be statistically significant ( $r^2 = 0.911$ ,  $p < .05$ ; sig.  $f < .05$ ). In the same vein, the correlation between agriculture as an independent variable and GDP as the dependent variable was positive, statistically significant, and very high ( $r = .954$ ,  $p < .05$ ). Furthermore, by converting the  $r$ -statistic to Cohen’s  $d$  to ascertain the effect size of the agric sector on the country’s GDP within the time frame under review, the following will be obtained:  $r = .954$ ,  $d = 6.346$ . This effect size ( $d = 6.346$ ) exceeds Cohen’s (1988) threshold for a large effect size, that is  $d = .80$ . Therefore, it can be concluded that agriculture has quite a large effect on the GDP of the country.

Further analysis of the results indicated that the agric sector had the strongest correlation with GDP when compared to the other critical sectors examined in the study. Consequently, it has the largest effect on the country’s GDP and explained more variability in GDP than the oil, manufacturing, and service sectors. With the analyses so far discussed, ( $H_1$ ) is to be accepted as it clearly points to the multiplier effects and benefits that would emanate from transforming the agricultural sector into an agribusiness sector. Also the results justify diversifying the economy and investing more in the agric sector with a view to making it the mainstay of the Nigerian economy.

A few more statistical analyses would be needed to further justify the above position. It is important, for example, to examine the extent to which all four independent variables were statistically significant. The  $f$ -statistic, which measured the individual and joint significance of the four independent variables (agriculture, oil, manufacturing, and service sectors), was found to be statistically significant for all the four independent variables at 5% level of significance. But at 1% level of significance, the oil, manufacturing, and service sectors are not statistically significant in explaining variability in the GDP.



This observation further justifies the call to invest more in the transformation of the agricultural sector into an agribusiness sector, thereby positioning it as a major contributor in the long run to Nigeria's economic growth and consequently economic development. Additionally, this transformation would prove critical and practical in achieving macroeconomic stability. This finding confirms the theoretical expectations as posited by Omole (1985), Mody, (1981), and Kuznet (1961), all of which align with the central proposition of this paper.

The entire results indicated that, on the average, 56% of the variability of the Nigerian GDP was explained by the four sectors within the ten years' period under review. The agricultural sector, however, showed superior performance, as it explained 95% of the variability of the Nigerian GDP for the period. This superior performance is evinced by the fact that the individual regression output of the three sectors in each of the cases fell below the 56% average output. This finding corroborates findings from other studies. For example, Suleiman and Aminu (2010) examined the empirical contributions of the agriculture, manufacturing, and petroleum sectors to the Nigerian economy and discovered that the agricultural sector contributed higher than both the petroleum and manufacturing sectors to the Nigerian economy. In a similar study undertaken by Umaru and Zabairu (2012), which covered a period of fifty-one years' time series data from 1960 to 2010, the results and conclusion revealed that agriculture contributed higher than petroleum to the GDP over the fifty-one (51) years under review despite the neglect of the agricultural sector since the advent of oil in the early 1970s. Ahungwa, Haruna, and Abdusalam (2014), in a study on time series data between 1960 and 2002, discovered that agriculture contributed more than other sectors to the GDP of Nigeria. Their regression analysis showed that for every percentage increase in the contribution of agriculture the GDP increased by 64.4%. Put differently, given the period under review, agriculture explained 66.4% of the variability in the Nigerian GDP – higher than other sectors. The result was positive and statistically significant. The results are corroborated by this present study despite the analysis of a shorter time frame, which is from 2005 to 2014.

## **6. Transforming from Agricultural Sector into Agribusiness Sector – Prospects and Problems**

Transformation and global alignment is the key to developing new markets and industries. A focus on transformation is also critical to providing the structure and infrastructure for positioning firms, economic sectors, and countries for vertical integration, maximum output, and competitive advantage respectively. One major extrapolation that can be made from the central proposition of this paper

is that transforming the Nigerian agricultural sector into an agribusiness model presents an avalanche of opportunities to improve the economic performance of the country. This section examines the prospects and the dimensions within which this extrapolation translates to reality. Four dimensions have been identified as areas to discuss the prospects for this transformation. These are: (i) self-sufficiency, (ii) macroeconomic stability, (iii) attraction of foreign direct investment (FDI), and (iv) technological acquisition, diffusion, and development. These are discussed in brief below.

### **6.1 Self-Sufficiency**

In the last two decades, Nigeria has become a net importer of food. This situation has extended into the importation of both food crops and processed food products into the country to supplement local production and consumption. This trend brings two economic anomalies to the fore. First, Nigeria now imports agricultural products and farm outputs, which in the early 1960s and 1970s had comparative and competitive advantage in producing and processing, for example, palm oil and grains such as corn and wheat. Second, Nigeria imports finished products that have been processed from the farm outputs hitherto exported from Nigeria to other countries. While it may seem contradictory that a sector which has contributed the most in explaining variability in the country's GDP needs to be supplemented with imports from abroad, these contradictions can be best appreciated when three variables are factored into the discourse. These are: (i) the geometric increase in the population of Nigeria since 1970, (ii) the increase in average income resulting from oil and gas exports since 1970, and (iii) the high income elasticity of demand for food owing to population explosion and increase in income from oil and gas exports.

Presently, Nigeria is no longer a self-sufficient producer of food for its teeming population of over 170 million. A good number of this population are people who have also come to develop an appetite and preference for imported farm produce and finished agricultural products. The challenge of reconciling the high demand for food and the increased appetite for foreign agricultural products has seeds of opportunity embedded in it and hence provides the platform for shifting from an extract- and export-bound agric sector to an extract–process–export-based agribusiness sector. A shift to an agribusiness model is capable of benefiting the agric sector with the necessary systematic tools, mechanisms, interventions, and global pool of resources needed to reinvent the present structure of the Nigerian agricultural sector.

It is this very structure that has contributed to the low output of the sector and consequently a *status quo* which has rendered the country incapable of single-handedly catering for the food needs, requirements, and demands of the growing

population. Akpan and Atan (2015) attempted to explain how the structure of the Nigerian agricultural sector contributes to low output. In an empirical study which investigated the impact of globalization on selected sectors in the Nigerian economy, namely agriculture, manufacturing, and international trade, Akpan and Atan (2005) discovered that the increase of credit facilities, such as agricultural loans between 1970 and 2011 to the agric sector, had a negative impact on agricultural output. According to Akpan and Atan (2015), “A possible explanation could be that the production process in the sector is mostly labour intensive. This is reflective of the dual structure of the Nigerian agricultural sector” (Id.: 152). Akpan and Atan stated further that “While the modernized sub-sector, which employs modern technologies, accounts for about 5% of Nigeria’s total agricultural output, the traditional production sub-sector, relying mostly on manual labour with crude and less productive technologies, accounts for the remaining 95%” (Akpan & Atan, 2015: 152).

From the above, it is glaring that transforming the sector is very critical owing to the data that describe its dual nature. As such, appropriating best global practices benchmarked against an agribusiness model would be very much critical to transforming the sector into a more modernized structure that will be based on agricultural practices with the attendant benefits of increased agricultural output, capable of meeting local demands for subsistence and global demands for export. Another benefit accruing from this transformation is cost saving, which will result from reduced importation of agricultural commodities with scarce foreign exchange resources, which, when saved, could be put to alternative use, especially those geared towards development.

What is more, the agribusiness model will position the sector to achieve high levels of what Weisser (2008) referred to as production efficiency, trade efficiency, and logistical efficiency (as cited in Bell, Goldberg, Ning, and Weisser, 2008). This efficiency troika will contribute to Nigerian agribusiness and agro-allied firms to successfully expand into new markets, establish new global alliances, and finally attain sector-related global strategic flexibility.

## **6.2 Macroeconomic Stability**

According to Edward Shapiro, “Macroeconomics deals with the functions of the economy as a whole, including how the economy’s total output of goods and services and its total employment of resources are determined and what causes these totals to fluctuate” (as cited in Vaish, 2002: 31). The government is a major player in providing the enabling environment for macroeconomic stability in a modern society. As such, the government’s macroeconomic policy, according to Sloman and Sutcliffe (1998), aims primarily at achieving the two goals of ensuring that key macroeconomic variables are at acceptable levels, on

the one hand, creating a stable economic environment in which the economy can flourish, that is minimizing fluctuation in economic activities on the other hand. Sloman and Sutcliffe (1998) identified several macroeconomic variables that the government seeks to influence and grouped these under four main headings. These are: economic growth, unemployment, inflation, and balance of payments. This subsection focuses on how the agricultural sector has contributed so far and could possibly still contribute to economic growth, increased employment, and promotion of favorable balance of payments in the Nigerian economy, especially when adapted to the agribusiness model.

A number of empirical studies have been reviewed and discussed in this paper, which have presented far-reaching conclusions and evidences that validate the conceptual model and proposition presented in this paper. In addition, the analysis of time series data regarding the contribution of the agricultural sector to the GDP of Nigeria between 2005 and 2014 also validates the central argument and proposition of the paper. Going forward, these results open another dimension that is pertinent to macroeconomic stability and which also helps to appreciate the prospects that agribusiness portends for the Nigerian economy and society as a whole. Macroeconomic stability here implies a steady state characterized by economic activities that contribute towards the promotion of economic growth and consequently development, reduction of unemployment, or attainment of full employment, achieving favorable balance of payments and ensuring the full utilization and optimal allocation of resources within strategic sectors of an economy.

Nigeria being the most populous country in Africa has two-thirds of its population employed in the agricultural sector or productively engaged in some form of business that relates to the agriculture supply chain. However, this statistic does not translate to high output of the sector, even though in the last decade it has been the largest contributor to the Nigerian GDP. As previously stated, Akpan and Atan (2015) observed that the structure of the agriculture sector is dual in nature, with 95% of the sector being largely labour intensive and 5% being technology driven. This large disparity in itself presents the business case for the timely introduction of an agribusiness model into the sector, with the resultant effect of large and modern farm spin-offs, which employ mechanized farming techniques. This position is supported by the fact that mechanized farming will enhance the cultivation of land, increase output, and improve supply chain efficiency. Consequently, this leads to the full employment of factors critical to increased agricultural production, processing and commercialization of primary agricultural commodities. It must also be said that this full employment of resource factors come with some attendant macroeconomic benefits.

When there is full employment and engagement of resource factors in the agricultural sector through the intervention of agribusiness practices, this will

translate and contribute to economic growth and development *ceteris paribus*. For example, as agricultural output increases, the local aggregate demand for agricultural products, which hitherto have been supplemented with imports from abroad, will reduce. This will help save foreign exchange as less processed agricultural commodities are imported. Such foreign exchange savings could be put to alternative use for development projects. This narrative describes how agribusiness can promote actual economic growth in the short run through variations in the growth of local aggregate demand given the large population of the Nigerian state, which is projected to be over 230 million by the year 2025 and projected to be larger than the population of the USA by 2050 (UN Population Division, 2013).

Exploring the prospects embedded in agribusiness as a predictor of economic growth, and consequently development, will be best understood when the various sources of economic growth are properly highlighted and, in addition to this, when the types of economic growth and the measures of economic growth are clearly stated. Across the extant literature on economic analysis, many sources of economic growth have been identified. Arnold (2005) maintains that two major factors affect economic growth, namely: increase in the quantity of resources and an advance in technology. According to Arnold (2005), “An advance in technology commonly refers to the ability to produce more output with a fixed quantity of resources or the ability to produce the same output with a smaller quantity of resources” (Id.: 40). Sloman and Sutcliffe (1998) identify policies which can cause governments to increase a country’s growth rate. The first category of policies comprises those that stimulate aggregate demand and alternatively aggregate supply. In their view, policies to stimulate aggregate demand ensure that firms will be eager to invest and by so doing increase potential output, and policies aimed at increasing aggregate supply focus on concentrating on measures to increase potential output. Such measures include the encouragement of research and development, innovation and training. The second category of policies are the market-oriented or interventionist policies. These policies advocate that while a free market economic system will indeed open up a conducive environment that encourages growth through private enterprise, research, and development, such environments are still besieged by uncertainty and cyclical fluctuation. As a result, government intervention is needed to reduce the fluctuations and challenges that are characteristic of uncertain and unstable business environments.

McConnell and Brue (2002: 323–324) proposed six main ingredients that promote economic growth. They grouped these ingredients as being supply-related, demand-related, and efficiency-related. The supply factors comprise four ingredients of economic growth that relate to the physical ability of the economy to expand. These are: (1) increases in the quantity and quality of natural resources, (2) increases in the quantity and quality of human resources, (3) increases in

the supply (or stock) of capital goods, and (4) improvements in technology. The fifth ingredient of economic growth in their proposition is the demand factor. According to McConnell and Brue (2002), “To achieve higher production potential created by supply factors, households, businesses, and government must *purchase* the economy’s expanding output of goods and services” (Id.: 323). The sixth ingredient is the efficiency factor. In their view, for an economy to reach its production potential, it must achieve economic efficiency as well as full employment.

Gwartney, Stroup, Sobel, and Macpherson (2003: 374–375) stress that “The process of economic growth is complex. Several factors contribute to growth and they are often interrelated.” To this end, they highlight three factors that reveal important sources of economic growth: (1) investment in physical and human capital, (2) technological advances, and (3) institutions and policies consistent with efficient economic organization. To consolidate their position, they further identified six key institutions and policies that enhance efficiency and growth. These are: (1) secure property rights and political stability, (2) competitive markets, (3) stable money and prices, (4) free trade, (5) open capital markets, and (6) avoidance of high marginal tax rates.

Colander (2001) examined some factors which according to him economists have determined to be the five important sources of economic growth. These are: (1) capital accumulation – investment in productive capacity, (2) available resources, (3) growth-compatible institutions, (4) technological development, and (5) entrepreneurship. Finally, the contribution of Jhingan (2005) in the review of sources of economic growth is very critical. Jhingan presented economic and non-economic factors. The economic factors include: (1) natural resources, (2) capital accumulation, (3) organization, (4) technological progress, (5) division of labor and scale of production, and (6) structural changes. Jhingan believed that “Economic growth is not possible so long as social institutions, political conditions and moral values in a nation do not encourage it” (Jhingan, 2005: 39). These factors, according to him, are non-economic factors that promote economic growth.

An overview of all the factors that promote economic growth so far discussed reveals that some factors appear to be the most cited ones, four in number, as being predictors of economic growth. These are: (1) availability of resources, (2) technological development and progress, (3) capital accumulation (or formation), and (4) strong social institutions and policies. Thus, it can be concluded that these four factors are the most strategic predictors of economic growth. Technological development and capital accumulation had the most occurrences in the literature cited. To these should be added *leadership* and the *national culture* of a country. *Entrepreneurship* has also become a critical factor that promotes economic growth, bringing the total to seven factors.

When reference is made to economic growth, two types of growth are usually discussed. These are “actual growth” and “potential growth”. Actual growth refers to the percentage annual increase in national output, while potential growth is the speed at which the economy could grow. It is the percentage annual increase in the economy’s capacity to produce that is the rate of potential output (Sloman & Sutcliffe, 1998). Economic growth is usually measured in terms of Gross Domestic Product (GDP), and the data on the agricultural sector’s contributions to GDP vis-à-vis three other critical sectors in Nigeria between 2005 and 2014 have been analyzed and presented to investigate and support the proposition in this paper for a transformation of the Nigerian agric sector to an agribusiness model.

Agribusiness is driven by three principal forces, namely: technology, innovation, and capital investments. Apparently, two of these three components have received the highest attention in literature as the most strategic factors that cause a country to experience economic growth and thereby position itself for economic development. This being the case, it can be argued that, given the three key driving forces of agribusiness, that is technology, innovation, and capital investments, and the multiplier effect that these driving forces have on other sectors of the economy, agribusiness can be seen as an economic catalyst that can position Nigeria to be a major player in the global economy in line with its vision for the year 2020. This argument should not be accepted on face value without some reference to examples from countries who by reinvesting surpluses from agriculture became economically advanced in the 20<sup>th</sup> century and who are currently global leaders in agribusiness. Examples of such countries include: USA, Britain, Brazil, China, and Israel, to mention but a few. The foregoing has been a case for the contribution of agriculture to economic growth. This contribution is invaluable and has been described from the viewpoint of how agriculture (a primary sector activity) contributes to the growth of an economy by augmenting the long-run expansion of activities in the secondary and tertiary sectors. This kind of contribution is known as the “market contribution” of agriculture (Kuznet, 1964).

