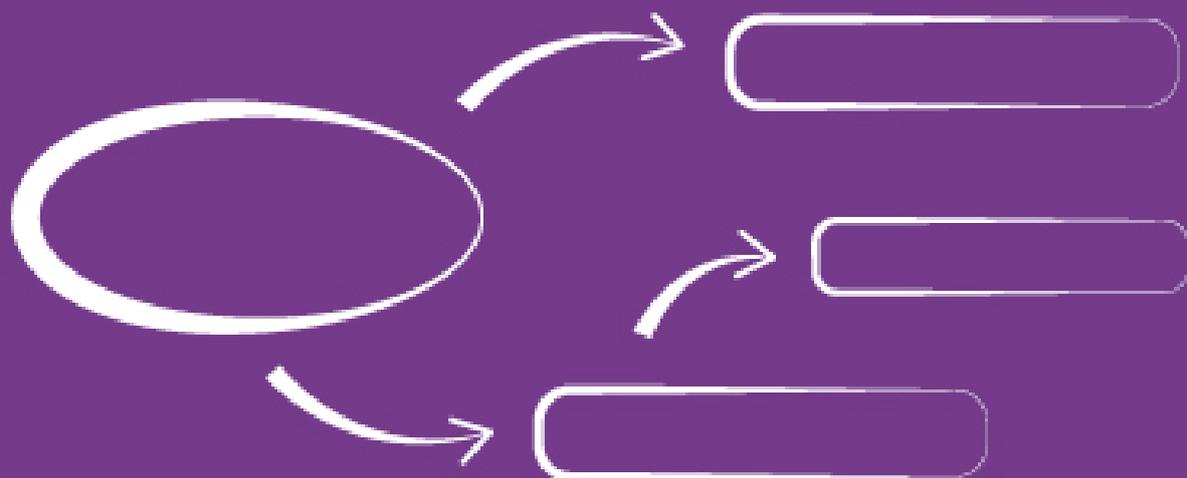


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Impact of Debt Management Strategy on Economic Growth of Sub-Saharan Africa: a Search for an Appropriate Strategy

Abstract:

To achieve a meaningful growth most countries in the sub-Saharan Africa may find it difficult to escape borrowing. It is on record that many of these countries have lived literally on debt, debt relief and aid from more developed economies. The effect of debt in most of the sub-Saharan was found to be negative on growth (Okosode and Isedu, 2008; Adegbite et al, 2008). Several works have supported the argument however using very insignificant samples; and few of those are from the sub-Saharan Africa (Fosu, 1996). The negative impact of debt on economic growth could be as a result of factors other than debt. Issues of corruption, mismanagement and the strategy of managing sovereign debts are often ignored. It is believed that an effective debt management strategy is a relevant factor for economic growth. The objective of this work is to determine the effect of a debt management strategy employed by a country on economic growth of such a nation. The work will employ the use of the least square regression analysis to establish the relationship between the variable of debt management (DeM) and economic growth. A Time series debt data was generated from the World Bank Economic Policy and External Debt data bank. Total external reserves as a percentage of external debt (TOTEXRES) represents economic growth in the model, and debt management (DeM) was computed from the World Bank's debt management performance assessment (DeMPA) and the joint World Bank/IMF debt sustainability analysis (DSA) reports. It was expected that an effective debt management strategy would be positively related to economic growth.

Keywords: debt, management, strategy, relief, economic growth

INTRODUCTION

In order to achieve an effective government debt management there is need for putting in place an effective and efficient debt management strategy in place. The strategy of ensuring an effective and efficient sovereign debt management should be allocated to a process which although complimentary is independent of the macroeconomic policy apparatus of such a government. Due to the availability of functional institutions and services the advanced economies of Europe, the Americas and Asia find it quite possible to employ the use of markets and financial market instruments to promote and implement very important policies that impacts positively on the economy. For instance in developed countries unlike in the sub-Saharan Africa, the capital markets are very vibrant, effective and sensitive to policy changes. An increase in interest rates, a slight adjustment of government on taxes for instance can easily result in a multiplier effect and at the end producing the desired results. Advanced capital and functional markets tend to provide accessibility to capital both of domestic and external sources and offer a wide range of instruments and derivatives that financial experts deal in and governments use to stabilise the economy as well as achieve a meaningful growth. Therefore for the sub-Saharan Africa the need for the development of a debt management strategy is paramount but may however be assembled in a manner that is only peculiar to the sub-region and can be accommodated by the extent of the institutional development among the nations.