### **6.3 Attraction of Foreign Direct Investment (FDI)**

The discourse on the agriculture and economic growth symbiosis leads to the discussion on the third major prospect presented by agribusiness to the Nigerian economy, that is attraction of Foreign Direct Investment (FDI). One of the strategic factors critical for economic growth is capital formulation. To this end, Jhinghan (2005) maintains that “Agricultural surplus leads to capital formation...” (Id.: 335). While this stance supports Kuznet’s (1964) position in his classical study on the role of agriculture, Kuznet is quick to stress that “One of the crucial problems in modern economic growth is how to extract from the product of agriculture

a surplus for the financing of capital formation necessary for industrial growth without at the same time blighting the growth of agriculture” (Kuznet, 1964, as cited in Winters, de Janvry, Sadoulet, and Stamoulis, 1997). While the benefits and problems associated with agricultural sector surplus appropriation as it pertains to capital accumulation is obvious, it remains a critical sector for generating foreign exchange and consequentially for promoting increased national productivity in Nigeria, as indicated in the analysis of the four sectors that have contributed to Nigeria’s GDP between 2005 and 2014. In support of this view, Salako, Lawrence, Aremu, and Egbekunle (2015) emphasized that:

The most reliable means of earning foreign exchange is the agricultural sector through the exportation of its output. The reason for this is not far-fetched; Agricultural output is a renewable product considering the fertility of the Nigerian farm lands, while the crude oil which we rely so much on is non-renewable. As we continue to fetch it, it is diminishing in supply. Hence, in the opinion of researchers, the ability of this non-renewable resource to sustain... *Nigeria’s* economic growth and development in the long run is doubtful. (Id.: 466)

A quantum of scholarly attempts have been made to examine the impact of FDI on the agricultural sector in Nigeria in comparison to other sectors (Ogbanje et al., 2010; Oloyode, 2014). Such studies have been undertaken in view of the fact that the country has witnessed a great deal of political stability since its transition to democratic rule in 1999, which is a critical factor for attracting FDI. In addition, data show that the agricultural sector has attracted a lot of FDI over the last decade owing to the renewed focus on it as a springboard for economic growth. But the extent to which these investments have been significant in transforming the sector begs the question, especially when considered against the backdrop of the fact that well over 95% of the structure of the agric sector is still largely dominated by traditional or crude forms of farming and cultivation practices (Akpan & Atan, 2015). This contradiction continues to remain apparent despite the data which indicates that the agric sector has contributed the most to the country’s GDP in the last ten years under review. This contradiction, however, does not take the shine away from the fact that agriculture remains a viable pool for attracting genuine FDI into Nigeria.

#### **6.4 Technological Acquisition, Diffusion, and Development**

Agribusiness is a technology-driven business. Baptista (2012) stressed that “Adoption of new technology throughout the agribusiness chain is necessary to meet the higher food and fuel needs of a growing and wealthier population” (Id.: 105). This statement typifies and exemplifies the Nigerian society, where the population is growing faster than the national income. The expected astronomical



growth in Nigeria's population projected for 2050 would be accompanied by an increase in the demand for agricultural products. The present state of the country is one in which, despite the agric sector's significantly large contributory effects to GDP in the last 10 years in Nigeria, agricultural production has had to be complemented by an excessive importation of processed agricultural products and other agro-related commodities. This lag in the sector, besides blaming policy failure and the shift in focus to the oil and gas sector, can be attributed to the dual structure of the sector as previously mentioned. This opens up prospects for disrupting the sector with agrotechnological innovations that can improve the productivity of the sector and also improve the acquisition of new skills, work ethics, and labor efficiency in the sector and ultimately alter and modify the structure of the sector.

If the agric sector in Nigeria is to once again attain its "Cinderella" status from presently being the backwater sector of the Nigerian economy, an agricultural revolution is strategically imperative. And very critical to a successful revolution and consequent transformation of the sector in this regard are technological acquisitions and diffusion across the country. Technological diffusion is an important source of economic growth, particularly because it increases productivity output, promotes efficiency in resource utilization, and improves the marginal productivity of labor.

Agribusiness, therefore, promotes technological developments and requires the acquisition of existing technology to boost output. This will translate into improved economic activities and will enhance the global competitiveness of the agric sector by improving its performance in the global agricultural supply chain. Similarly, it positions indigenous firms to take advantage of the rising prices of food across the globe occasioned by the increasing world population, which is projected to hit 9 billion by the year 2050.

## **7. The Role of Government, Business, and Society in Nigeria's Agribusiness Consolidation**

What interdependent roles should the public sector (federal, state, and local governments in Nigeria), private-sector businesses, and the society play in the consolidation of agribusiness in Nigeria? Addressing this issue is critical if the economic activities in the real sector are to coalesce into national competitiveness and comparative advantage of the Nigerian economy anchored on agric sector transformation. To achieve this objective, gleanings from various perspectives on the functions of government, businesses, and society will be examined in brief, and then an integrating perspective/framework on how their functions would result in contributing to agribusiness consolidation in Nigeria would be

presented. This would ultimately form the basis of a fulcrum of recommendations and strategies pertinent to the main aim of this paper.

For the context of this paper, government is defined as that which comprises federal, state, and local government tiers as well as public-sector institutions and organizations which regulate and moderate the social structure of society. For generic purpose “public sector or government sector” will be adopted to denote this definition. Following Gwartney et al. (2003: 380), “Governments can promote economic progress by establishing an environment that encourages entrepreneurship, investment, skill development, and technological improvements”. This statement underscores a major role that government plays in consolidating economic activities for the general improvement of society’s welfare in all spheres and ramifications.

This role is further reinforced with the performance of certain functions. McConnell and Brue (2002) identified certain economic activities of the public (government) sector in the government–business–society continuum. These are: (1) providing the legal structure, (2) maintaining competition, (3) redistributing income, and (4) reallocating resources. McConnell and Brue’s (2002) position rests on the premises that the government’s core function is to promote the efficient allocation of resources through an effective optimal amount of regulation as it concerns the production of goods and services. According to McConnell and Brue (2002), “The optimal amount of regulation is that at which the marginal benefit (MB) and marginal cost (MC) are equal. Thus, there can be either too little regulation (MB exceeds MC) or too much regulation (MB is less than MC). The task [of the *government*] is deciding on the right amount” (Id.: 79). Sloman and Sutcliffe (1998), commenting on this level of macro-analysis, maintain that the two major objectives of government intervention in the market identified by economists are social efficiency and equity. Thus, if the marginal social benefits (MSB) to society of producing (or consuming) any given good or service exceeds the marginal social costs (MSC) to society, then it is said to be totally efficient to produce (or consume) more. However, where the reverse is the case, then it is socially efficient to produce (or consume) less. As such, social efficiency occurs when the MSB of producing (or consuming) a particular good or service exceeds the MSC. In either of the cases, regulation, as McConnell and Brue (2002) have clearly pointed out, is critical to attaining efficient allocation of resources and consequently social efficiency.

Colander (2001) identified six major roles of government within a market economy. These are: (1) providing a stable set of institutions and rules, (2) promoting effective and workable competition, (3) correcting for externalities, (4) pursuing economic stability and growth, (5) providing public goods, and (6) adjusting for undesired market results. Of these six key roles of government, two are of particular interest, namely: correction of externalities and adjustment for undesired market results. These two roles are interwoven. Market externalities

can be considered as the after-effects (usually in some form of costs) to society or third parties experienced as a result of transactions or productive activities engaged in by other actors in the transaction or environment. According to Colander (2007: 110), “An externality can be positive (in which case society as a whole benefits by the trade between the two parties) or negative (in which case society as a whole is harmed by the trade between two parties)”. In this section, specific focus is on negative externalities. Negative externalities, according to Luxmore and Hull (2010), are “By-products or side effects of a company’s activities, which have negative consequences for entities not directly involved with those activities” (Id.: 20).

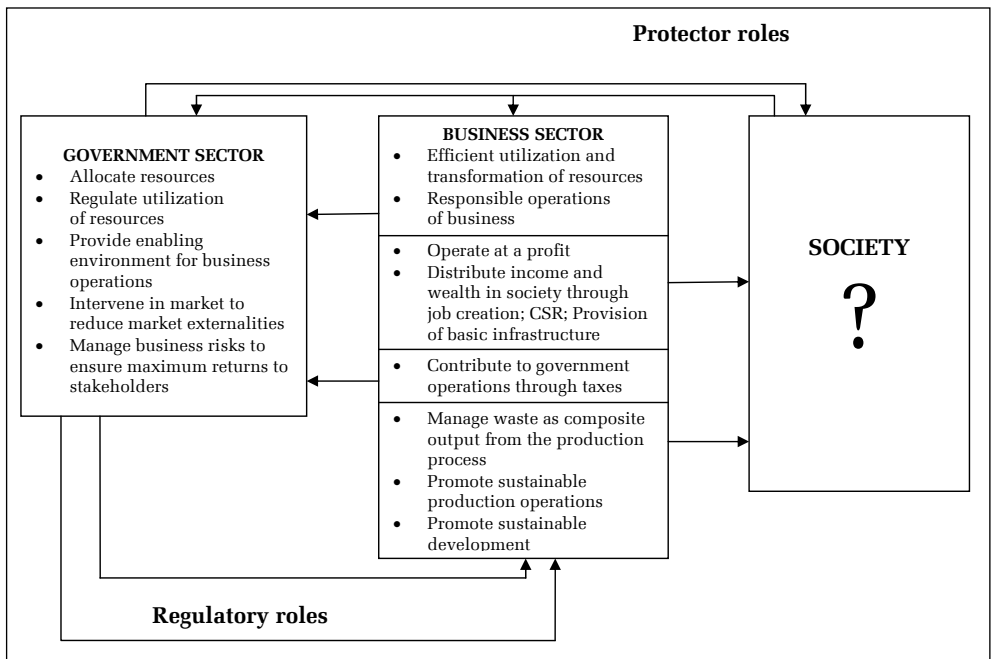
Firms engaged in agribusiness usually have associated to their operations marginal private and implicit external costs, which spill over into the society. These spillover costs are for the most part negative externalities. Examples of negative externalities that should be anticipated with the upsurge of industrial agriculture, that is, agribusiness in Nigeria include: *air pollution, water pollution, destruction of the tropical rainforest for the purpose of clearing massive expanse of land for cultivations, environmental degradation, loss of soil quality, natural habitat restructuring, and loss of employment for labor-intensive small traditional farmers.*

Another externality that has been the focus of discussion in Nigeria is that associated with the perceived health-related side-effects of Genetically Modified Organisms (GMOs) and their related agricultural products. Attempts to introduce this radical innovation by the last political administration attracted a lot of criticisms. However, Luxmore (2005) observes that “In the case of agribusiness and GMOs, many of the negative externalities associated with the resistance are externalities only in potential—they have been imagined, but have not (yet) happened in fact” (Id.: 20). Another spillover cost that is a negative externality which results from industrial agriculture is the negative effects emanating from the use of pesticides on crops. This externality is two-sided. One side is the effect on the environment and the other side are effects on consumers in the long run.

All of the externalities, put together, will account for market failures that characterize large-scale agribusiness, which the Nigerian government must prepare for. It is these market failures and the resultant multiplier effects that justify the rationale for government intervention in agribusiness to ensure its maximum benefits to all stakeholders by reducing negative externalities and in so doing protecting the consumers, market, investors, and most importantly the environment. This brings to the fore the core roles of government that must be performed more efficiently than the role of regulation, that is the role of adjustment for undesired market results and protection of the market, consumers, and investors.

Given the above, it is obvious that business firms play a major role in the proposed agribusiness transformation. The generic term business will be used to refer to firms in this paper. Business may be defined as “The collection of private, commercially oriented (profit-oriented) organizations, ranging in size from one person proprietorships... to corporate giants” (Caroll & Buchholtz, 2006: 5). Business firms are responsible for the efficient conversion and utilization of scarce resources through process innovations and technology, for the collective benefits of government and society.

Figure 2 describes the interdependent roles of government, business, and society for the viability of a fledging Nigeria agribusiness industry.



Source: the authors (2016)

**Figure 2:** Agribusiness Government—Business—Society (GBS) Integrative Model

From the agribusiness Government—Business—Society (GBS) integrative model above, which depicts key roles and relationships of three principle economic actors, that is government, business firms, and society, it can be established that businesses play key social, economic, and fiduciary roles. The multiple arrows display what some of these roles are to both the government and society. The roles in the model are not exhaustive, but they lay down the critical success platform for strategic actions that should be taken to ensure a successful transition to agribusiness in Nigeria. What is(/are) then the role(s) of the social sector in this discourse?

Society has been defined in different ways across multiple spheres and ramifications of disciplines. Within the GBS context, society according to Steiner and Steiner (2006) refers to a network of human relations that includes three interacting elements: ideas, institution, and material things, while Carroll and Buchholtz (2006) define it as “A community, a nation, or broad grouping of people, having common traditions, values, institutions, and collective activities and interests” (Id.: 6). For want of a better explanation, Wu and Davidson (2011) expand the concept with a new nomenclature suitable for discourse: the civil society sector. This would be adopted in the paper. According to Wu and Davidson (2011), the civil society sector comprises advocacy groups and the media. The society is the macro-environment which accommodates the various institutions, systems, and subsystems that enable businesses to pursue their goals and objectives. Jones (1983), citing Bell (1976), and Novak (1982) uphold that “society” is made up of three major subsystems: an economic, a political, and a cultural subsystem, which all interact with each other. To these three should be added the legal subsystem. This legitimizes which interactions are permitted within the social framework and which are not. Basically, therefore, society plays the dynamic and mechanistic role of providing social controls of and for business. Jones (1983) maintains that this notion of social action of business is the central focus of the field of business and society. Novak (1983) defined social control of business as “The means by which society directs business activities to useful ends” (Id.: 560).

From Novak’s (1983) submissions, it can be garnered that society provides the much needed social control mechanisms that keep businesses aligned to ethics, values, sustainable operations, and green-oriented endeavors. This makes it easily appreciable to see the important role that society plays in the GBS relationship through advocacy/interest groups and the media as watchdogs. However, these roles beg the question: *How structurally dependent are the effective outcomes of society’s roles in the GBS interaction?* This accounts for the question mark in *Figure 2*. The aim here is to explore the extent to which the effectiveness of the societal sector is a function of the kind of political (democratic or otherwise) structure, level of economic development, literacy level in the society, rural/urban population ratio, jurisprudence system, etc. This spells a challenge for agribusiness GBS interaction effectiveness in Nigeria, especially considering the fact that the country has only maintained political stability for seventeen years and is only beginning to witness media freedom and other features of the rule of law.

Consequently, in view of the fact that this paper attempts a descriptive approach to amplify and appropriate the GBS relationship abstractions for the purpose of generating applied strategies that would contribute to the transformation of the Nigerian agric sector, too much emphasis would not be placed on theoretical underpinnings. However, it is imperative to identify at least some basic models

that help to substantiate the approach that is being promoted here. Steiner and Steiner (2006) have presented seminal works in the GBS field of study. They discuss four basic models that explain the GBS relationship. These include: the market capitalism model, the dominance model, the countervailing forces model, and the stakeholder model. The position advocated in this paper is an amalgam of the market capitalism and stakeholder models. This position initiates answers to the question: *How can the integration of government, business, and society components be aggregated to ensure that effective business-social control mechanisms are developed and deployed to checkmate the negative externalities that could possibly result from the upsurge of agribusiness in Nigeria, especially with respect to health, labor market, economic and environmentally-related spillovers?* The issue raised in this question is critical if considered against the backdrop of the reality that the Nigerian society is mired with political, economic, moral, and social inefficiencies. The next section highlights strategies that can be considered critical and useful in effectively positioning the emerging agribusiness industry as an economic replacement of the oil and gas industry in Nigeria.

## **8. Strategies for Effective Agribusiness Operations in Nigeria**

One major argument that informed the proposition in the paper is that a strategic management and market-driven approach to agribusiness would enhance the advantages to be gained by Nigeria in the global food market. Strategic management and the strategies that emanate from its process and practice are useful in industries characterized by high ambiguity, volatility, turbulence, and uncertainty. For the most part, these characteristics are resultant effects of a competitive and technologically driven global business environment. This being the case, it should follow that it is countries with the most strategic and proactive approach to trade and economic management that will continue to have international comparative and competitive advantage over other countries. The market-driven approach, on the other hand, emphasizes market-orientation as a dominant logic for ensuring the successful outcome of strategies that are applied to mitigate against the challenges posed by impending threats and to take advantage of emerging opportunities. The terms market-oriented and market-driven firms will be used interchangeably.

According to Cravens and Piercy (2003), “A market-oriented organization continuously gathers information about customers, competitors and markets; views that information from a total business perspective; decides how to deliver superior customer value; and takes actions to provide value to customers” (Id.: 6).

Slater and Narver (1994, as cited in Kirca, Jayachandran, and Bearden, 2005: 4) maintained that “Market orientation enhances customer satisfaction and loyalty because market-oriented firms are well positioned to anticipate customer needs and to offer goods and services to satisfy those needs”. Kirca et al. (2005) further identified four major consequences of market orientation, which are: organizational performance, customer consequences, innovation consequences, and employee consequences. Their research confirmed that market orientation had a positive and significant effect on innovativeness, which in turn had positive significant effects on customer loyalty, both of which have positive significant effects on organizational performance. Their results, were, however, industry-specific (i.e. related to the manufacturing industry) and very much culture dependent. One important link Kirca et al. (2005) empirically established as being significant in their research is the link between market orientation and performance. This link according to Ellis (2006) was originally formalized by the twin papers of Narver and Slater (1990) and Kohli and Jaworski (1990).

The Nigerian business environment and, indeed, the global market is quite a turbulent one. To this end, Day (1999) stresses that “Turbulent markets are simply too unpredictable and efforts to codify everything usually result in rigidity and myopia” (Id.: 21). Owing to this environmental feature, it is important, as is the case across global markets, to note that environmental turbulence and market shakeouts create uncertainties. However, they also provide an ambience of opportunities, as has been postulated in this paper, with respect to agribusiness development in Nigeria.

To deal with market turbulence and its cognate, market shakeouts, Day (1999) recommends three ingredients which are necessary for a business to successfully steer the strategic course through market turbulence. These are: strategic vision, market orientation, and a robust process for formulating and choosing the best strategy. These ingredients Day (1999) maintains would help a firm become proactive in shaping events and competitive behavior to its advantage. Market orientation is therefore critical in producing a market-driven strategy, for creating value, and ultimately for sustaining competitive advantage. This emphasis on delivering superior value to the customer and on quality is good for the emerging agribusiness industry in Nigeria so as to guard against some of the negative externalities associated with agribusiness.

By focusing on the strategic management approach of planning, implementation, and regular evaluation of strategic intent of regulators, the government and firms in the emerging agribusiness industry in Nigeria, the supply-side economics of the industry can be better explored for superior performance. On the other hand, applying the strategic marketing (market orientation) approach to the demand-side economics of the agribusiness industry will ensure that maximum benefits for all stakeholders can be attained. A combination of both approaches, as being proposed here, would lead to enhanced value and supply chain performance in

the industry, overall market competitiveness at both local and global levels, and finally sustainable macroeconomic benefits in the long run.

In response to the first question posed in this paper for the purpose of building an analytical framework, below are six strategies, suggested for the promotion of enhancing social and operational efficiencies in the agric sector in preparation for mass industrial take-off.

### **i) Agric Finance Strategy**

Agribusiness is capital intensive as such – a proper institutional framework and strategy should be put in place which would guarantee that present and potential investor-farmers have unfettered access to securing credit facilities on a long-term basis, without the usual administrative bottlenecks and business-suffocating interest rates that accompany such credit facilities. Some dimensions to this strategy include: having revolving credit schemes; dedicated agric development financial institutions; encouraging special-purpose entities and institutions to regulate agribusiness finance and investments, just to mention a few. All of these should be directed towards the development of financial instruments, innovative products and services that would be peculiarly efficient in meeting the special needs of the Nigerian agricultural system.

### **ii) Supply Chain Strategy**

The success of agribusiness at the macro-level in a country depends to a great extent on well-developed marketing systems, institutions, and boards, which will ensure that all activities and operations related to ensuring the performance of a well-articulated agricultural supply chain are put in place, performed excellently, and well managed at a profit to all supply chain actors/participants. Such a strategy will enhance supply chain efficiency, agility, flexibility, quality assurance, cost effectiveness, and product durability.

### **iii) Cooperative Marketing Strategy**

Marketing and distribution cooperatives are key components in sustaining agribusiness, especially at its emerging/developmental stage in a country such as present-day Nigeria. This is especially because cooperatives, in whatever form, play strategic roles in financial aggregation, especially in the area of credit disbursement and management. In addition, they serve as supply chain intermediaries, which ensure the success of vertical integration irrespective of whatever type of business model is employed by stakeholder firms. The challenge remains that most cooperatives are plagued with short-term management and



corporate governance issues. Therefore, to weigh against these, a well thought-out strategy must be evolved to ensure the perpetuity of agricultural cooperatives and an effective monitoring of their functions and intervention in agribusiness chains and industry all over Nigeria.

#### **iv) Agribusiness Education and Management Strategies**

Agribusiness has become an increasingly global phenomenon especially amidst the threat of global food shortages, resource scarcity, famine, and changing climatic conditions. These incidences necessitate that the requisite education and management-related structure, strategy, and governance mechanisms be put in place to enhance and aggrandize the collective understanding and appreciation of the dynamics that characterize the global agribusiness environment on the part of Nigerian academics, agric researchers, agric economists, investors, regulators, and potential pool of students. Thus, a well-defined strategy aimed at improving agribusiness education and management will contribute to improved specialized agricultural production, post-harvest management geared towards commercial processing for export, overall product positioning and marketing in the global economy, and better supply chain performance and value delivery. Last but not the least, such a strategy will also contribute to the easy adaptations of already existing tools and mechanisms that are critical to boosting system and operational efficiency in the agribusiness set up in Nigeria.

#### **v) FDI Inflow Strategy**

The federal government of Nigeria in conjunction with indigenous agribusiness firms, academics, and consultants must develop a well-articulated strategy for attracting “genuine” Foreign Direct Investments (FDI) inflow into Nigeria, which will actually contribute to agribusiness industry growth and consequently to the generation of significant economic activities that reflect positively on macroeconomic indicators of job creation, increased exports, increased GDP, and a well-diversified economy. To aid this strategy, the government must provide at all levels a sustainable enabling environment for agribusiness operations, a flexible tax regime, appropriate governance and control mechanisms to checkmate inter-firm- and intra-firm-generated negative externalities, among other things.

#### **vi) Adaptation of Quality Management Systems**

The negative externalities that emanate from the operations of agribusiness firms usually have a demand and supply side dimension. However, most pertinent and equally petrifying are issues related to produce/product/service quality. The

quality issue has become a major barrier to global agribusiness trade, production, and logistics-related efficiency. A quality strategy and associated certifications to enhance food safety and management must be adapted and adopted by regulatory authorities and other stakeholders to reduce the risks associated with produce/product/service quality in the agric sector. Some of the global quality assurance and management tools/certifications and techniques that would prove useful in this direction are: ISO 9000, ISO 14000, ISO 22000, Hazard Analysis and Critical Control Points (HACCP), and a Food Safety Management System (FSMS) certification known as FSSC 22000.

## **9. Policy Recommendations for Agribusiness System Efficiency – Year 2020 in View**

This paper reveals a key recommendation which suggests that all policies to be recommended as emanating from this paper are geared towards establishing a medium-term program called *Structural Adjustments for Agribusiness Promotion* (SAFAP) in Nigeria. In view of this program, the following policy recommendations are made.

### **i) Land-Use Reforms**

Submissions from various quarters have agreed that the present land-use and tenure system being operated in modern-day Nigeria poses a major impediment to agricultural development, which consequently hampers progression towards industrial agriculture. Therefore, it is imperative that a land-use reform that will guarantee minimal challenges to land ownership, tenure, security, and development rights be considered as a prerequisite for facilitating the agglomeration of land in Nigeria and for attracting large-scale investments in the agric sector. There is an urgent need to review the 1978 Land-Use Act enacted by the then military government of General Olusegun Obasanjo.

### **ii) Sustainability Policies**

It has been revealed that incorporating sustainability policies in the strategy of firms contributes to more competitiveness and returns on investments as well as to increasing other financial and strategic performance-scorecard indicators. Government, business, and society sectors should thereby make it mandatory for agribusiness firms that aspire to and presently carry on large-scale operations in Nigeria to be guided by some sustainability policy blueprint. This will demand

that such firms take the responsibility for environmental and ecological care: the core foundation of their operations. This will help to minimize some of the spillover effects that are associated with agribusiness expansion.

### **iii) Trade Policies**

One of the major challenges that herald the diversification of the Nigerian economy from concentration on oil and gas to agriculture and agro-related businesses is that of providing an enabling environment for the promotion of export-led strategic trade policies, especially as it pertains to encouraging agricultural trade. These should include policies that affect import tariffs, prevent dumping, encourage local industries to process agricultural produce for export, and policies that foster international co-operation between Nigerian agribusiness firms and regional or global counterparts.

### **iv) Agribusiness Educational Policy**

Agribusiness and the export-led economics that surrounds it will, of necessity, need to manage the variance that exists between market demand and ability to supply agricultural and agro-allied produce on a global scale. To bridge this gap in Nigeria, it is suggested that a strategic marketing-management-based syllabus is developed to make agribusiness management and agric economics education more robust in Nigeria. This will mitigate against the challenges of achieving market demand and supply equilibrium at least from the management point of view. In addition, a more articulated agribusiness management and agric economics curriculum will help improve the training and development of manpower and consequently improve employment generation mechanisms in the agric sector.

### **v) Farmers' Credit Scheme**

The capital intensive nature of agribusiness will require financial policies that will be supported by legal and regulatory frameworks, which will enable farmers and agro-allied businessmen and -women to have easy access to credit facilities for the purpose of funding produce export, produce processing, large-scale farming, working capital, and other financial obligations and contingencies.

### **vi) Agricultural Subsidies and Incentives**

Subsidies and incentives are pivotal in sustaining agribusiness cycles especially at the developmental stage. However, care must be taken to ensure that the subsidy corruption regime, which has pervaded the Nigerian oil and gas downstream

sector, does not repeat itself in the emerging agribusiness industry. While subsidies will promote export and local consumption of Nigerian processed agricultural produce, incentives will further encourage farmers and prospecting investors to plow resources into the industry.

### **vii) Protectionism and Anticompetitive Policies**

The three tiers of government in Nigeria, agro-allied-related businesses, and advocacy groups must design legal, policy, and regulatory frameworks that will protect Nigerian agro-allied businesses from foreign competition and pressures coming from globally established agribusiness firms seeking to invest in the agric sector. Some legislations that can evolve such protectionist strategies and which will also ensure that no anti-competitive behavior is indulged by agribusiness firms within Nigeria are “competing-interest legislations” and “anti-trust legislations”.

### **viii) Internal Migration Control**

Government and businesses should devote resources to developing infrastructure as well as other basic necessities and amenities that would help stem the tide of rural–urban migration. This is especially because most farmlands are situated in rural Nigeria, and the manpower needed to supplement mechanized agriculture seems to be depleting as more and more skilled and unskilled persons within the working-age bracket look to migrate to urban centers for greener pastures. Policies to discourage rural–urban migration should be enacted with fringe benefits and incentives to encourage young people to go into farming.

### **ix) Asset Injection Model**

Targeted asset-injection-related policies and mechanisms to encourage mainly *four* strategic activities, which are critical for agribusiness success in Nigeria, must be formulated and regularly reviewed to ensure consistency and continuity. These activities are: attraction of foreign direct investment, promotion and funding of research and development, promotion of innovation in the agric sector, and finally enabling support systems to perpetuate vertical integration in the sector. These activities are usually better calibrated and augmented through policy-driven, policy-guarded, and policy-assured “asset injection”. This model is exemplary of that adopted by countries such as China, Singapore, Malaysia, South Korea, and India. The model has transformed these nations from third-world economies to rank shoulder to shoulder with developed countries.

## **x) Institutional Framework for Sustainable Investment**

Agribusiness is structured on a global industrial scale, and as a result it is usually characterized by the attraction of a surfeit of funds. The onus, therefore, lays on the present and successive governments to regulate the industry and other associated businesses, especially in the financial services industry in such a way that will guarantee such protection of funds invested in agribusiness nation-wide. Such regulation and protection, as guarded and guided by an institutional framework, will also ensure that all participants in the agribusiness value and supply chain get to achieve above average returns on their investments and deployments of resources.

## **xi) Agricultural Insurance**

The agribusiness industry is one that is particularly characterized with high risk. This owes to the fact that, on the one hand, nature and the environment could generate some unforeseeable externalities, which could lead to loss of farmlands, crops and vegetation, and poor harvest. On the other hand, supply-chain-related risks can also contribute to low return on investment. To this end, the Nigerian Agricultural Insurance Corporation (NAIC) must be more empowered by law, policy, and capitalization to help weigh against the risk peculiar to agribusiness supply chains in Nigeria. Similarly, they must mitigate risks, which also prevent the attraction of more investments into the agric sector and consequently agribusiness. Farmers across all scales (small and large) must be able to have equal access to agric insurance. This would in turn serve as an incentive to encourage continuous farming engagement.

## **xii) Corporate Governance Framework**

Having considered eleven areas where policy frameworks are needed to promote and entrench agribusiness in Nigeria, it is adequate to mention that the capstone policy to ensure the successful implementation of other policies and programs, which will at the same time guarantee returns on agric-fund investments at the firm level, is *corporate governance*. It is, therefore, suggested that a code of corporate governance be developed to guide the operations of large-scale farmers, board of directors of agribusiness firms as well as regulators in the agribusiness industry. This will ensure to a great extent that all stakeholders' interests are provided for and protected.

The above highlighted recommendations are not exhaustive. However, suffice it to mention that these policy recommendations are a response to the second

question posed in this paper in the build-up to the analytical framework of this paper.

## 10. Conclusions

The strategies and recommendations suggested in this paper are an attempt to create a blueprint that encompasses the roles of government, business, and societal groups in promoting economic development in Nigeria as an emerging market economy. However, the fact remains that in the Nigerian case the government should bear most of the burden and take the lead in tackling the challenges of arrested development not just in the agric sector but in all critical economic sectors. Thus, to transform the Nigerian agric sector into a flourishing agribusiness industry, with the attendant economic benefits of resource utilization, job creation, and economic growth, the Nigerian government – in addition to carrying along business firms and societal stakeholder groups – must create a legal, sound fiscal, regulatory, volunteering, and protectionist environment to ensure the efficient operations of markets and the effective running of institutions. The government must also escalate its commitment and deployment of resources to the development of infrastructure, provision of basic amenities, other public goods and services, especially in rural areas. Finally, this paper concludes with empirical evidence that agriculture can once again become the mainstay of the Nigerian economy if and only if concerted efforts are made to transform the sector into an agribusiness model. It also argued that all the recommendations made in this paper can be best implemented with the increase in government expenditure deliberately aimed at investing in the expansion of agribusiness management and education, emerging opportunities, and human capital development. Similarly, such expenditure should also be directed towards technological acquisition and development that enhance agricultural output as well as towards funding of agric-related R & D programs which encourage and promote innovation. Additionally, the agribusiness emphasis will also have far-reaching social implications in alleviating poverty, reducing crime rates, and stemming rural–urban migration.

## References

- Abayomi, O. (1997). The agricultural sector in Nigeria. The way forward. *CBN Bullion* 21: 14–25.
- Ahungwa, G. T.; Haruna, U.; Abdusalam, R. Y. (2014). Trend analysis of the contribution of agriculture to the Gross Domestic Product of Nigeria (1960–2012). *IOSR Journal of Agriculture and Veterinary Science* 7(1): 50–55.

- Akpan, U. F.; Atan, J. A. (2015). The effect of globalization on selected sectors of the Nigerian economy: agriculture, manufacturing and international trade. *British Journal of Economics, Management and Trade* 8(2): 144–156.
- Arnold, R. A. (2005). *Microeconomics* (7<sup>th</sup> ed.). Ohio: South-Western.
- Bairwa, S. L.; Kalia, A.; Meena, L. K.; Kushwaha, S. (2004). Agribusiness management education: a review on employment opportunities. *International Journal of Scientific and Research Publications* 4(2): 1–4.
- Baptista, R. D. (2012). Technological transition and the new skills required by the agribusiness sector. *International Food and Agribusiness Management Review* 15(Special Issue A).
- Bell, D. (1976). *The cultural contradictions of capitalism*. New York: Basic Books.
- Bell, D. E.; Goldberg, R. A.; Ning, F. G.; Weisser, A. (2008). Agribusiness. In: *The Centennial Global Summit*. Harvard Business School.
- Boehlje, M. (1999). Structural changes in agricultural industries: how do we measure and analyze them? *American Journal of Agricultural Economics* 81: 461–472.
- Carroll, A. B.; Buchholtz, A. K. (2006). *Business and society* (6<sup>th</sup> ed.). Ohio: Thomson South-Western.
- Central Intelligence Agency (2014). *World Factbook*. Retrieved: February 1, 2015 from: <https://www.cia.gov/library/publications/download/download-2014>.
- Chigbu, U. E. (2015). The case of agriculture as the only savior to Nigeria's dying economy. Retrieved: October 20, from: [http:// www.gamji.com/article4000/NEWS4400.htm](http://www.gamji.com/article4000/NEWS4400.htm).
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2<sup>nd</sup> ed.). Hillsdale, NJ: Erlbaum.
- Colander, D. C. (2001). *Economics* (4<sup>th</sup> ed.). New York: McGraw-Hill Irwin.
- Cook, M. L. (1992). Agribusiness in a global economy: Challenges of an evolving profession. *Southern Journal of Agricultural Economics*, July 11–16.
- Cook, M. L.; Chaddad, F. R. (2000). Agroindustrialization of the global food economy: bridging development economics and agribusiness research. *Agricultural Economics* 23: 207–218.
- Cravens, D. W.; Piercy, N. F. (2003). *Strategic marketing* (7<sup>th</sup> ed.). New York: McGraw-Hill Irwin.
- Davis, J. H.; Goldberg, R. (1957). *A concept of agribusiness*. Division of Research, Graduate School of Business Administration, Harvard University, Cambridge, Massachusetts.
- Day, G. S. (1999). *Market driven strategy: processes for creating value*. New York: Free Press.
- Ekerete, P. (2000). Assessment of agricultural contributions to total export marketing in Nigeria. *International Journal of Economic and Development Issues* 1(2).