The management of sovereign debt is of very economic importance in the macro economic affairs of any nation. In fact this role has never been more desirable than during the aftermath of the very recent economic crisis that had engulfed the world economy. While the pinch last on governments around the world some with the assistance of leading financial institutions are implementing various strategies to steer back their economies on tract if nothing to curtail the negative impact of the crisis if such economy is not already deep in the crisis. Whether debt is the major source of the economic decline facing the world, its effective management by sovereign nations particularly the developing and as a desperate measure among the lesser developed economies will go a long way in securing them against the crisis and ensuring the desired economic growth. Weist, Togo, and Prasad (2010) argued that there exist an empirical evidence to support the fact that an effective debt management strategy could help middle and lower income countries stave off the negative effect of the economic crisis. According to Williams (2009) sovereign debt management involves a process of trying to establishing and executing a strategy which has the objective of managing strictly the government debt in such a manner that the following goals will be achieved:

- (i) Raising the required amount of funds needed for a given period;
- (ii) Achieving the government's outlined cost and risk objectives; and
- (iii) Meeting the government's specific objectives of developing for instance a vibrant, efficient market for its securities.

While debt management among the developed nations in the industrialised economies of Europe and the United States is implemented with the help of a range of developed, effective and functional institutional and market frameworks which make adjustments and economic policies possible, among the lesser developed nations of the world especially those in the sub-Saharan Africa the scenario is completely different. In the sub-Saharan Africa there is a lack of if not a total absence of the relevant agencies and institutions required to implement an effective debt management strategy. Yet in the emerging world system development is considered strictly economic (Comeliau, 2005) where trends in development are only comparable to the antecedents of the historical experiences of the industrialised countries. Even though emerging markets especially the poor ones in the sub-Saharan Africa lack the market sophistication of their counterparts in the developed economies (Dooley, 2000). Thus making a case for the development of a suitable debt management strategy for the peculiar economies of the lesser developed countries.

The Evolution of Public Debt Management and Institutions

The process of an active debt management is not strictly new in the sub-Saharan Africa; more so not only among the poorest lesser developed nations on earth. The subject of debt management is relatively new in the traditional global economics sense. The separation of the practice of debt management and that of monetary policy in the United Kingdom followed the works of Tobin of the 1960s. A separate debt management office came on stream as recent as 1995 (Leong & Britain, 1999). Tobin (1963) observed that the claims an economy has on government are articulated and contained in monetary control and debt management. Debt management has to be practiced in conjunction with other government agencies involved with its external finance (Klein, 1994). Wheeler, (2004) defined government debt management as the method of putting in place and effecting a strategy for transparently managing the government's debt with the main objective of meeting the government's financing needs, the costs and risks involved and any other debt management goals the government may have set such as evolving and preserving an efficient market for government securities.

Government debt management is however not an old field in finance. In fact the growing need for a public debt management among most countries in the OECD followed the increasing government borrowing, the need for greater autonomy for the central banks and the general agitations for changes in the objectives and priorities of public debt policies put together culminated into a choice of fresh institutional arrangements for countries to manage their publicly sourced debts (Elizabeth, 2003). Up till the late 1980s among many of the so-called current developed nations debt management was never considered independent of the monetary policy and had been handled by the same public sector economists. By the 1990s however debt management was increasingly seen to be an independent public policy with separate objectives of ensuring a risk-cost trade off in the process of managing sovereign debts. Due to the nature of their institutions, which are by far very organised and effective, the countries in the OECD found it quite easy to adopt the shift in policy and readily opted for separate debt management offices which were seen as the most appropriate arrangement of institutions for the attainment of operational efficiency, economic stability and growth. Few however maintained their

debt management offices under the various ministries of Finance. But sovereign debt management was carried out among developing countries under relatively favourable circumstances (Gooptu & Braga, 2010).

In the sub-Saharan Africa, the new institutional approach in the area of public debt management was readily adopted. As far back as the year 2000, Nigeria had established a separate debt management office with the objective of carrying out an effective management of Nigeria's debt for development and economic growth. Beside Nigeria however, majority of the countries in the sub-Saharan Africa e.g. Ghana, Cameroun and Uganda, continue to have their apex banks and Ministries of Finance as the case may be to handle issues concerning debt and its management. But the crux of the matter is that the term debt management tend to be applied loosely even among the few sub-Saharan African countries where independent debt management offices happen to exist. For instance the issue of cost of borrowing or the risks inherent in the process of government debt tend not to be prioritised. The bureaucratic red-tape-ism which hinges on corruption and mismanagement remained entrenched and eventually with the dysfunctional institutions debt management in the sub-Saharan Africa exist only as dictated by the executive.

The functional objective of any government debt management is to enable the financing of government deficits through the process of the issuance of government debt or bonds as well as handling the aspects of monetary financing. This is to try to achieve the set objectives of maintaining a good access to market, ability to drastically minimise the cost of borrowing, ensuring a prudent and manageable level of risk; and ensuring the development of an effective and efficient government securities market. Through these processes the function of an ideal debt management becomes securing market access; ability to develop a good government securities market, the establishment of a system that will aid in the management of outstanding stock of public debt and general cash management (Blommestein, 2009). The World Bank (1990) however gave a broader function of government debt management. According to the Bank an effective debt management primarily revolves around seven major functional areas: The issues of policy, regulatory, resourcing, recording, analytical controlling and operating functions. While the first three functions of policy, regulation and resourcing can easily be attributable to the executive aspect of debt management, the last four have to do with active operational aspect of debt management.

Sub-Saharan African Debt Crisis

In an effort to carve out a suitable debt management strategy for the sub-Saharan Africa perhaps it becomes imperative for us to try to answer the following questions: Is the process of debt management as recently introduced contributory to economic growth? And if the answer is in the affirmative; what strategy of debt management would be most suitable for the countries in the sub-Saharan Africa?

Several countries in the sub-Saharan Africa qualified for the HIPC debt relief initiative commencing from the early new millennium. It is however argued that governments' discount rate remains unchanged in the two periods before and after the debt relief, then all the bad policies will continue even after debt relief (W. Easterly, 2002). This resulted in many seeing debt relief as a strategy for the

creditor nations and institutions to salvage and stabilise their markets very much patronised by the debtor nations. Berthélemy and Vourc'h (1994) argued that the step-by-step strategy of debt relief as put together by the multilateral financial institutions and other private creditor bodies was in essence packaged to systematically relieve the lending banks involved from the negative effect of widespread debt crisis. The debt relief granted was not in any way too much as a benefit to the debt ridden countries, instead the threat of debt crisis was not to expose the lending banks to the looming financial crisis and the danger of bank failure but there was a clear risk that the process could have devastating effect for the globe and make vulnerable its economy. Barry and Tomitova (2006) raised a serious ethical question on the debt on which relief is claimed to have been granted. According to them some people are fond of making incorrect and fictitious suggestions most of the time concerning the extent of poor countries' indebtedness; these statements tend to create a wrong impression that the reneging on such stands is equivalent to what they think in error to be 'debt relief' or alternatively by stopping to make the whole claims the lending bodies or institutions have in a way 'reduced its claims' on a 'debtor.' To these two researchers it follows naturally in such times of claims and counter claims to actually believe that there were no debts in the beginning of it all.

It is noteworthy that there was actually no improvement in the economy of any debt relief beneficiary nation as a result of any sound policies or improved external environment. The slight change was simply as a result of the quantum of the debt relief and temporary. Debt relief obviously turned out to be a mere increased free funds at the disposal of the benefitting nations which had no effect on the longer term debt situation of the poor nations.

The IMF (2009) report was however cautious in stating that the issue of unsustainable debt was yet to be completely resolved. According to the debt sustainability analysis (DSA) that was conducted in most part of the year 2008, showed that about 61 per cent of sub – Saharan African countries fell under nations categorised under the low and moderate risk of debt distress. The others were classified under the high risk or in debt distress categories. The risk of debt distress among the countries is given below.

Table 1 Risk of Debt Distress by Country Grouping

Country Groupings	No of Countries	Risk of Debt Distress			
		Low Risk	Moderate Risk	High Risk	In Debt Distress
PRGF– eligible countries	70	31.4	32.9	22.9	12.9
Sub-Saharan Africa LICs	36	30.6	30.6	19.4	19.4
Non-HIPC and Completion Point HIPC	26	42.3	38.5	15.4	3.8
Non-HIPCs	6	50.0	33.3	0.0	16.7

Completion-point HIPCs	20	40.0	40.0	20.0	0.0
Other HIPCs (pro-completion point)	10	0.0	10.0	30.0	60.0
Post-decision point countries	8	0.0	12.5	25.5	62.5
Pre-decision point countries	2	0.0	0.0	50.0	50.0

Source: IMF, 2009

The table shows that out of the 36 sub-Saharan African countries under study about 11 or 30.6 per cent of them are harbouring a moderate risk of debt distress, 7 or 19.4 per cent of these countries on the high risk and with another 19.4 per cent already suffering the dreaded distress. In all, about 25 countries or 70 per cent are affected by the debt distress, further confirming that SSAs were not free from the grips of debt and the complications it brings along with it.