- Epko, A. H.; Umoh, O. J. (2003). Overview of the Nigerian economic growth and development. Retrieved: February 15, 2015, from: <http://www.onlinenigeria.com/economics/>.
- Ellis, P. D. (2006). Market orientation and performance: a meta-analysis and cross-national comparisons. *Journal of Management Studies* 43(5): 1089–1107.
- Fabayo, J. A. (2003). Foreign direct investment and manufacturing industries in Nigeria: performance, prospects, and problems. In: O. J. Nnanna.; C. M. Okafor.; F. O. Odoko (eds.), *Foreign private investments in Nigeria*. Proceedings of the Central Bank of Nigeria 12<sup>th</sup> Annual Conference of the Regional Research Units.
- Gbaiye, O. G.; Ogundipe, A.; Osabuohien, E.; Olugbire, O. O.; Adeniran, O. A.; Bolaji-Olatunji, K. A.; Awodele, O. D.; Aduraola, O. (2013). Agricultural exports and economic growth in Nigeria (1980–2010). *Journal of Economics and Sustainable Development* 2(16): 1–4.
- Goldberg, R. A. (1991). The global food system—The role of cooperatives. Paper presented at the Fourth International Symposium of Cooperative Managers, Carmel, California.
- (1999). The business of agriceuticals. *Nature Biotechnology* 17: 5–6.
- Gwartney, J. D.; Stroup, R. L.; Sobel, R. S.; Macpherson, D. A. (2003). *Economics: Private and public choice* (10<sup>th</sup> ed.). Ohio: South-Western.
- Harbinson, F.; Myers, C. A. (1959). *Management in the industrial world: an international analysis*. New York: McGraw-Hill.
- Itodo, I. D.; Apeh, S.; Adeshina, S. (2012). Government expenditure on agriculture and agricultural output in Nigeria (1975–2010). *Journal of Agriculture and Veterinary Sciences* 4: 7–22.
- Jhingan, M. L. (1975). *The economics of development planning* (38<sup>th</sup> ed.). Delhi: Vrinda Publications.
- Jones, T. M. (1983). An integrating framework for research in business and society: a step toward the elusive paradigm. *The Academy of Management Review* 8(4): 559–564.
- Johnson, B. F. (1966). Agricultural and structural transformation in developing countries: a survey of research. *Journal of Economic Literature* 8(2).
- King, R. P.; Boehlje, M.; Cook, M. L.; Sonka, S. T. (2010). Agribusiness economics and management. *American Journal of Agric Economics* 92(2): 554–570.
- Kirca, A. H., Jayachandran, S., Bearden, W. O. (2005). Market orientation: a meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing* 69: 24–41.
- Kohli, A. K.; Jaworski, B. (1990). Market orientation: the construct, research propositions, and managerial implications. *Journal of Marketing* 54: 1–18.
- Kothe, E.; Garly, A.; Gestrin, M. (2014). FDI in figures: International investment stumbles into 2014 after ending 2013 flat. Retrieved: June 15, 2015, from: <http://www.oecd.org/investment/statistics.htm>.



- Kuznet, S. (1961). Economic growth and the contribution of agriculture. In: F. Carl.; W. Lawrence (eds.), *Agriculture in economic development*. Bombay: Vora and Co.
- (1964). Economic growth and the contribution of agriculture: Notes of measurement. In: C. Eicher.; L. Wills (eds.), *Agriculture in economic development*. New York: McGraw-Hill.
- Lawal, A. A. (1997). The economy and the state from pre-colonial times to the present. In: A. Osuntokun.; A. Olukoju (eds.), *Nigerian peoples and culture*. Ibadan: Davidson.
- Lazzarini, S. G.; Chaddad, F. R.; Cook, M. L. (2001). Integrating supply chain and network analyses: the study of netchains. *Journal of Chain and Network Science*, 1(1): 7–22.
- Luxmore, S. R. (2005). Innovation and varying market acceptance: biotechnology in agribusiness. *Journal of International Business Strategy* 1(1): 16–27.
- Luxmore, S. R.; Hull, C. E. (2010). Externalities and the six facets model of technology management: genetically modified organisms in agribusiness. *International Journal of Innovation and Technology Management* 7(1): 19–36.
- Mody, A. (1981). Financing of modern economic growth—the historical role of agricultural resources. *Centre for Development Studies*. Working Paper 121. Trivadium II.
- McConnell, C. R.; Brue, S. L. (2002). *Economics: principles, problems and policies* (15<sup>th</sup> ed.). New York: McGraw-Hill Irwin.
- McEachern, W. A. (2006). *Microeconomics: A contemporary introduction* (7<sup>th</sup> ed.). Ohio: South-Western.
- National Bureau of Statistics. (2014). *Nigerian Gross Domestic Report: quarter four*. Retrieved: June 16, 2015, from: <http://www.nigerianstat.gov.ng/>.
- (2015). *Nigerian Gross Domestic Report: quarter one*. Retrieved: June 16, 2015, from: <http://www.nigerianstat.gov.ng/>.
- Ng, D.; Siebert, J. W. (2009). Toward better defining the field of agribusiness. *International Food and Agribusiness Management Review* 12(4): 123–142.
- Narver, J. C.; Slater, S. F. (1990). The effect of market orientation on business profitability. *Journal of Marketing* 54(4): 20–35.
- Novak, M. (1982). *The spirit of democratic capitalism*. New York: Simon & Schuster.
- Obansa, S. A. J.; Madueke, I. M. (2013). Agriculture financing and economic growth in Nigeria. *European Scientific Journal* 9(1): 168–204.
- Ogbanje, E. C.; Okwu, O. J.; Saror, S. F. (2010). An analysis of foreign direct investment in Nigeria: the fate of Nigeria's agricultural sector. *Production Agriculture and Technology* 6(2): 15–25.

- Ogen, O. (2003). Patterns of economic growth and development in Nigeria since 1960. In: S. O. Arifalo.; G. Ajayi (eds.), *Essays in Nigerian contemporary history*. Lagos: First Academic Publishers.
- Olagbaju, J.; Falola, T. (1996). Post independence economic changes and development in West Africa. In: G. O. Ogunyemi.; E. K. Faluyi (eds.), *An economic history of West Africa since 1750*. Ibadan: Rex Charles.
- Oloyede, B. B. (2014). Impact of foreign direct investment on agricultural sector and development in Nigeria (1981–2012). *Kuwait Journal of Arabian Journal of Business and Management Review* 3(12): 14–24.
- Omole, A. (1985). *Nigeria: solutions to our megacrisis*. Nigeria: McQuick Press.
- Raj, F., Mukherjee, S.; Mukherjee, M.; Ghose, A.; Nag, R. N. (2007). *Contemporary development economics: from Adam Smith to Amartya Sen* (2<sup>nd</sup> ed.). Kolkata: New Central Book Agency.
- Reynold, L. G. (1975). *Agriculture in development theory*. Yale: Yale University Press.
- Rostow, W.W. (1960). *The stages of economic growth: a non-communist manifesto*. Cambridge: Cambridge University Press.
- Salako, M. A.; Lawrence, A.; Aremu, Y. S.; Egbekunle, S. O. (2015). Agriculture, economic growth and development nexus: VAR Variance decomposition evidence from Nigeria. *International Journal of Economic, Commerce and Management* 3(6): 460–478.
- Slater, S. F.; Narver, J. C. (1994). Market orientation, customer value and superior performance. *Business Horizons* 37(2): 22–28.
- Sloman, J.; Suttcliffe, M. (1998). *Economics for business*. England: Pearson Education.
- Sonka, S. T.; Hudson, M. A. (1989). Why agribusiness anyway? *Agribusiness, an International Journal* 5(4): 305–314.
- Steiner, G. A.; Steiner, J. F. (2006). *Business, government and society: a managerial perspective* (11<sup>th</sup> ed.). New York: McGraw-Hill Irwin.
- Suleiman, G. P.; Aminu, U. (2010). Analysis of the contributions of the three key sectors (agriculture, petroleum and manufacturing) of the Nigerian economy. *Journal of Management Studies* 3. Faculty of Management Sciences, Usman Danfodio University, Sokoto.
- Umaru, A.; Zubairu, A. A. (2012). An empirical study of the contribution of agriculture and the petroleum sector to the growth and development of the Nigerian economy from 1960 to 2010. *International Journal of Social Science and Education* 2(4): 758–769.
- Vaish, M. C. (2002). *Macroeconomics theory* (12<sup>th</sup> ed.). New Delhi: Vikas Publishing.
- Winters, P.; Janvry, A.; Saoulet, E.; Stamoulis, K. (1997). *The role of agriculture in economic development: visible and invisible surplus*. Working paper 814.

University of California at Berkeley, USA. Department of Agricultural Economics and Resource Economics. Division of Agriculture and Natural Resources.

Wu, J.; Davidson, D. K. (2011). The business–government–society relationship: a comparison between China and the U.S. *Journal of Management Development* 30(1): 112–125.





# Counterproductive Work Behaviors: a Socio-Demographic Characteristic-Based Study among Employees in the Nigerian Maritime Sector

Ignatius Ikechukwu UCHE,<sup>1\*</sup> Olusoji GEORGE,<sup>2</sup>  
Wuraola ABIOLA<sup>3</sup>

<sup>1</sup> Department of Business Administration, University of Lagos, Lagos, Nigeria

\*Corresponding author: e-mail: godnear2000@yahoo.com

Telephone: +234-803-3032909

<sup>2</sup> Department of Business Administration, University of Lagos, Lagos, Nigeria

E-mail: golusoji@unilag.edu.ng

<sup>3</sup> Department of Business Administration, University of Lagos, Lagos, Nigeria

E-mail: wura\_abiola@mtransformation.com

**Abstract.** The prevalence of counterproductive work behavior (CWB) does not only differ across industries but also varies significantly according to socio-demographic characteristics. This study examines CWB and socio-demographic characteristics among selected employees in the Nigerian maritime industry. Causal research design was adopted to survey 1,000 employees selected through multistage sampling approach in three selected parastatals (Nigerian Ports Authority, Nigerian Maritime Administration and Safety Agency, and Nigerian Shippers Council). The data obtained were analyzed with ANOVA and t-test. Based on the analysis carried out, CWB was found to be significantly related to gender, age, marital status, employee cadre, and income, while employees' level of educational attainment is not significantly related to CWB. Based on the abovementioned findings, the study concludes that the level of education is not significantly connected to the employees' propensity towards CWB, while other socio-demographic variables are strongly associated to CWB in the workplace. The study recommends that management should develop a mechanism for identifying and selecting their potential employees as a guide against poor organizational fit of employees and that of the organization. Likewise, effort should be intensified to develop and improve organizational culture that will propel citizenship behavior in the workplace.

**Keywords:** demographic characteristics, counterproductive work behaviors, workplace, employee, organizational fits, organizational culture

**JEL Classifications:** M0, L32

## **1.1 Background to the Study**

There is a growing concern among organizational researchers and practitioners on the subject matter of counterproductive work behaviors (CWBs). Counterproductive behavior, often termed deviant behavior, at workplace has appeared as a foremost issue for academics as well as business executives in organizations due to its substantial cost and disrupting tendency. Thus, every business strives to limit the impacts and prevalence of these harmful behaviors (Penny & Spector, 2005; Yang & Diefendorff, 2009). According to Spector and Fox (2005), CWBs vary from common destructive actions – since they are not accidental and are done purposively – to causing damage through deliberate actions. Business organizations represent settings where multiplicities of different behaviors are articulated, with varying degrees of consequence to the individuals as well as the entire organization (Pelin & Funda, 2013). However, in the contemporary business world, where firms continue to struggle to endure or acquire sustainable competitive advantage, it is vital for companies to seek a thorough understanding of the issues that influence employee-oriented work outcomes (Lasisi, Okuneye, and Shodiya, 2014).

As a result, employee behavior in the workplace in terms of what they say and do has emerged as a major concern in organizations (Hiriyappa, 2008). Essentially, these behaviors can be categorized into those that benefit the organization and those that are detrimental to its success (Spector & Fox, 2005). These damaging or dysfunctional behaviors have been considered and labeled with different terminologies by different scholars. For instance, anger (Neuman & Baron, 1997), workplace violence (Barling, Dupre, and Kelloway, 2009), revenge (Skarlicki & Folger, 1997), intimidation (Hoel, Rayner, and Cooper, 1999), emotional vindictiveness (Keashly, 1998), bottleneck (Zapf & Einarsen, 2005), stealing (Greenberg, 1990), sabotage (Ambrose, Seabright, and Schminke, 2002), rudeness (Andersson & Pearson, 1999), or dispute (Kelloway, 2010) among others. A critical evaluation of the above labels reveals that all forms of deviant behavior have harmful effects; hence, they are termed counterproductive work behaviors (CWBs). Counterproductive work behaviors can be defined as behaviors that contradict and inhibit the attainment of organizations' objectives (Spector, Fox, Penney, Bruursema, Goh, and Kessler, 2006).

Apart from personality traits (such as narcissism, agreeableness, negative emotions, etc.) that propel deviant behaviors, CWB can also result from vague job description, job insecurity, poor motivation, poor organizational control, injustice, poor career opportunities, stress, and wrong performance appraisal system among others (Shamsudin, Subramaniam, and Ibrahim, 2011; Aftab & Javed, 2012; Fatima, Atif, Saqib, and Haider, 2012). Likewise, socio-demographic characteristics, such as age, gender, marital status, income, and level of education, are significantly connected to the tendency to engage in CWBs (Paul-Titus, 2009).

CWBs occur either at i) interpersonal level or ii) organizational level; CWBs at interpersonal level are directed at individuals/employees within the organization – i.e. violence, verbal abuse and gossip, assault, harassment, etc. (Spector & Fox, 2005). CWBs at the organizational level relate to deviant behaviors, such as calling in sick when one is not, withdrawal efforts, long hours of break, cyberloafing, misuse/damage of the employer's assets, stealing, sabotage, etc., which affect the organization (Chang & Smithikrai, 2010).

Either at the individual or organizational level, the costs of CWB are very damaging to the organization in terms of declining productivity, greater maintenance costs due to vanished or destroyed property, psychological costs, and poor corporate image (Vigoda, 2002; Aquino, Galperin, and Bennett, 2004). According to Dineen and Lewicki (2006), over \$50 billion is estimated annually as the costs of fraud and theft committed by employees.

The Nigerian maritime sector accounts for a significant share of the output of service industry, and the sector is absolutely vital to the socio-economic growth and development of Nigeria. It is the foremost mode for internal trade facilitations, and, like the rest of the countries in the world, Nigeria relies on its sea ports as a major source of revenue (Nagle, 2009). In the maritime sector, CWBs manifest in such acts as theft, fraud, falsification of documents, underdeclaration of goods with insider connivance, espionage, pilferage, diversion of imported goods, vandalism, sabotage, and poor service quality, among others, which are witnessed on a daily basis.

The outline for discussion will include but is not limited to the following: background to the study, statement of the problem, theoretical and literature review, research methodology, results and discussion, conclusions, implications of the study, and recommendations for further studies.

## **1.2 Statement of the Problem**

While some employees show serious concern for and make meaningful contributions to their job by performing beyond the call of their responsibilities set in their jobs, others choose to not exhibit such appropriate work behaviors, mostly when such behavior does not appeal to any direct or indirect value (Pelín & Funda, 2013). This scenario is perhaps responsible for the decline in performance and service delivery in the public sector in general and in the maritime sector in particular. Recently, the indications of imminent managerial failure have become obvious going by the revelation of the level of fraud in various government establishments in Nigeria and poor guilt proneness displayed by the culprits. This is evident from the frequency of reports in the newspapers and other media regarding cases involving dishonesty, poor job attitude, fraud, or embezzlement, to mention but a few. Ironically, it has become a norm for public officers to request or expect

some kind of inducement (popularly called gratification or tips) to do a job they have originally been employed to do. CWBs are like a windstorm, which if left unrestrained have the potential to erode the organizational competences and drive such firms to extinction.

According to Uchenna (2013), while it may not be formerly detailed, the fact remains that by nature and intention most employees will perpetrate some form of CWB at a given point. The above scenarios have raised concerns about the ethics in the public sector and the need to understand these occurrences in order to restrict and tackle them. A review of extant literature reveals that studies on the notion of counterproductive work behaviors (CWBs) has had abundant considerations on the part of Western researchers (Sharizan, Abdul Rahman, and Noor, 2013). Gabriel (n.d.) posits that there is a strong dispositional dimension to the propensity to either engage or withhold appropriate organizational citizenship behavior in the workplace. Thus, CWBs may share attributes that are both impulsive and instrumental forms of antisocial behaviors (Mario, 2012). Therefore, a thorough understanding of employee personality and socio-demographic variables is an important step towards a better understanding and approach to the amelioration of CWB impacts in workplaces.

Regrettably, extant literature has shown that socio-demographic characteristics have not enjoyed serious research attention in CWB studies, and the few conducted researches offer conflicting evidence regarding the relationships among socio-demographic characteristics and CWB (Robinson & Greenberg, 1998; Peterson, 2002; O'Fallon & Butterfield, 2005; Paul-Titus, 2009). Consequently, more empirical evidence is needed regarding the aforesaid relationship to fill this important lacuna in literature. As such, the primary purpose of this study is to investigate whether CWBs differ significantly with respect to socio-demographic variables (such as age, sex, marital status, level of education, and income) among the selected employees in the Nigerian maritime industry.