In the process of debt relief there was no provision for the protection of the HIPCs from external shocks (Martin, 2004a) where the multilateral institutions made little or no provision for development finance. In many instances donor nations are more concerned with the repayment of loans due to western companies (Dijkstra, 2004). These inconsistencies led to a situation where most HIPCs have slipped back into distress or showing signs of distress (IMF, 2009) because the initiative did not provide for debt sustainability (Martin, 2004b). Kuteesa and Nabbumba (2004) observed that in Uganda, a HIPC, debt to exports ratio was recorded to be 50 per cent higher than it had been before the debt relief. Uganda had however received extensive assistance from DRI and MEFMI long before the HIPC (CPB, 2008). With the failure of the debt relief initiative it is thus left for countries faced with threat of debt crisis to fashion out a suitable strategy of managing their debts.

Strategy in Sovereign Debt Management

By the strategy of debt management we refer to the process through which we plan to achieve the set out objectives of a government's debt liabilities. The public debt management strategy involves the setting up of objectives and policies for the management of government liabilities (Blommestein, 2009) as well as providing frameworks for making portfolio arrangements and decisions in respect of certain parameters for cost and risk. Sovereign debt management also encompasses the important choices inherent in government debt management which concern the characteristics of debt instruments, including the composition of the desired currency; the desired maturity structure and liquidity of government debt; appropriate duration of interest rate sensibilities; and the proportion of the domestic currency denominated debts, nominal interest or indexed to inflation debt to be issued. An important aspect of the strategy of debt management is the cost at risk approach and the evaluation of the strategies in accordance to the different projections of envisaged costs and risks under different strategies for managing the government finance portfolio.

For Scott (2009) economic theory has no clear cut answer to the fundamental questions raised under the issue of the strategy of government debt management. These questions that are traditionally regarded as

unrelated are increasingly seen recently as joint. The important question of the amount of debt to be raised by a government at a given point in time and to what extent such an amount should be varied over time is one question; and the other question has to do with the aspect of composition of the debt government should issue. That is what type of debt and how it will be varied over time. For Williams (2009) both the size and composition of government debt matters in the determination of debt management strategy. By focusing on the size of debt implies the prioritisation of a country's track record in debt sustainability. Debt sustainability refers to the ability of a nation to maintain the servicing its debt liabilities without an unrealistically alteration to its income balances and size of expenditure. Here emphases tend to be directed at the possibilities of underlying vulnerabilities associated with none or delayed servicing of debt. Debt sustainability analysis is employed in policy and policy making decisions as well as the primary balance; where stress tests on results and alternative scenarios exposes the underlying weaknesses and promotes realism in meaningful projections. Debt management strategy is however more concerned with the composition of government debt portfolio rather than its overall size. An ideal debt strategy is therefore more inclined towards the achievement of the objective of improved resilience to economic shocks; where vulnerabilities arising from the composition of the debt portfolios are acknowledged.

In the sub-Saharan Africa the requirements for an effective debt management system may prove extremely tough where there is poor development or total lack of a functional capital market is the case. For Roe and Griggs (1990) there are few African countries that could successfully finance a deficit that could amount to an equivalent of 1 per cent of such a country's GDP through the sales of government securities in the domestic capital market. The development of a viable domestic capital market may prove difficult as a result of both macroeconomic and to a larger extent political instability. Furthermore as result of controlled interest rates investors are discouraged because of unrealistic returns.

A major deficiency in the ability for the sub-Saharan Africa to develop a viable debt management strategy is the absence of an effective capital market. The ability for the development of a viable capital market is one of the major objectives of government debt management. The promotion of an effective and efficient capital market is however dependent on the consistency in the supply of securities which make possible the accessibility to a variety of capital instruments. The factors that tend to mitigate the supply of securities in African markets are as follows:

- “(a) A predominance in many African countries of very small corporate sectors;
- “(b) A heavy dominance within the corporate sector of public enterprises used to borrowing directly from government;
- “(c) Within private corporate sectors, predominance of family owned businesses unhappy, possibly, about the greater disclosure and security associated with public issues rather than in family borrowing and lending;

“(d) The high costs of issuing and trading in securities arising from thin markets and unsophisticated techniques;

“(e) Fiscal disincentives for the issue of securities relative, for example, to borrowing from the banking system; and

“(f) The absence of any positive incentives for companies going public.” (Roe,1990: 30)

Many of the low income countries especially those in the sub-Saharan Africa tend to remain at the early stage in the process of defining a comprehensive debt management strategy; this could be due to lack of functioning domestic public debt markets that will assist to reduce financial vulnerabilities. In some countries this shortcoming is most pronounced especially among those that benefitted from significant HIPC and MDRI debt relief (IMF, 2009).

Research Philosophy

The subject of debt being a branch of Finance is accordingly placed under the positivists’ and the objectivists’ field of knowledge and therefore follows that it is even more appropriately placed, perspective wise under the functionalists’ paradigm. This paradigm is based upon assumptions that society possesses a concrete, real existence and a systematic feature that is focused at the production of an ordered and regulated state of affairs whose objective is to promote a social theory striving to understand the role of humans in the society (Morgan and Smircich 1980). These assumptions results into the existence of an objective and value free social science that can create a true explanatory and predictive information about reality (Ardalan 2011) where there is independence to the observer from the observed.

Relationship between debt management and economic growth

The work relied on two different sources of data: The primary and the secondary sources. Data from the multilateral financial institutions such as the World Bank and the IMF comes in secondary form and covers information on variables such as the total external reserves (TORESEX), which have been used in multiple regression analysis. Where data involves a latent variable such as debt management (DeM), structural equation modeling is adjudged more appropriate. Bollen (1998) observed that structural equations models are used to refer to a procedure in statistics for building a multi-equation systems which contains continuous latent variables with multiple indicators, error terms, other equation related errors and the observable variables.

The SEM is considered very appropriate at the next level of work where an appropriate debt management strategy would be sought for the sub-Saharan Africa (SSA). SEM is a combination of multiple regression analysis, confirmatory factor analysis (CFA) and path modeling (Path Analysis). Thus structural equation will be used to confirm our multiple regression analysis using the primary data collected through the administration of questionnaires. Amos statistical software would be used in SEM regression analysis.

Model Specification

For the purpose of this paper however we resolve to adopt the Ordinary Least Squares (OLS) multiple regression analysis in order to examine the impact of debt management on economic growth in the sub-Saharan Africa. Our approach assumes a functional relationship between the economic growth (TORESEX) and the key explanatory variables of debt management (DeM). Thus, in this study, different specifications of the model will be tested and estimated. Based on the review of literature, models are specified for economic growth and debt management. The aim of the model is to verify the impact of sovereign debt management, on the overall output growth and performance of countries in sub-Saharan Africa over the given period.

Specifically, Economic growth (TORESEX) is taken to be a function of Sovereign Debt management (DeM).

The general framework of the functional form is expressed as:

$$Y = f(\text{DeM})$$

$$\text{DeM} = \text{GOVED} + \text{CORMAC} + \text{BORFINA} + \text{CASHFLM} + \text{OPRX} + \text{DTRR} + \text{GOVDEC} + \text{AUTH}$$

$$\text{TORESEX} = f(\text{GOVED} + \text{CORMAC} + \text{BORFINA} + \text{CASHFLM} + \text{OPRX} + \text{DTRR} + \text{GOVDEC} + \text{AUTH}) \dots \dots \dots (1)$$

Where TORESEX is the External reserves representing economic growth; GOVED stands for government and strategy development, CORMAC is coordination with macro policies, BORFINA stands for borrowing and related financing activities, CASHFLM is cash flow forecasting and cash balance management, OPRX is operational risk management and DTRR stands for debt records and reporting and GOVDEC represents government decision, while AUTH stands for the approving authority. Incidentally the variables of DeM represent the issues raised with the respondents in the administered questionnaires. The models are given as follows;

$$\text{RTORESEX}_t = \beta_1 + \beta_2(\text{DeM})_t + \mu_t \dots \dots \dots (2)$$

Taking the first difference of the equation above yields a slightly different version of model (2).

The specification of the model is:

$$\Delta \text{RTORESEX}_t = \beta_1 + \beta_2 \Delta(\text{DeM})_t + \mu_t \dots \dots \dots (3)$$

Accordingly, the a priori expectations are:

- $\beta_1 > 0, \beta_2 > 0$
- β_t s = coefficients
- β_1 = constant (intercept)

μ_t = error term

Research Population and Sample

The HIPC sub-Saharan African countries and Nigeria form the population of this work. For the purpose of this work however four (4) countries Cameroon, Ghana, Nigeria and Uganda have been sampled. Our respondents were senior and management staffs of Central Banks, Ministries of Finance, and debt management offices in the sampled countries. Some respondents were sampled from the West African Institute for Financial and Economic Management (WAIFEM). The data expected from these sources are secondary time series by nature and thereby ideal for a quantitative research. Data for Nigeria was solely used for this report.