### **1.3 Research Hypotheses**

To achieve the research objective, this study hypothesized that counterproductive work behaviors are not significantly different with respect to socio-demographic variables (such as age, sex, marital status, levels of educational, and income) among the selected employees in the Nigerian maritime industry. Accordingly, this hypothesis was broken down into six sub-hypotheses as follows:

1. There is no significant difference between gender and counterproductive work behaviors among the selected employees in the Nigerian maritime industry.



2. There is no significant difference between age and counterproductive work behaviors among the selected employees in the Nigerian maritime industry.
3. There is no significant difference between marital status and counterproductive work behaviors among the selected employees in the Nigerian maritime industry.
4. There exists no significant difference between the level of education and counterproductive work behaviors among the selected employees in the Nigerian maritime industry.
5. There exists no significant difference between occupation and counterproductive work behaviors among the selected employees in the Nigerian maritime industry.
6. There is no significant difference between the level of income and counterproductive work behaviors among the selected employees in the Nigerian maritime industry.

## 2. Theoretical and Literature Review

### 2.1 The Employee Fraud Triangle Theory

Academics at DePaul University in Chicago articulated the “Employee Fraud Triangle” theory, which offers a rational theory of employees’ criminal and deviant behaviors in the workplace (Cressey, 1973). The employee fraud triangle theory heavily focuses on the attitudinal elements of the employee. Essentially, this theory identifies three forces (*Need*, *Opportunity*, and *Rationalization*) which influence an employee’s tendency to engage in unethical behaviors such as theft, abuse, withdrawal of efforts, and other forms of counterproductivity. According to this theory, when an employee is confronted with these three forces, the odds of engaging in deviant behaviors become very high.

The first element in the employee fraud triangle is the need or motivation, which may also be termed incentive – the presence of a pressure or the financial need of the person (i.e. debts or inability to meet basic needs among others) who commits fraud that drives him/her to engage in fraud. Then, the opportunity to commit fraud opens up when such (an) employee(s) gain(s) access to assets and information that allows them to both commit and conceal the fraud. The final element of the theory is the rationalization of the fraudulent behavior, which regulates the reasons advocated by the perpetrators of the deviant acts – i.e. being unpaid, suffering salary cuts, etc. This theory is particularly relevant to this study given the turbulent economic downturn the country is experiencing. According to Deloitte Financial Advisory Services (2008), during economic recession,

employees' tendency to engage in on-the-job deviant behavior for financial gain is higher. Likewise, unemployment, loss of job, and unpaid salaries are currently becoming uncontrollable in Nigeria with 27 states in Nigeria being unable to pay the workers' salaries (Business News, 2016). The loss of these rights and privileges may propel employees to steal or engage in on-the-job dishonest behaviors.

## **2.2 Defining Counterproductive Work Behavior**

As a result of growing interest and concern regarding the phenomenon of CWBs, diverse terminologies, which inferred the same meaning, have surfaced in literature. Some of these expressions are: structural crime, firm-motivated violence, avenging behaviors, bullying, and antisocial behavior in organizations among others. Counterproductive work behaviors are forms of intentional acts displayed by employees, which are viewed by the organization as conflicting to its legitimate interests (Sackett, 2002). According to Spector et al. (2006), counterproductive work behaviors (CWBs) are volitional behaviors that are destructive or intentionally designed to harm employees or organizations.

CWBs, according to Idiakheua and Obetoh (2012), are sets of undesirable acts that are damaging to the organization and harmful to its employees. Employee deviant behavior is considered voluntary probably because he/she lacks the enthusiasm to comply with the normative expectations of the social context, or they develop enough zeal to disrupt those expectations (Robinson & Bennett, 1995). According to Lawrence and Robinson (2007), CWB is a form of organizational resistance that inhibits the attainment of organizational goals; such misbehavior intends to benefit the individual or to inflict damage on the organization (Vardi & Weitz, 2004). While there is some overlap between the forms of counterproductive behavior, Pearson, Andersson, and Porath (2005) highlighted the following as the common features of CWBs:

- i) willingness to harm (which may be lacking, existing, or unclear);
- ii) object of attack (which may be individuals, the firm, or both);
- iii) types of disrupted procedures (of the general public, firm, operational group, or none);
- iv) occurrence of the act (a single act or repetitive);
- v) degree and gravity of behaviors.

## **2.3 Dimensions of Counterproductive Work Behavior**

As earlier noted, CWBs embrace a multiplicity of behaviors such as absenteeism, dissemination of destructive reports, disruption, stealing, sexual harassment, or uncooperative attitude among others (Chang & Smithikrai, 2010). The diversity

of these detrimental acts can be categorized into five main classes, namely: abuse, production deviation, sabotage, theft, and withdrawal (Spector et al., 2006). In general, scholars have most often used the structure established by Fox and Spector (1999) when deliberating on CWBs. Accordingly, CWB is any act anticipated to hurt the organization or other members of the organization. Hence, it can be classified around the target of the behavior: the organization (CWB-O) and other individuals (CWB-I). Behaviors such as violence and antagonism are directed at people (CWB-I), while others, such as sabotage and withdrawal of efforts, are focused on organizations (CWB-O). Additional grouping was advanced by Spector et al. (2006), who grouped CWBs into five dimensions: abuse, production deviance, sabotage, theft, and withdrawal. CWBs can also be classified on the basis of the severity of the acts, ranging from minor (lying) to severe (sabotage).

Although the main concern of scholars and business managers is on the negative side of CWBs, these can be classified as both negative and positive. In line with the former, Gallperin (2002) presented the word “constructive deviance”, which occurs when employees engage in certain acts that advance the organization’s well-being. For instance, workers who engage in whistle-blowing perhaps do so to expose certain dysfunctional aspects of individuals so as to place such illicit practices under the control of the organization.

## **2.4 Demographic Characteristics and Counterproductive Work Behavior**

A number of studies have investigated the relationship between demographic characteristics and CWBs (Henle, 2005; Hershcovis, Turner, Barling, Arnold, Dupre, Inness, and Sivanathan, 2007; Paul-Titus, 2009). For instance, a meta-analysis done by Lau, Au, and Hu (2003) showed that age, sex, and marital status were all valid predictors of different CWBs. In terms of a comparison between developed countries and developing countries, Hershcovis et al. (2007) reported that in the former gender was a stronger predictor of interpersonal aggression (a form of CWB). They further noted that men being more forceful than women, they have more tendency to engage in CWBs. Henle (2005) discovered that gender and age were associated to deviant workplace behavior, while tenure of employment was not significantly correlated with it. A study conducted by Sackett, Berry, Wiemann, and Laczó (2006) reported that gender, race, age, marital status, educational qualification, occupational area, hours of work, years spent on the job, and career tenure are significantly correlated to both composite organizational citizenship behavior and counterproductive work behaviors.

### **3. Research Methodology**

#### **3.1 Research Design**

The study adopts causal research design using quantitative research approach. The choice of this approach is based on the fact that the objective of this study is to deduce the cause and effect relationships to be found between the variables under investigation. Hence, causal research design is particularly suited to achieve the stated objective because it has the potential to demonstrate that a change in one variable causes some predictable change in another variable (Malhotra, 1999).

#### **3.2 Population, Sample Size, and Sampling Technique**

The population of the study consisted of employees of three selected parastatals (Nigerian Ports Authority, Nigerian Maritime Administration and Safety Agency, and Nigerian Shippers Council). For the purpose of this study, a targeted sample size of one thousand employees across the selected parastatals was surveyed. 400 were selected at Nigerian Ports Authority and 300 at both Nigerian Maritime Administration and Safety and Nigerian Shippers Council of Nigeria. Available statistics at the Federal Ministry of Transport confirm that Nigerian Ports Authority has bigger staff strength than the other two parastatals, which explains the disparity in the sample selection. This study used multistage sampling technique. Firstly, disproportionate quota sampling technique was adopted to select the sampled respondents on the basis of the strength of the parastatals surveyed in this study. In the second stage, purposive sampling technique – often denoted as judgmental sampling – was used to select the respondents that participated in the survey based on their understanding of the phenomena under investigation. Lastly, convenience sampling was used to survey the respondents that are available and willing to participate in the survey. The target sample cut across the managerial, senior, and junior staff of the selected parastatals.

#### **3.3 Measures, Sources of Data, and Instrumentation**

The major variables investigated in this study are counterproductive work behavior (CWB) and socio-demographic characteristics. Measures used to evaluate CWB were adapted from Spector et al. (2006) – a total 19 descriptions of CWB involving both CWB-I (CWB targeted at individuals) and CWB-O (CWB-targeted at the organization). Examples from each category are: making use of organization property for personal use, withholding of effort, falsification of accounts for personal gain, gossiping about coworkers, and harassment among others. General

demographic information that was gathered from participants in this study consists of gender, age, level of education, marital status, and employee cadre. The primary data were collected using a self-administered questionnaire, which is the most common instrument used in a survey research, especially where the investigator is conversant with the variables under investigation (Beiley, 1994). The choice of questionnaire is believed to offer respondents greater anonymity (Cooper & Schneider, 2003) and more cost effectiveness (Struwig & Stead, 2001). Respondents were asked to rate their response on a five-point Likert scale ranging from 1 = “strongly disagree” to 5 = “strongly agree”. Validity and reliability of the research instrument were undertaken. The questionnaire was subjected to validity testing through content validity. The researchers sought the opinion of four senior academics of the Department of Business Administration, University of Lagos, while reliability testing was carried out with the help of Cronbach’s Alpha. All the variables and constructs have reliability values exceeding 0.7, which shows that the instrument is reliable (Girden, 2001).

### 3.4 Methods of Data Analysis and Techniques

The data collected through the questionnaire were analyzed using the Statistical Package for Social Sciences (SPSS-19). The approaches of data analyses were conducted through descriptive (mean and percentages) and inferential statistics, using one-way analysis of variance (ANOVA) and t-test.

## 4. Results and Discussion

### 4.1 Respondents’ Demographic Characteristics

Table 4.1 provides a summary of the questionnaire distribution and response rate. The desired sample size for this study was put at 1,000. A total of 811 copies of questionnaire were distributed, out of which 762 were retrieved. 49 copies of questionnaire were not retrieved and 30 were rejected due to multiple and incomplete responses, thus yielding a valid response rate of 73.2%.

**Table 4.1** Characteristics of employees in the Nigerian maritime industry

Variables	Characteristics	Frequency	Percentage
Gender	Male	485	66.08
	Female	249	33.92
Age (Years)	Less than 20	11	1.50

<b>Variables</b>	<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
	21–29	95	12.94
	30–39	198	27.00
	40–49	282	38.42
	50–59	139	18.94
	60 and above	9	1.23
Marital Status	Single	128	17.44
	Married	544	74.11
	Divorced/Separated	62	8.45
Education	School Certificate Holder	36	4.90
	Diploma/NCE	149	20.30
	HND	147	20.03
	B.Sc.	262	35.70
	MSc/MBA	168	22.90
	Ph.D.	8	1.09
Cadre of Employment	Management staff	139	18.94
	Middle-level staff	378	51.50
	Junior staff	217	29.56
Monthly Income (Naira)	Below 500,000	483	65.80
	501,000–1,000,000	174	23.71
	1,001,000–2,000,000	60	8.17
	2,000,000 and above	17	2.31

Source: field survey, 2016

There are a total number of 1,000 respondents from maritime employees involved in this study. Most of the employees are male (66.08%), while only 33.92 percent are female. About 41.4% of the respondents are below 40 years of age. Specifically, 1.5% of employees are less than 20 years of age. About 13% are in the age range of 21 and 29 years. Respondents in the age range of 30 and 39 years constitute 27% of the work force. The highest percentage of employees (38.42%) is to be found in the age bracket of 40 and 49 years. Whereas 18.94% are between 50 and 59 years of age, only 1.23% are 60 years and above. Overall, a high percentage of respondents is still in the active age bracket. The majority of the respondents (74.11%) are married, 17.44% are single, and 8.45% of them are divorced/separated. The descriptive statistics of the level of education reveals that 75% are holders of higher education certificates. More specifically, 20.03% are Higher National Diploma (HND) holders, 35.7% of the employees are university graduates with a bachelor degree, and

22.9% hold a master's degree. Most of the staff (51.50%) are in the middle-level cadre of employment, while 18.94% and 29.56% are management and junior staff respectively. Expectedly, the monthly income of employees varies as follows: the majority (65.8%) earn below 500,000.00 Naira on a monthly basis. 23.71% earn between ₦501,000.00 and ₦1,000,000:00, 8.17% earn between ₦1,001,000:00 and ₦2,000,000:00, while a relatively low percentage of the employees (2.31%) earn between ₦2,000,000.00 and above.

## 4.2 Testing of Hypotheses

Counterproductive work behavior is not significantly different with respect to socio-demographic variables (such as gender, age, marital status, level of education, and income) in the Nigerian maritime industry.

### *CWB and Gender*

**Table 4.2** *Descriptive statistics – CWB and gender*

What is your gender?	N	Mean	Std. Deviation	Std. Error Mean
Male	485	1.62	0.645	0.029
Female	249	1.75	0.662	0.042

Source: field survey, 2016

**Table 4.3** *CWB and gender-independent samples test*

	Levine's Test for Equality of Variances			T-test for Equality of Means					
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	0.029	0.865	-2.453	732	0.014	-0.124	0.051	-0.224	-0.025
Equal variances not assumed			-2.432	489.166	0.015	-0.124	0.051	-0.225	-0.024

Source: field survey, 2016

In order to ascertain whether CWB differs significantly with regard to gender in the Nigerian maritime industry, t-test of difference of means was carried out. Results

in tables 4.2 and 4.3 show that CWB differs significantly with respect to the gender of employees in the selected sample government parastatals: ( $df = 732$ ,  $T = -2.453$ ,  $p < 0.05$ ). Based on the above statistics, sub-hypothesis (1), which states that CWB does not differ significantly with respect to gender, is not supported by the finding of this study – hence, it is hypothesized that CWB significantly differs between male and female employees in the Nigerian maritime industry. The finding of this study reveals that CWB is significantly different with respect to gender in the Nigerian maritime industry. The finding of this study is in line with the studies conducted by O’Fallon and Butterfield (2005) as well as Lau, Au, and Ho (2002).

### *CWB and Age*

**Table 4.4** *Descriptive statistics – CWB and age*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below 20 years	11	1.70	0.557	0.168	1.32	2.07	1	2
21–29 years	95	1.78	0.763	0.078	1.62	1.94	1	4
30–39 years	198	1.53	0.586	0.042	1.45	1.61	1	3
40–49 years	282	1.70	0.687	0.041	1.62	1.78	1	5
50–59 years	139	1.69	0.581	0.049	1.60	1.79	1	3
60 years and above	9	1.81	0.487	0.162	1.44	2.19	1	2
Total	734	1.67	0.653	0.024	1.62	1.71	1	5

Source: field survey, 2016

**Table 4.5** *ANOVA – CWB and Age*

	Sum of Squares	Df	Mean Square	F	Sig.
Between groups	5.587	5	1.117	2.652	0.022
Within groups	306.717	728	0.421		
Total	312.304	733			

Source: field survey, 2016

A one-way between-groups analysis of variance was conducted to explore the relationship between CWB and age. As shown in tables 4.4 and 4.5, there is a



significant difference at the  $p < 0.05$  for the 6 age-groups:  $F(5, 728) = 2.662$ ,  $p < .022$ . Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. Post-hoc comparisons using Tukey's highly significant difference (HSD) test indicated that the mean score among the age-groups did not differ significantly. From the above statistics, sub-hypothesis (2), which states that CWB does not differ significantly with respect to age, is not supported by the finding of this study; hence, it is hypothesized that CWB significantly differs between the age-groups of employees in the Nigerian maritime industry. This finding corroborates the finding of the studies carried out by Baucus and Near (1991) and Martinko, Gundlach, and Douglas (2002). On the other hand, it contradicts the finding reported by Paul-Titus (2009) and Uchenna (2013).

### *CWB and Marital status*

**Table 4.6** Descriptive statistics – CWB and marital status

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Single	128	1.59	0.731	0.065	1.47	1.72	1	4
Married	544	1.64	0.629	0.027	1.59	1.70	1	5
Divorced	23	2.05	0.735	0.153	1.73	2.37	1	4
Separated	39	2.00	0.488	0.078	1.84	2.16	1	4
Total	734	1.67	0.653	0.024	1.62	1.71	1	5

Source: field survey, 2016

**Table 4.7** ANOVA – CWB and marital status

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	8.754	3	2.918	7.018	0
Within groups	303.549	730	0.416		
Total	312.304	733			

Source: field survey, 2016

A one-way between-groups analysis of variance was conducted to explore the relationship between CWB and marital status. As shown in tables 4.6 and 4.7, there is a significant difference at the  $p < 0.05$  for the 4 marital status groups:

$F(3, 730) = 7.018, p < .000$ . Despite reaching statistical significance, the actual difference in mean scores between the groups varies considerably. Similarly, post-hoc comparisons using Tukey's HSD test indicated that the mean score in the marital status values was significantly different. Based on the above results, sub-hypothesis (3), which states that CWB is not significantly different with respect to marital status, is not supported by the finding of this study; hence, it is hypothesized that CWB significantly differs concerning the marital status of employees in the Nigeria maritime industry. This finding is similar to the one reported by Robinson and Greenberg (1998) and Peterson (2002).