Quantification of debt management variable

To determine the single most important variable of DeM; the debt management annual performance ratio was strictly from the researcher's computation, adjustments and manipulation. In this process a number of documents were used. These documents are the debt sustainability analysis (DSA), the Debt Management Performance Assessment (DeMPA) report, the MDRI (Medium Debt Relief Initiative) and the HIPC Initiative assessments. Combined together the researcher effected some adjustments and arrived at the computation under column 6 (See appendix I).

Computation

Appendix I show a time series debt and growth data obtained on Nigeria. For the purpose of our first stage data presentation and analysis one variable each from the group of dependent and independent variables would be sufficient. In order to establish a relationship between debt management and economic growth i.e. to attempt to answer our research question number one, we need to simply regress the time series data in column six (6); the independent variable on time series data in column eight (8) or the dependent variable – total external reserves as a percentage of total external debt. But the data in column eight (8) is readily accessible from the World Bank data base on debt. How about the debt management (DeM) performance annual ratio?

Debt Management Performance Annual ratio Computation

Nigeria was never an HIPC (World Bank 1999). However it was considered along with other HIPCs for debt relief in 2006 after fulfilling some requirements (Okonjo-Iweala, Soludo, & Muhtar, 2003). For the purpose of computing the debt management performances over the years from 1980 we need to create six (6) different periods, with each period covering an average span of five (5) years. The periods are here named A, B, C, D, E, and F.

Debt Management Performance Ratio Score

DeMPA scores performance on a scale of A, B, C, and D. A stands for Outstanding, B is sound, C is fair and D is poor. Thus countries' debt management is assessed based on the scores against the debt performance indicators listed in table 2. Since under DeMPA the rating is A to D from its inception in

2008, there is no provision for a performance below D i.e. E and F. For this reason we make the following assumptions:

All assessments after 2008 must be scored A to D. This is for the simple reason that these performances are post HIPC initiative and MDRI; two World Bank and IMF initiatives were equally based on a particular ranking;

The HIPC/MDRI decision point and the period prior to debt relief should be grouped E and F respectively.

Class intervals: There will be five classes with unequal class sizes.

DeMPA Scores for Nigeria 1980 to 2011

To compute the debt management (DeM) performance ratio which will complete column six (6) of appendix I we proceed as follows.

Table 2

Class	Interval	Score
A – Outstanding	69.5 – 99.5	84.5
B – Sound	59.5 – 69.5	64.5
C – Fair	49.5 – 59.5	54.5
D – Poor	39.5 – 49.5	44.5
E – Decision Point	29.5 – 39.5	34.5
F – Pre-debt Relief	19.5 – 29.5	24.5

Source: Author's computation

Table 2 above shows the scores based on Nigeria's debt management performance between 1980 and 2011.

Between 1980 and 1999 when Nigeria was engulfed in a debt crisis and yet to secure a debt relief it is thus scored 24.5 per cent. Having fulfilled all the conditions for debt cancellation Nigeria is scored 34.5 per cent. This period is termed decision point and covered the years 2000 and 2005. The year 2006 to 2008 represent post decision point and Nigeria is scored 44.5. 2008 to 2011 Nigeria was assessed twice under DeMPA with scores of 59.54 and 60.11 respectively.

Regression Output

Multiple regressions analysis was carried out in order to ascertain or investigate the relationship that exists between the strategy employed by a country in the management of its debt and the debt relief

secured from the creditor nations clubs as brokered by the multilateral financial institutions of the World Bank and the IMF and economic growth as represented by exports of goods and services as a percentage of GDP.

Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. Furthermore the correlation between the predictor variables included in the study was examined.

Checking Assumptions: Multicollinearity

The coefficient table (Appendix II) gives Tolerance and Variance Inflation Factor (VIF). Where the tolerance value is less than 0.10 then it is assumed that there is the possibility of multicollinearity between the independent variables. A VIF value exceeding 10 also points to possible multicollinearity among the independent variables. In situations where all these values mentioned above are exceeded, the need to reconsider the maintenance of one of the independent variables in the process becomes necessary.

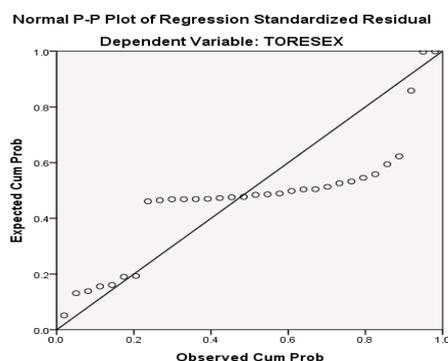
Checking our Coefficients^a table (Appendix II), it was found that a tolerance value of 1.000 was recorded for the variable of Debt management (DeM). This value is by far in excess of 0.10; which implies an absence of multicollinearity.

A VIF value of 1.000 was equally recorded against the independent variables of debt management (DeM). The value recorded was found to be lower than the maximum of 10. This further implies that our independent variable is free from the problem of multicollinearity.

Checking Assumptions: Outliers, Normality and Linearity and the Scatterplot

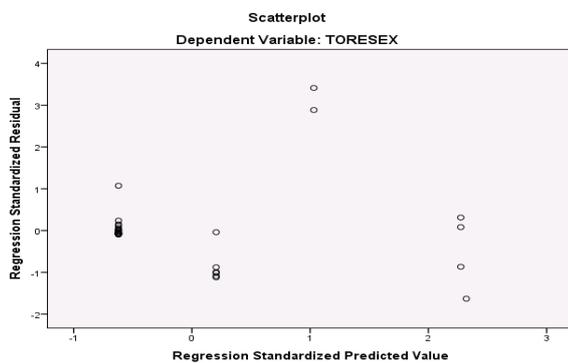
In the process of interpreting the SPSS result we need to verify our data by checking the Normal Probability Plot (P-P) of the regression standardised residual and the scatterplot shown below (figure 1). In the box we expect to see on the normal p-p plot that all points lie in a reasonably straight diagonal line from the bottom left of the square box to the top right angle. In our case the same pattern is depicted to confirm the linearity assumption and normality.

Fig. 1



In the scatterplot (Figure 3) we are interested in seeing the regression standardized residual on the y axis and the regression standardised predicted value on the x axis to be rectangularly distributed, with most of the scores concentrated in the centre i.e. spread along the point 0. Accordingly the distribution in the scatter plot shown below indicate that it is distributed in the centre of the rectangular but slightly to the top left to the y axis. The distribution actually resembles a near normal distribution having being spread within the space (range) of -1 to +2. Standardized residuals exceeding 3.3 or short of - 3.3 implies outliers (Tabachnick & Fidell, 2012).

Fig 2



Evaluation of the Model

In order to carry out a proper evaluation of our model we need to consider the Model Summary^b table (Appendix II). The process requires the checking of R Square in the Model Summary box. We noted our predictor to be debt management (DeM). The dependant Variable is the Total External Reserves as a percentage of total debt (TORESEX).

Checking our Model Summary box (Appendix II) we see that the independent variable (debt management) included in the model explained approximately 68.8 per cent of variance ($0.688 \times 100\%$) in dependent variable (Total Reserves as a percentage of total debt or Economic Growth). This implies that as much as 68.8 per cent of variance in the dependant variable is explained by the independent variable of debt management (DeM).

ANOVA

To further evaluate our model we need to refer to the ANOVA^a table (see appendix II). The ANOVA table shows the extent of the overall significance of the model. Here we are interested in the figures under the columns degrees of freedom (df) the F column and most importantly the significance column. Our table thus gives $F(1, 30) = 66.06$, $P < 0.005$. The level of significance was actually recorded to be 0.000^b . This indicates clearly that the model is sound and quite relevant to measure the proposed relationships. The p-value is usually used to refer to the probability of being wrong when the formulated null hypothesis happened to be rejected (Brooks, 2008), the smaller the p-value the less the null hypothesis is plausible.

Evaluating the Independent Variable

To evaluate the independent variable we need to refer to our Coefficient^a table (See appendix II). This time we check the standardized Coefficient (Beta values) and the significance.

A good predictor of economic growth as represented by total reserves as a percentage of external debt is DeM (debt management); ($\beta = 0.829$). The Standardized Beta values also show the number of standard deviations that scores in the dependent variable (DV) would have changed with a single standard deviation unit change in the predictor independent variable (IV). For instance we know from the descriptive statistics table that if we would increase the predictor of DeM (debt management) score by a single standard deviation which is shown as 12.10240, then it would be likely to translate into a growth in the external reserves of a country by 0.829.