### *CWB and Level of Education*

**Table 4.8** *Descriptive Statistics – CWB and level of education*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
School certificate holder	36	1.61	0.677	0.113	1.38	1.84	1	4
Diploma	149	1.69	0.618	0.051	1.59	1.79	1	3
HND/NCE	147	1.75	0.680	0.056	1.64	1.86	1	5
B.Sc.	262	1.60	0.628	0.039	1.52	1.67	1	4
MSc/MBA	132	1.69	0.704	0.061	1.57	1.81	1	4
Ph.D.	8	1.77	0.484	0.171	1.37	2.17	1	2
Total	734	1.67	0.653	0.024	1.62	1.71	1	5

Source: field survey, 2016

**Table 4.9** *ANOVA – CWB and level of education*

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	2.654	5	0.531	1.248	0.285
Within groups	309.649	728	0.425		
Total	312.304	733			

Source: field survey 2016

A one-way between-groups analysis of variance was conducted to explore the relationship between CWB and level of education. As shown in tables 4.8 and 4.9, there is no significant difference at the  $p > 0.05$  for the 6 education groups:

$F(5, 728) = 1.248, p > .285$ . Despite reaching a statistically insignificant level, the actual difference in mean scores between the groups does not vary significantly. Similarly, post-hoc comparisons using Tukey's HSD test indicated that the mean score among the 6 levels of educational attainment was significantly different. From the above statistics, sub-hypothesis (4), which states that CWB is not significantly different with respect to the level of education, is supported by the finding of this study. This finding contradicts the one reported by Robinson and Greenberg (1998), who reported that an increased level of education is associated with high tendency to engage in CWB.

### *CWB and Employee Cadre*

**Table 4.10** *Descriptive statistics – CWB and employee cadre*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Management staff	139	1.76	0.649	0.055	1.65	1.87	1	3
Middle-level staff	378	1.59	0.626	0.032	1.53	1.66	1	5
Junior staff	217	1.73	0.689	0.047	1.64	1.82	1	4
Total	734	1.67	0.653	0.024	1.62	1.71	1	5

Source: field survey, 2016

**Table 4.11** *ANOVA – CWB and employee cadre*

	Sum of Squares	Df	Mean Square	F	Sig.
Between groups	4.069	2	2.034	4.825	0.008
Within groups	308.235	731	0.422		
Total	312.304	733			

Source: field survey, 2016

A one-way between-groups analysis of variance was conducted to explore the relationship between CWB and employee cadre. As shown in tables 4.10 and 4.11, there is significant difference at the  $p < 0.05$  for the 3 employee cadres:  $F(2, 731) = 4.825, p < .008$ . Despite reaching a statistically insignificant level, the actual difference in mean scores differs slightly between the groups. Similarly,

post-hoc comparisons using Tukey’s HSD test indicated that the mean score for management and middle-level employees differs, while that of junior staff did not differ significantly from either management or middle-level employees. From the above results, sub-hypothesis (5), which states that CWB is not significantly different with respect to employee cadre, is not supported by the finding of this study; hence, it is hypothesized that CWB significantly varies with respect to employee cadre in the Nigerian maritime industry. This finding is similar to the one reported by Robinson and Greenberg (1998) and Peterson (2002).

### *CWB and Income Level – Descriptive*

**Table 4.12** *Descriptive statistics – CWB and income level – descriptive*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below ₦500,000	483	1.57	0.633	0.029	1.51	1.63	1	4
₦501,000– ₦1,000,000	174	1.92	0.663	0.05	1.82	2.01	1	5
₦1,001,000– ₦2,000,000	60	1.72	0.562	0.073	1.57	1.87	1	3
₦2,000,000 and above	17	1.59	0.750	0.182	1.21	1.98	1	3
Total	734	1.67	0.653	0.024	1.62	1.71	1	5

Source: field survey, 2016

**Table 4.13** *ANOVA – CWB and income level – descriptive*

	Sum of Squares	Df	Mean Square	F	Sig.
Between groups	15.398	3	5.133	12.619	0
Within groups	296.906	730	0.407		
Total	312.304	733			

Source: field survey, 2016

A one-way between-groups analysis of variance was conducted to explore the relationship between CWB and income. As shown in tables 4.12 and 4.13, there is significant difference at the  $p < 0.05$  for the 4 income groups:  $F(3, 730) = 12.619$ ,

$p < .000$ . Despite reaching a statistically significant level, the actual difference in mean scores between the income groups also differs significantly. Similarly, post-hoc comparisons using Tukey's HSD test indicated that the mean score for the 1<sup>st</sup> and 2<sup>nd</sup> income-level employees was significantly different, while that of the 3<sup>rd</sup> and 4<sup>th</sup> income groups did not differ significantly from either the 1<sup>st</sup> or the 2<sup>nd</sup> income groups. Based on the above statistics, sub-hypothesis (6), which states that CWB is not significantly different with respect to the income of the employees, is not supported by the finding of this study; hence, it is hypothesized that CWB significantly differs between the income levels of employees in the Nigerian maritime industry. This finding is similar to the one reported by Robinson and Greenberg (1998) and Peterson (2002).

## **5.1 Conclusion and Implications**

This study investigates demographic characteristics and CWB in the Nigerian maritime industry. The findings of this study provide significant evidence supporting the prevalence of CWB in the public sector. No doubt, demographic characteristics highlight the importance of what underlies these deviant acts in the workplace and the role some of the variables play in determining the frequency and degree of CWB. Thus, the increasing attention and interest in CWBs is that it has potential to inhibit the attainment of organizational objectives. In particular, the prevalence of CWB in the workplace caused adverse effects on organizations in terms of declining productivity, increased costs, lost or damaged property arising from theft, and tendency for high turnover (Leblanc & Kelloway, 2002). Another important consequence of CWBs in the workplace is the high level of employees' dissatisfaction and reported job stress (Keashly, Trott, and MacLean, 1994).

This study offers a number of implications for business managers. Accordingly, it is important for the management to establish codes of conduct so that ideal norms of respectful interaction are known and prevail at all levels of the organization to curtail the occurrence of counterproductive work behavior. The findings of this study served to assist maritime organizations to better understand what types of employees are more likely to engage in deviant behavior in specific settings and situations. A deeper understanding of CWB dimensions and the degree of its manifestation will help the government not only in curbing CWB in the workplace but in taking cognizance of these demographic variables during recruitment and employee placement. Accordingly, given that the starting point of analysis of an individual is his/her demographic profile, the management should conduct personality assessments more frequent with a view to ascertaining the demographic characteristics that have a tendency to induce CWB. Another vital implication of this study is the need to connect demographic characteristics with

job identity and allocation of tasks. For instance, a finding of this study indicates that gender, age, marital status, employee cadre, and income are significantly related to CWBs. The immediate implication of this finding is that the prevalence of tendency to engage in CWBs is very much connected to these demographic variables; hence, the management should focus serious attention on them. On the other hand, the finding that the level of educational attainment is not significantly related to CWB portends that employees, irrespective of their level of education, are likely to engage in CWB.

## 5.2 Recommendations

In view of the significant relationship documented between some demographic characteristics in this study, business organizations should develop a mechanism for identifying and selecting their potential employees. Likewise, an organization should have a good pre-employment surveillance method to evaluate candidate background and perform a vetting that could assist in identifying employees with a high tendency to engage in deviant behavior.

Efforts should be intensified to put into practice such strategies that develop the culture of organizations in the Nigerian maritime industry. By developing a good culture, it will be much easier to modify employee behavior in a way that aligns with the goals and objectives of the organizations in particular and the maritime industry in general.

Management should give due consideration to workplace environment and ensure that it is conducive for all and sundry. By having the right climate, counterproductive work behaviors will be at the barest minimum level. Without the right organizational climate, undesirable behavior will persist and may even escalate to dangerous situations.

## References

- Aftab, H.; Javed, A. (2012). The impact of job stress on the counter-productive work behaviour (CWB): a case study from the financial sector of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business* 4(7): 590–604.
- Ambrose, M. L.; Seabright, M. A.; Schminke, M. (2002). Sabotage in the workplace: the role of organisational injustice. *Organisational Behaviour and Human Decision Processes* 89: 947–965.
- Andersson, L. M.; Pearson, C. M. (1999). Tit for tat? The spiraling effect of incivility in the workplace. *The Academy of Management Review* 24(3): 452–471.

- Aquino, K.; Galperin, B. L.; Bennett, R. J. (2004). Social status and aggressiveness as moderator of the relationship between interactional justice and workplace CWB. *Journal of Applied Psychology* 34(5): 1001–1029.
- Bailey, K. D. (1994). *Method of social research* (4<sup>th</sup> ed.). New York: The Free Press.
- Barling, J.; Dupre, K.; Kelloway, E. K. (2009). Predicting workplace violence and aggression. *Annual Review of Psychology* 60: 671–692.
- Baucus, M.; Near, J. (1991). Can illegal corporate behaviour be predicted? An event history analysis. *Academy of Management Journal* 34(1): 9–36.
- Business News (2016). *It is a disgrace that 27 states in Nigeria cannot pay worker's salary – Buhari*. Retrieved on: August 21, 2016, from: [http://www.givenbiznews.com/It is a disgrace that 27 States in Nigeria cannot pay worker's salary-Buhari](http://www.givenbiznews.com/It-is-a-disgrace-that-27-States-in-Nigeria-cannot-pay-worker's-salary-Buhari).
- Chang, K.; Smithikrai, C. (2010). Counterproductive behaviour at work: An investigation into reduction strategies. *International Journal of Human Resource Management* 21(8): 1272–1288.
- Cooper, D. R.; Schindler, P. S. (2003). *Business research methods* (8<sup>th</sup> ed.). Boston: McGraw-Hill Irwin.
- Cressey, D. (1973). *Other people's money*. Montclair: Patterson Smith.
- Deloitte Financial Advisory Services. (2008). *Financial fraud: does an economic downturn mean an uptick?* Deloitte Development LLC. ([www.Deloitte.com](http://www.Deloitte.com)).
- Dineen, R. J.; Lewicki, E.C. (2006). Tomlinson supervisory guidance and behavioural integrity: relationships with employee citizenship and deviant behaviour. *Journal of Applied Psychology* 91(3): 622–635.
- Fatima, A.; Atif, K.; Saqib, A.; Haider, A. (2012). A path model examining the relations among organisational injustice, counterproductive work behaviour and job satisfaction. *International Journal of Innovation, Management and Technology* 3(6): 697–701.
- Fox, S.; Spector, P. E. (1999). A model of work frustration–aggression. *Journal of Organisational Behaviour* 20: 915– 931.
- Gabriel, A. A. (n.d.). *Demographic and dispositional characteristics as predictors of organisational citizenship behaviour: an appraisal of OCB in a non-English culture workgroups*.
- Galperin, B. L. (2002). *Determinants of deviance in the workplace: an empirical examination in Canada and Mexico* (Doctoral dissertation). Concordia University.
- Girden, E. R. (2001). *Evaluating research articles* (2<sup>nd</sup> ed.). London: SAGE.
- Greenberg, J. (1990). Employee theft as a reaction to underpayment inequity: the hidden cost of pay cuts. *Journal of Applied Psychology* 75: 561–568.
- Henle, C. A. (2005). Predicting workplace deviance from the interaction between organisational justice and personality. *Journal of Managerial Issues* 17(2): 247–263.

- Hershcovis, M. S.; Turner, N.; Barling, J.; Arnold, K. A.; Dupre, K. E.; Inness, M.; Sivanathan, N. (2007). Predicting workplace aggression: a meta-analysis. *Journal of Applied Psychology* 92: 228–238.
- Hiriyappa, B. (2008). *Organisational Behaviour*. India: New Age International PVT Ltd.
- Hoel, H.; Rayner, C.; Cooper, C. L. (1999). Workplace bullying. In: Cooper, C. L.; Robertson, I. T. (eds.), *International review of industrial and organisational psychology*. Chichester, UK: Wiley. 195–230.
- Idiakheua, E. O.; Obetoh, G. I. (2012). Counterproductive work behaviour of Nigerians: an insight into make-up theory. *Interdisciplinary Journal of Contemporary Research in Business* 4(7): 10.
- Keashly, L. (1998). Emotional abuse in the workplace: Conceptual and empirical issues. *Journal of Emotional Abuse* 1(1): 85–117.
- Keashly, L.; Trott, V.; MacLean, L. M. (1994). Abusive behaviour in the workplace: a preliminary investigation. *Violence and Victims* 9: 341–357.
- Kelloway, E. K. (2010). Counterproductive work behaviour as protest. *Human Resource Management Review* 20: 18–25.
- Lasisi, O. J.; Okuneye, M. Y.; Shodiya, O. A. (2014). Antecedents of counter work behavior in public sector organisations: evidence from Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review* 3(9): 58–65.
- Lau, V. C. S.; Au, W. T.; Ho, J. M. C. (2002). A qualitative and quantitative review of antecedents of counterproductive behaviour in organisations. *Journal of Business and Psychology* 18(1): 73–99.
- Lawrence, T. B.; Robinson, S. L. (2007). Ain't misbehavin: workplace deviance as organisational resistance. *Journal of Management* 33: 378–394.
- LeBlanc, M.; Kelloway, E. (2002). Predictors and outcomes of workplace violence and aggression. *Journal of Applied Psychology* 87(3): 444–453.
- Malhotra, N. K. (1999). *Marketing research: an applied orientation* (3<sup>rd</sup> ed.). New Jersey: Prentice Hall.
- Mario, G. (2012). *Counterproductive work behaviours and moral disengagement*. Doctorate in Pro-sociality, Innovation and Collective Efficacy in Educational and Organisational Contexts. XXIV Course, Sapienza Universita Di Roma.
- Martinko, M. J.; Gundlach, M. J.; Douglas, S. C. (2002). Toward an integrative theory of counterproductive workplace behaviours. A causal reasoning perspective. *International Journal of Selection and Assessment* 10: 36–50.
- Nagle, K. J. (2009). Seaports deliver prosperity. *AAPA Seaports Magazine* winter. Retrieved on: August 11, 2015, from: <http://www.aapaports.org/Publications/SeaportsDetail.cfm?itemnumber=13112#seaportsarticle>.
- Neuman, J. H.; Baron, R. A. (1997). Aggression in the workplace. In: Giacalone, R. A.; Greenberg, J. (eds.), *Antisocial behaviour in organisations*. Thousand Oaks, CA: Sage.



- O'Fallon, M. J.; Butterfield, K. D. (2005). A review of the empirical ethical decision-making literature: 1996–2003. *Journal of Business Ethics* 59: 375–413.
- Paul-Titus, R. (2009). *Deviant workplace behaviour in organisations: antecedents, influences, and remedies*. International Business Administration – University of Vienna.
- Pearson, C. M.; Andersson, L. M.; Porath, C. L. (2005). Workplace incivility. In: Fox, S.; Spector, P. E. (eds.), *Counterproductive workplace behaviour: Investigations of actors and targets*. Washington, DC: APA. 177–200.
- Pelin, K.; Funda, E. U. (2013). The effect of organisational study on the employees of manufacturing. *The Macrotheme Review* 2(4): 144–160.
- Penney, L. M.; Spector, P. E. (2005). Job stress, incivility, and counterproductive work behaviour (CWB): the moderating role of negative affectivity. *Journal of Organisational Behaviour* 26: 777–796.
- Peterson, D. (2002). The relationship between unethical behaviour and the dimensions of the ethical climate questionnaire. *Journal of Business Ethics* 41: 313–326.
- Robinson, S. L.; Bennett, R. J. (1995). A typology of deviant workplace behaviours: A multidimensional scaling study. *Academy of Management Journal* 38: 555–572.
- Robinson, S. L.; Greenberg, J. (1998). Employees behaving badly: dimensions, determinants, and dilemmas in the study of workplace deviance. *Journal of Organisational Behaviour (1986–1998)* 5(6): 1–30.
- Sackett, P. R. (2002). The structure of counterproductive work behaviours: dimensionality and relationships with facets of job performance. *International Journal of Selection & Assessment* 10(1–2): 01–11.
- Sackett, P. R.; Berry, C. M.; Wiemann, S. A.; Laczko, R. M. (2006). Citizenship and counterproductive work behaviour: clarifying relationships between the two domains. *Human Performance* 19: 441–464.
- Shamsudin, F.; Subramaniam, C.; Ibrahim, H. (2011). *HR practices and deviant behaviour at work: an exploratory study*. 2011 International Conference on Business and Economics Research.
- Sharizan, S.; Abdul Rahman, A. R.; Noor, A. D. (2013). Relationship between person organization fit, psychological contract violation on counterproductive work behaviour. *International Journal of Business and Social Science* 4(4): 173–183.
- Skarlicki, D. P.; Folger, R. (1997). Retaliation in the workplace: the roles of distributive, procedural, and interactional justice. *Journal of applied psychology* 82: 434–443.
- Spector, P. E.; Fox, S. (2005). A model of counterproductive work behaviour. In: Fox, S.; Spector, P. E. (eds.), *Counterproductive workplace behaviour: investigations of actors and targets*. Washington, DC: APA. 151–174.

- Spector, P. E.; Fox, S.; Penney, L. M.; Bruursema, K.; Goh, A.; Kessler, S. (2006). The dimensionality of counter-productivity: are all counterproductive behaviours created equal? *Journal of Vocational Behaviour* 68(3): 446–460.
- Struwig, F. W.; Stead, G. B. (2001). *Planning, designing and reporting research*. Cape Town: Pearson.
- Uchenna, C. O. (2013). Counterproductive work behaviour among employees in emotionally demanding jobs: the roles of perceived organisational support, job burnout, and age. *Nigerian Journal of Applied Behavioural Sciences* 1: 105–114.
- Vardi, Y.; Weitz, E. (2004). *Misbehaviour in organisations: theory, research, and management*. NJ: London: Lawrence Erlbaum Associates.
- Vigoda, E. (2002). Stress-related aftermaths to workplace politics: the relationships among politics, job distress and aggressive behaviour in organisations. *Journal of Organisational Behaviour* 23(5): 571–589.
- Yang, J.; Diefendorf, J. M. (2009). The relations of daily counterproductive workplace behaviours with emotions, situational antecedents, and personality moderators: a diary study in Hong Kong. *Personnel Psychology* 62(2): 259–295.
- Zapf, D.; Einarsen, S. (2005). Mobbing at work: escalated conflicts in organisations. In: Spector, P. E.; Fox, S. (eds.), *Counterproductive work behaviour: investigations of actors and targets*. Washington, DC, US: American Psychological Association. 237–270.



# A Comparative Analysis of Migration Policies: (Best) Practices from Europe

Tünde PATAY

Doctoral School of Regional and Economic Sciences,  
Széchenyi István University, Győr, Hungary  
E-mail: tuende.patay@wien.gv.at

**Abstract.** Migration is one of the main factors that shape and accelerate the development of nations or urban areas, although the dynamics and combined effects of migratory movements, national policies, and the roles of local authorities present a mixed picture in Europe. Some countries have restrictive immigration and integration policies, other nations provide easier access to their political and welfare systems, while the question of local responsibility has also acquired particular importance in recent years. The aim of this study is to explain the linkages between migration policy and development, exploring the variety of European integration policies and their effects on the national socio-economic structures. The integration policy has progressively been becoming ever more important over the last decades. The analysis presents how integration tools interact with national or regional development, emphasizing the role of different migration strategies.

**Keywords:** Europe, integration policy, migration, regional development

**JEL Classifications:** J15, K37

## Introduction

The European states face different migratory challenges. National and local governments have been learning for decades how to manage migration and control its effects. The elements of European migration policy aim to harmonize the legislative and administrative instruments (European Commission, 2003). Europe intends to maximize the positive effects of migratory flows while finding solutions for social, economic, environmental, and political challenges (European Commission, 2000). The European Union emphasizes the opportunities and calls our attention to the potential that immigration has for the development of the European states (European Commission, 2015).

Migration policies contain in summary all the legal norms which are in relation to human migratory movements or the changes in residential status being able to affect migratory trends and their effects and not only the labor market consequences (Oltmer, 2017). Summarizing the studies on migration policies, Feleky and Vincze define three basic attitudes to migration in the European political platform: selective excluding attitude, policy of total assimilation, and pluralist attitude (2010) – I only agree in part with this statement since the aspects of the results can vary. Lack of integration could have negative effects besides those on the main areas of competitiveness, the democratic representation, and accountability (Jones-Correa, 1998). The consequences of success or lack of integration scatter further just like the spread or backwash effect of Myrdal (1960). Thus, integration strategies should cover all the key areas of growth and well-being: labor market, education, welfare system, housing environment, or civic and political life – systematically, such as how urban development strategies have to be worked out (Palmai, Patay, 2014). Goodhart (2004) argues that it is hard to maintain equilibrium between sustaining a modern welfare state and acceptable migration policies that ensure easier access to welfare services. Recognition of cultural differences, granting rights to immigrants without a selective procedure (legal requirements) can be advantageous for immigrants but not for the host population, undermining the development of the welfare system – as Barry argues (2001). Other achievements point out that supporting multiculturalism – as a policy approach – means aiming at full protection against discrimination and exclusion that leads to marginalization (Banting, Kymlicka, 2006).

Global competitiveness motivates provinces and cities to work to attract and retain creative and talented human capital (Florida, 2005). European countries with migratory experiences all have programs on the national level to attract the best (Gafner, Yale-Loehr, 2010), but from local aspects the flows of immigrants also mean challenges caused by ethnic, cultural, or social diversity (Rogers, Tillie, 2001). Varun Uberoi and Tariq Modood point out, however, that successful strategies and anti-discrimination practices remain mainly in place and not countrywide (2013). Moreover, the roles of municipalities have gained importance in recent years due to the implementation of decentralized policies (Balázs, 2003), though experience has shown different types of evolution of modernization in the western and eastern countries (Torma, 2003).

From the practical point of view, studies mainly prefer the national context (Descy, 2016), and it is obvious because the range of citizenship and immigration policies is always defined at the national level. Ideas on measuring immigration policies and their effects have already been discussed among the Member States (Kováts, 2014). We can also find databases on indicators relating to migration policies – they cover policy data of selected countries; they are thus useful but not complete (Ellerman, 2013). Studies have, however, been conducted with focus on

one highlighted area such as labor market, social challenges, or methodological issues (Bjerre et al., 2014). De Haas, Natter, and Vezzoli demonstrate in their study a long-term trend: the evolution of migration policies of 45 countries. They also call attention to the need of a cross-country comparison of policies and their effects since, as they sum up, researchers have mainly explored some selected host countries with focus on specific migrant groups (2016).

Thus, the aim of this study is to offer a new, comprehensive approach, focusing on the main relations within the policy–migration–development triangle. Furthermore, the study comes to the result that different clusters can be identified on the basis of these variables: macro-regions within Europe and subnational regions within a country. The outcomes can serve as a base for further cross-national or cross-regional investigations. The first section of the study introduces the structure of the modern migratory movements towards the European countries; afterwards, the paper discusses the main fundamental areas of migration policies: citizenship, equal rights, and welfare system. The next paragraphs analyse the importance of the integration policy, with particular attention to the labor market, issues of culture, and spatial segregation. The last section, pointing out the relevance of the regional aspects, explains how local governments perceive and manage the effects of migration. This cross-country comparison undertakes in summary to explain the linkages between migration policy and development, exploring along these lines the variety of European policies and their effects on both the national socio-economic structures and the migratory flows.

## **Material and Methods**

Its migratory features can characterize Europe, and thus we can distinguish four main regions: Northern Europe (such as Sweden or Finland), South-Western Europe (France, the Netherlands, or Italy), the German-speaking regimes, and the territories of the United Kingdom (Dustmann, Frattini, 2012). The post-communist countries have other types of experiments in migration and integration issues (Fassmann, Münz, 1996). This paper investigates the migration policies of selected countries from these macro-regions. Besides comparing policies and experiences at the national level, the study is based on secondary national and subnational data. It also discusses (on the basis of the author's dissertation) the importance of regional/local experiments regarding migration. The findings are, if needed, complemented with the results of previous studies related to the issues discussed below. This paper analyses the experiences mainly from the 1990s till the early 2000s, and some issues need an interpretation on the basis of current data as well (till 2014).

As regards the comparison between Western and Eastern Europe (or the post-communist countries), the immigration practice of Hungary will also be presented in this paper as an example for migratory issues in the post-communist countries despite less experience in the integration of immigrants. This analysis does not examine the current issues of asylum since the pressing challenges of this question should be discussed in particular studies.

## Results and Discussion

### Immigration to Europe

Since the 1980s, European states have been facing the challenge of how to include immigrants on different stages. Like Fassmann and Münz also present in their book (1996), the illusion of temporary or circular migration has disappeared, guest workers stayed in their new homeland. New migratory groups have been arriving: new work force, entrepreneurs, family members, students, refugees, and illegal migrants as well. Migrants make significant contributions to development at the national or local level: with their workforce, experiences, and knowledge but with their cultural characteristics or international connections as well. On the other hand, mobility brings negative effects with: expenditure of the welfare system, conflicts in the society, discrepancies regarding the values and goals of the host community, and, of course, deprivation.

Integration is the process by which immigrants become accepted into the society, getting a range of entitlements depending on their legal status. According to the statistics of the Eurostat, 3.4 million people immigrated in 2014 to the EU-28 Member States: 1.4 million third-country nationals, 1.2 million people with citizenship of another EU Member State, and 830 thousand returning migrants.

More than 40% of the population are non-nationals in Luxembourg. The Northwest European states, such as Austria, Germany, Italy, etc., became host countries after World War II (from the 1950s and 1960s), and today approx. 10% of their populations are non-nationals. In the era of modern migratory movements, since the first, recruited guest workers – and Britain's post-colonial immigrants – arrived, these host countries have gradually been developing their integration policies at the national and regional level. *Table 1* also contains the data for Hungary. Hungary can be considered as an example for the post-communist countries related to migratory issues despite its less experience in the integration of newcomers.

Not only its effects but the definitions of social, economic, or political integration of a newcomer vary (Angenedt, 2000; Treibel, 2011). It means we can hardly find

a consensus, not even on the political platform of one country. We can find in the political issues – but also in the literature – different terms for assimilation, incorporation, integration, and inclusion. Some of them emphasize the responsibility of the receiving community, some the importance of the willingness of the immigrants, and there can be found theories that say that the success depends on the cooperation of all the actors (see also Council of the European Union, 2004).

**Table 1:** Key data on immigration – 2014

	<b>Non-nationals in % of the population</b>	<b>EU citizens (1,000)</b>	<b>3. nationals (1,000)</b>
Luxembourg	43.2	191	30
Austria	12.3	352	555
Spain	12.3	2,329	3,325
Belgium	10.6	749	414
Ireland	9.2	292	69
Germany	9.1	2,628	4,571
Italy	8.5	1,335	3,235
UK	8.2	2,061	2,425
Sweden	6.7	270	352
Hungary	2.1	127	82

Source: Eurostat, own calculation

## Residence and citizenship

Migration policies of the European countries, just like many analysing studies, consider the issue of citizenship as the main goal or the best instrument for the inclusion of immigrants. Just as for citizenship – so writes Brubaker (1995) –, some conceptions highlight the importance of cultural or ethnic connections, whilst it is only the time spent within the country that counts for the other ones. However, Bauböck (1994) points out that certain entitlements are linked to the legal residential status of the migrants; it is obvious that citizenship is the most common entitlement for a migrant to get full membership rights and thus to take part in political life, too. Based on the legal systems of the European countries, important differences can be observed among the countries in their policies and procedures.

The legislative requirements have gradually been harmonized according to the EU policies in the European countries; in some of them, it is still easier to obtain the citizenship. Sweden and the Netherlands have the highest naturalization rates among the western countries and, despite the recent changes in their legal

rules and the decreasing percentage of the candidates, still higher than those of Germany or Austria. Regarding Hungary, persons acquiring citizenship were almost exclusively from the Hungarian minority in Romania or from returning diasporas.

As for the residence permit, criteria for obtaining, upgrading, or losing it can vary from country to country, though the spirit of the European Union requires a harmonized legal background. Some social and political rights can only be obtained with long-term permits or after obtaining the citizenship itself, while the requirements for getting them often relate to these social or political circumstances. Austria and Germany have strict rules; however, they are strongly highlighting through the media the importance and priority of human rights or protection of family. If we look at the legislative and administrative practice in these countries, immigrants have to face difficulties getting and holding their permits or later upgrading them into a secure one or into citizenship. Granted access to social welfare, marginalized life periods, crime issues, or just administrative problems can undermine these upgrading goals. Political rights can be fully obtained after having acquired citizenship. At the same time, in the Netherlands and in Sweden or in France, the legal rules are not so strict; the probability of losing a residence permit or the citizenship is low. Besides that, non-nationals have more political rights than in Austria or Germany, e.g. regarding local elections or political participation.

### **Equal Rights and MIPEX Scores**

Ten years ago, the legal solutions for anti-discrimination were most favourable in the United Kingdom and in the Netherlands (Niessen, Chopin, 2002), but, comparing the legal systems of today, the relevant legislation of the other immigration countries has also developed since then. Discrimination relating to religion is an important topic in each European country, as for most western countries there are deficits in both the legislation and the practice regarding discrimination related to religious differences. The realization of equality is particularly ensured by the legal system in the Netherlands and in Sweden.

Beyond analysing the migration policies and legal issues regarding immigration, the scores of the MIPEX (Migrant Integration Policy Index) can also be useful for us since the overall index is built up from 140 main indicators from the area of the following issues: access to nationality, long-term residence, anti-discrimination, family reunion, labor market access, and political participation. The below table (*Table 2*) presents the MIPEX indices for 2007, 2010, and 2014 for the countries analysed in this study.



**Table 2.** Overall scores of the migration and integration policy indices 2007–2010–2014

Country	2007	2010	2014 <sup>1)</sup>
Austria	39	45	50
Belgium	69	68	67
France	55	53	54
Germany	53	60	61
Hungary	49 <sup>2)</sup>	45	45
The Netherlands	68	69	60
Sweden	88	80	78
Switzerland	50	45	49
United Kingdom	63	62	57

Source: MIPEX, own illustration

*Notes:*

1) Health system included

2) Education not yet evaluated

Sweden has the highest score, offering the easiest access to equal rights. The next ones are the Netherlands and the United Kingdom. The German-speaking countries (Germany, Switzerland, and Austria) have lower scores. It illustrates their strict legal practices, reflecting the difficulties in the realization of equal rights. Regarding Austria, it is the labor market mobility that has had the major political priority. It also means a higher degree of inequality between immigrants and non-immigrants and relatively difficult preconditions for the obtaining of equal rights. The United Kingdom has lower scores, and the integration policy is now finding a new role in the regional and local development.

### Access to Welfare Services

An important issue of the national or regional development is the socio-economic situation of immigrants, which also depends on the migration policy of the host country and, at the same time, on the national or regional welfare characteristics. Comparing the European welfare structures, besides Belgium or the Netherlands, immigrants (just like non-migrants) have basically easy access to the welfare services in northern Europe such as Sweden. The United Kingdom offers the least protection against market forces for immigrants. In Austria, Germany, and even Switzerland welfare benefits are only granted for immigrants if the strict requirements are fulfilled.

Welfare dependence has an important role in migration management, particularly for the accessibility of citizenship. It is difficult to access citizenship in case

of welfare dependence in the countries with strict rules, e.g. Austria, Germany, or Switzerland, and welfare supports are not so easy to be obtained either. In this manner, these states can protect and maintain their welfare level, although immigrants – particularly those with low income possibilities – can feel its disadvantages. Belgium, France, the Netherlands, Sweden, and even the United Kingdom offer open naturalization systems for immigrants with welfare dependence as well; thus, equal rights can also be accessed for this social group. The socio-economic situation of immigrants has an influence on the national or urban development. The quantity and quality of immigrant groups depend at the same time on the structure of the national or regional welfare characteristics.

According to Todaro's hypothesis (1969), immigrants leave their home on the grounds of their – often sketchy – conception and information regarding the future possibilities. Derived from the theories of Borjas (1989), Myrdal (1960), and Treibel (2011) but also from several empirical studies, groups with less potential on the market (lack of education, experience, possession, or contact) tend to migrate to countries or urban areas that can offer a secure welfare background or an equal income distribution, while migrants with higher education, more experiences or possessions usually choose a destination with stronger market competition despite the social inequality in the host country. Particularly the first generation of some ethnic groups is satisfied with a humble standard of living (even if they tend to save money for own properties or for remittances); they are thus not intensively interested in cultural assimilation, language acquisition, education, or carrier plans. The second generation often follows the attitudes of their parents, and thus the gap can hardly be reduced (Biffi et al., 2010).

The socio-economic gap between immigrants and the host community is therefore actually widening, and countries that try to provide an equal income distribution system have thus difficulties to maintain this level. Contrary to countries with generous welfare systems, in host countries with strict legal and administrative requirements, immigrants are motivated to improve their chances on the market.

### **Integration Policies and the Labor Market**

Immigrants with high human capital potential can easier be involved in the labor market and avoid unemployment: e.g. with language knowledge, soft skills, contacts, and other issues of social assimilation. In Austria, Germany, and the United Kingdom, unemployment rates for immigrants are also higher than those of the native population but not as much as in the multicultural regimes. By contrast, countries with multicultural policies, such as Belgium, the Netherlands, or Sweden, have more immigrants with difficulties on the labor market (*Table 3*).

**Table 3.** *Unemployment rates of selected countries  
[as the share of unemployed persons (15–64) in the labor force]*

	Native-born			Foreign-born		
	2002	2008	2014	2002	2008	2014
Austria	4.3	3.2	4.7	8.7	7.5	10.1
Belgium	5.7	5.9	6.9	16.7	14.6	17.4
France	8.0	7.0	9.1	14.2	12.0	16.0
Germany	8.0	6.6	4.5	10.5	12.3	7.9
Hungary	5.6	7.9	7.8	5.1	6.1	6.0
The Netherlands	2.2	2.5	6.1	5.3	6.6	12.0
Sweden	4.3	5.3	6.2	10.2	12.2	16.4
Switzerland	4.1	2.4	3.3	3.0	6.2	7.7
UK	4.9	5.6	6.1	7.6	6.7	7.1

Source: OECD, own calculations

As for the labor market participation of immigrants, analysing the data of both the OECD and the Eurostat, it is almost at the same level in Austria as that of non-immigrants; however, we can observe differences in view of region, age, country of origin, or skills. In Germany, Switzerland, or the United Kingdom, the native-born population has only approx. 10% higher rates of participation, while Sweden and the Netherlands have the lowest levels of immigrant participation on the labor market. It means that liberal welfare systems (United Kingdom) and regimes with high requirements (Austria, Switzerland) should show prospective labor market integration outcomes and narrower income gaps. In contrary, countries such as Sweden or the Netherlands have difficulties regarding the integration of immigrants in the labor market.

On the basis of labor market data, the participation of immigrants is higher in countries with a strict legal system regarding naturalization or integration pressures (Austria, Germany, Switzerland) than in countries with easier access to naturalization or lighter assimilation pressures (Sweden, the Netherlands, Belgium).

### Cultural and Spatial Segregation

From the perspective of the outcomes of the integration policies, it is important to distinguish the cultural dimension of these since it is permanently at the centre of controversies as for its definition or measurability (see also Bandelow, 2006; Treibel, 2011). Koopmans et al. (2005) compiled an index that reflects cultural rights and obligations (*Table 4*).

**Table 4.** *Koopman's index of cultural rights*

Host country	Scale (-)1 to (+)1
Germany	-0.20
France	-0.52
The Netherlands	+0.76
Switzerland	-0.85
United Kingdom	+0.31

Source: Koopman et al., 2005 – own illustration

The overall score involves the following categories: cultural conditions of naturalization, legal freedom for Islamic everyday practices, provisions for the Islam in institutions, political representation, and integration in the labor market. Along these dimensions (provisions or allowances), the European countries can be positively characterized, e.g.: state funding for religious schools and classes, education in own language, consultative bodies, institutions, financially supported associations, broadcasting time obligations, labor market actions, financial help for trainings and higher education, police and military employment, labor market obligations in the private sector, or even allowances regarding slaughtering of animal or call to prayer.

Beyond the priority of the language, the culture, and customs of the host community, the lack of the provisions mentioned above can be described in summary as barriers to cultural freedom and signals for assimilative goals. As *Table 4* also shows, at the time of Koopman's study, the Netherlands, followed by the United Kingdom, granted immigrants a wide range of rights and provisions, demanding less conformity in public institutions; however, several programs and actions of these governances were later not continued any more. Comparing the findings of Koopman with the legislative systems and the integration environment that characterize the European states, Sweden and Belgium can be considered to be on the positive side of this scale (high cultural freedom both in private life and in public environment). Austria is conversely in a position of the negative side of this scale due to its legal rules and definite integration goals, although if we look at the current concepts Austria now provides more representation for immigrants in several public and private areas.

The spatial segregation of immigrants – when this happens under the title of urban development – is regularly considered as a provision of multiculturalism and as an acceptance of cultural rights. Public housing programs and related integration actions have been organized to build and maintain housing estates and districts for special immigrant groups on the basis of their ethnic or religious features, thus segregating them from the host community both spatially and

socially. However, residential segregation is not only determined by financial circumstances or by national and local instruments. Immigrants have their cultural preferences, and it also affects their residential possibilities (self-segregation). On the basis of a cross-regional comparison of integration concepts (as a part of the author's dissertation), but as a result of some empirical studies (see also Gachter, 2005; Musterd, 2005), segregation seems to be assisted by the concepts of local policies (in some regions of the Netherlands, Belgium, the United Kingdom, Germany, and Austria). Particularly Muslim groups are segregated (Turks, North Africans, Iranians, Algerians, etc.), while the social groups these immigrants come from (e.g. employees with high skills) and the districts they live in also play an important role. Housing programs for immigrants can also be an instrument of integration (assimilation) concepts such as the development concept of Vienna (2014) in the spirit of the STEP.

### **Subnational Concepts and Instruments**

National and local governments have been learning for decades how to manage migration and its consequences. From the practical point of view, however, most experts have privileged the national context in their studies. This may be because the range of citizenship and immigration policies is always defined at the national level. However, at the local level, policies have more direct effects. So they have on the daily life of migrants, strengthening the linkage between migrants and natives (Penninx et al., 2004). Local governments experience the first challenges brought by ethnic, cultural, and social diversity that immigration causes (Rogers, Tillie, 2001). Comparing the migratory politics and strategies in Europe, it is mainly the local policy that can manage and accelerate the intensity of migrants' incorporation into the community. It is also at the local level that migrants usually have greater opportunities to become involved in political and civic life.

Regarding Austria, despite its humble MIPEX-scoring values, which have been stable over the last years, this country has a wide range of solutions as for the integration of immigrants, both at the national and subnational level. After the breakdown of the Austro-Hungarian Monarchy, the history of migration has also developed in the successive states in different ways. By now, Austria has become a nation with a mixed population, which means that approximately 12% of the inhabitants are foreign residents and 20.4% have a migratory background according to the Austrian statistics. The Austrian subnational, local authorities have also recognized the importance of immigrant integration. Different integration instruments have been developed – in Graz, even since the appearance of the first guest workers. However, we can talk about a countrywide intensive integration activity from 2000 onwards.

In Hungary (just like in several post-communist countries), the migration management is still in another phase. On the one hand, Hungary only became involved in international migration in the late 1980s. On the other hand, the tasks and the performance assessment of the municipalities have only gained importance in the recent years, and the efficient decentralization or modernization has still not yet quite worked out.

Although the labor market is basically controlled at the national level, the regional features of immigration also show interactions with these areas of development.

**Table 5.** *National and subnational competencies in Austria in relation with migratory challenges*

	National level	Subnational level
<i>Legal rules</i>	<ul style="list-style-type: none"> <li>- immigration</li> <li>- employment</li> <li>- welfare services</li> <li>- equal rights</li> </ul>	<ul style="list-style-type: none"> <li>- education</li> <li>- social aid</li> <li>- spatial planning</li> <li>- real property</li> <li>- acquisition</li> </ul>
<i>Priorities</i>	<ul style="list-style-type: none"> <li>- basic skills</li> <li>- dialogues</li> <li>- neighborhood</li> <li>- health</li> <li>- sports</li> <li>- Austrian culture</li> </ul>	<ul style="list-style-type: none"> <li>- German language</li> <li>- schools</li> <li>- public sector</li> <li>- women's integration</li> <li>- information transfer</li> <li>- diversity</li> </ul>
<i>Communication</i>	<ul style="list-style-type: none"> <li>- defining preconditions</li> </ul>	<ul style="list-style-type: none"> <li>- cooperation</li> </ul>

Source: Patay, 2016

As already analysed in this study, the labor market participation of immigrants is higher and unemployment rates are lower in countries with a strict legal system regarding welfare provisions, naturalization, and integration pressures (Austria, Germany, Switzerland). Furthermore, regional differences can be observed among inputs and outcomes of integration solutions within a country. In addition, integration program and labor market possibilities strengthen the phenomenon of immigrant concentration, which multiplies the positive steps of development. For that, the labor market participation of immigrants is high despite the relatively low rate of migratory movements. Female immigrants, both newcomers and residents (1. or 2. generation) are intensively involved in integration program. Their labor market participation is higher than in the other regions, and they have also success in running small businesses. A cooperative attitude of the regional or local government regarding integration of immigrants and the priority of information transfer among the actors (local community, immigrants, institutions, authorities, entrepreneurs, civil groups, and media)

profoundly affect the outcomes of the labor market and thus both the social and economic development of the region. Regions of Austria, e.g. Burgenland, capitalize effectively on the migratory flows and their consequences.

## Summary

The study has investigated the linkages between the main types of integration concepts and some factors of national and regional development, such as issues regarding welfare services, social and spatial segregation, comparing the European countries. Integration policies define how easy it is to obtain equal rights in the host country, getting entitlements to welfare benefits. An easy access to these rights may lead immigrants to dependence, not only financially but also regarding their future residence permit or naturalization chances. Besides the social conflicts, this dependence has built barriers against national or local development mainly through the income gap and labor market issues. Naturalization is a common way in Europe to integrate immigrants – with its requirements and entitlements to political, economic, and social advantages. The accessibility of citizenship, but of a residence permit too, varies in Europe.

On the basis of this study, liberal welfare systems and regimes with strict requirements have good labor market integration outcomes and fewer social conflicts. In contrary, countries with multicultural policies and a high level of welfare provisions have difficulties regarding the integration of immigrants in the labor market; labor market participation is lower. Systems with restrictive legal rules and administrative requirements regarding cultural integration, equal rights, and welfare services thus also support social well-being besides economic development. Open countries with easy access to equal rights have poorer outcomes on the labor market and less success in relation to spatial and social segregation.

In summary, the characteristics of a national migration policy have impacts on the economic potential and the well-being of the whole society as well as on the intensity of regional development. Regional and local integration policy have also become ever more important in several countries over the last decades. The cooperative and communicative attitude of regional or local governments and a good information transfer among the actors profoundly affect the outcomes and thus both the social and economic development of the region.

## References

- Balázs, I. (2003). A központi szint alatti közigazgatás helyzete és változásai az EU országokban I-II. [Features and changes of the subnational public administration in the EU Member States I-II]. *Magyar Közigazgatás* 9–10.
- Bandelow, N. C. (2006). Politische Systeme und kollektives Regierungslernen am Beispieldeutscher und britischer Europapolitik [Political systems and collective learning of governing with the example of German and British EU policies]. *Zeitschrift für Politikwissenschaft* 16(4): 1275–1298.
- Banting, K.; Kymlicka, W. (eds). (2006). *Multiculturalism and the welfare state: recognition and redistribution in contemporary democracies*. Oxford University Press, Oxford.
- Barry, B. (2001). *Culture and equality: an egalitarian critique of multiculturalism*. Harvard Press, Cambridge, MA.
- Bauböck, R. (1994). *The integration of immigrants*. Council of Europe CDMG. Strasbourg.
- Biffl, G.; Skrivanek, I.; Steinmayr, A.; Faustmann, A. (2010). *Migrantinnen und Migranten auf dem burgenländischen Arbeitsmarkt* [Immigrants on the labor market of Burgenland]. AMS Burgenland, Eisenstadt.
- Bjerre, L.; Helbling, M.; Römer, F.; Zobel Malisa (2015). Conceptualizing and measuring immigration policies. *International Migration Review* 3(49): 555–600.
- Brubaker, R. (1995). National minorities, nationalizing states, and external national homelands in the new Europe. *Daedalus* 124(2). Accessed from: <http://works.bepress.com/wrb/16/>, on: 12.5.2016.
- City Administration of Vienna (2014). *STEP 2025 – Stadtentwicklungsplan Wien* [STEP 2025 – Urban development plan of Vienna]. AV + Astoria Verlag, Wien.
- De Haas, H.; Natter, K.; Vezzoli, S. (2016). Growing restrictiveness or changing selection? The nature and evolution of migration policies. *International Migration Review*. Accessed from: <http://onlinelibrary.wiley.com/doi/10.1111/imre.12288/full#imre12288-note-1001>, on: 20.2.2017.
- Dustmann, Ch.; Frattini, T. (2012). Immigration: the European experience. *Discussion Paper 2012/1*. NORFACE Migration.
- Ellerman, A. (2013). Migration and citizenship. *Newsletter of the American Political Science Association* 2013/1.
- EUROPEAN COMMISSION (2000). *Communication from the Commission to the Council and the European Parliament on a community immigration policy. Executive summary. COM/2000/0757 final*. Accessed from: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52000DC0757>, on: 10.12.2016.
- (2003). *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee, and the Committee of*



- the Regions on Immigration, Integration and Employment*. Accessed from: [http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003\\_0336en01.pdf](http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003_0336en01.pdf), on: 10.12.2016.
- (2015). *Policies of DG Migration and Home Affairs*. Accessed from: [http://ec.europa.eu/dgs/home-affairs/what-we-do/policies/index\\_en.htm](http://ec.europa.eu/dgs/home-affairs/what-we-do/policies/index_en.htm), on: 20.8.2016.
- Fassmann, H.; Münz, R. (1996). *Migration in Europa. Historische Entwicklung, aktuelle Trends, politische Reaktionen* [Migration in Europe. Historical development, current trends, political reactions]. Campus Verlag, Frankfurt am Main.
- Feleky, G. A.; Vincze, A. (2010). *A sikeres integráció feltételeinek feltárása* [Exploring the factors of the successful integration]. Dél-Alföldi Regionális Társadalomtudományi Egyesület, Szeged.
- Florida, R. (2005). *Cities and the creative class*. Psychology Press, Washington.
- Gafner, Ch.; Yale-Loehr, S. (2010). Attracting the best and the brightest. A critique of the current U.S. immigration system. *Fordham Urban Law Journal* 38(183). Accessed from: <https://ssrn.com/abstract=1802690>, on: 20.8.2016.
- Gächter, E. (2005). *Sozialraumanalyse 1990/2000 – Stadt-Region* [Analysis of social space 1990/2000 – urban regions]. Verein Region Bern.
- Goodhart, D. (2004). Too diverse? Is Britain becoming too diverse to sustain the mutual obligations behind a good society and the welfare system? *Prospect* 95: 30–37.
- Huddleston, T. et al. (2015). *Migrant Integration Policy Index (MIPEX)*. Accessed from: <http://www.mipex.eu/play/>, on: 12.8.2016.
- Jones-Correa, M. (1998). *Between two nations. In the political predicament of Latinos in New York City*. Cornell University Press.
- Koopmans, R. et al. (2005). *Contested citizenship. Immigration and cultural diversity in Europe*. UMP, Minnesota.
- Kováts, A. (2014). Migrációs helyzetkép [Migratory situational picture]. In: Taróssy, I.; Glied, V.; Vörös, Z. (eds.), *Migrációs tendenciák napjainkban* [Migratory tendencies of today]. Publikon, Pécs, 329–349.
- Musterd, S. (2005). Social and ethnic segregation in Europe: levels, causes and effects. *Journal of Urban Affairs* 27: 331–348.
- Myrdal, G. (1960). *Beyond the welfare state. Economic planning and its international implications*. Duckworth, London.
- Niessen, J.; Chopin, I. (2002). *Anti-discrimination legalisation in EU Member States*. European Monitoring Centre on Racism and Xenophobia. Vienna.
- Oltmer, J. (2017). *Globale Migration – Geschichte und Gegenwart* [Migration – history and present]. CH.B. Beck, Munich.
- Patay, T. (2016). A migrációs kihívások és megoldások regionális sajátosságai [Regional features of migratory challenges and political solutions]. In: Berghauer,

- S. et al. (eds.), *Társadalomföldrajzi kihívások és adekvát válaszlehetőségek a XXI. Század Kelet-Közép-Európájában* [Social geographical challenges and search for adequate answers in the East-Central Europe of the 21<sup>st</sup> century]. Berehove, 380–387.
- Patay, T.; Pálmai, É. (2014). A területfejlesztés egy új típusú megközelítése [A new approach to regional development]. In: Takácsné György, K. (ed.), *Az átalakuló, alkalmazkodó mezőgazdaság és vidék* [The changing and adaptable agriculture and countryside]. Károly Róbert Főiskola, Gyöngyös, 1213–1221.
- Pennix, R. et al. (2004). *Integration of migrants: economic, social, cultural and political dimensions*. European Population Forum 2004. UNECE, Geneva.
- Rogers, A.; Tillie, J. (2001). *Multicultural policies and modes of citizenship in European Cities*. Ashgate, Aldershot.
- Statistik Austria. (2016). *Die Informationsmanager – Statistiken* [The information manager – statistics]. Accessed from: [http://www.statistik.at/web\\_de/statistiken/index.html](http://www.statistik.at/web_de/statistiken/index.html), on: 5.8.2016.
- Todaro, M. P. (1969). A model of labour migration and urban unemployment in less developed countries. *American Economic Review* 59(1): 137–148. Pittsburgh.
- Torma, A. (2003). *Önkormányzati reformok Nyugat-Európában és tanulságaik* [Reforms of the local government in Western Europe and their lessons]. Accessed from: [www.uni-miskolc.hu/~wwwwallin/kozig/hirek/eukozig/onk\\_reform.pdf](http://www.uni-miskolc.hu/~wwwwallin/kozig/hirek/eukozig/onk_reform.pdf), on: 16.8.2016.
- Treibel, A. (2011). *Migration in modernen Gesellschaften – Soziale Folgen von Einwanderung, Gastarbeit und Flucht* [Migration in modern societies – social consequences of immigration, guest-work and escape]. Juventa Verlag, Weinheim und München.
- Uberoi, V.; T. Modood. (2013). Has multiculturalism in Britain retreated? *Soundings* 53: 129–142. Dagenham.