Table 3

	R ²	β	B	SE	CI 95%(B)
Model	0.688***				
DeM		0.829	11.94	1.47	6.21/16.52

Standard significance ***p < 0.005

Preliminary MR Results Presentation

A multiple regression analysis was carried out in order to investigate the relationship that exists between the strategy of debt management and that of economic growth. By this we are trying to establish the ability of debt management (DeM), as variables covering debt management strategy to predict economic growth as represented by total reserves as percentage of total debt (TORESEX).

Accordingly preliminary analyses were conducted for the purpose of ensuring that no violation of normality, linearity and homoscedasticity assumptions was made in the process (See Appendix II). In aggregate the explanatory variable was found to be statistically correlated with the economic growth variable (TORESEX).

The independent variable explained 68.8 per cent of change in economic growth {F (1, 30) = 66.06, P < 0.005}. The predictor variable was found to be statistically significant, with debt management recording a higher Beta value ($\beta = 0.829$, p < 0.000). The analysis (See Appendix II) of the debt management (DeM) predictor variable remain with a higher Beta value ($\beta = 0.829$, p < 0.000).

By this the first research question is successfully answered and we conclude that there is a strong positive correlation existing between debt management and economic growth.

Conclusion

The above result suggests a very objective and unbiased view about debt and its management. Therefore the sub-Saharan Africa should vigorously pursue the adoption of effective debt management strategy for the purpose of attaining economic growth. As Weist, Togo, and Prasad (2010) argued that there is substantial empirical evidence to support the fact that effective public debt management could go a long way in protecting both LICs and MICs against the negative impact of the financial crisis that had engulfed the global economy.

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Employee counselling and career development

Abstract:

Research evidence has shown that employees are interested in and satisfied about workplace counselling support in relation to private-life and work-life problems. However, little is known about employees' opinions concerning the guidance to be provided by workplace counsellors for their career development. Therefore, a study with a qualitative methodology was planned and in-depth interviews were implemented with a convenience sample of forty employees. The study highlighted that employee counselling was perceived as an alternative for determining career related decisions. Individual expectations for counsellor-supported improvement included recognizing strengths and weaknesses, setting growth-related goals, adopting new attitudinal and behavioural patterns, and participating in personal development activities. Also, an organizational facilitator role was attributed to the counsellor for improving organizational practices such as training and performance evaluation. Emphasis was put on the cooperation between workplace counsellors and human resource professionals for achieving a better coordination of efforts conducted to facilitate career development.

Keywords: employee counselling, career development, human resource management, work and life problems, employee expectations, career counsellors

Introduction

Workplace counselling is an initiative displayed by socially responsible organizations. Counselling provision that is implemented with a short-term approach helps employees in relieving difficulties experienced in private life or workplace. Evaluation of such programs has revealed positive consequences for both employees and the organization. Besides improving the mental health of organization members, these schemes have also demonstrated effectiveness in terms of decreasing costs related to sickness absence (Carroll, 1997).

The workplace counsellor is expected to balance a number of different roles which are at times in conflict with each other. Examples include stress-management training, health and work-life balance promoting, mediation, coaching, and trauma debriefing (Kinder, 2005). Besides more traditional

clinical interventions available to employees and family members, the trend for a greater integration between a range of healthcare and performance management interventions has also become apparent in the development process of workplace counselling provision (Grange, 2005). Reddy (2005) has stated that a paradigm shift on the part of counsellors is required for considering the systemic aspects of a situation and responding to broader organizational issues.

Claringbull (2006) has suggested that it might be appropriate to eliminate some of the professional constraints of traditional counselling based on the needs of individual clients and focus more heavily on organizational matters. The model recommended by the author is based on a variety of skills including business “awareness”, sympathy to employer needs, better understanding of organizations, understanding counselling as a management tool, and offering “added value” to the workplace counselling process (p. 21). Thus, a proper match between the properties of workplace counselling tasks or objectives and organizational and individual needs may be established.

One example of the efforts directed towards integrating work and life counselling is a career paradigm suggesting a reintegration of career counselling and personal counselling. Following this conceptualization, an agreement among counsellors working on career issues is observed to be reached that reveals itself in the form of a new career concept that combines work and personal life in an inseparable form (Sinclair, 2009). Therefore, career development which is an ongoing and formalized effort that focuses on developing enriched and more capable workers (Gomez-Mejia et al., 2001: 294) may be supported by workplace counsellors who have adopted this holistic view of the career concept. Such a perspective, conceptualizing work as a symbol for the client’s striving for meaning in life (Dollarhide, 1997) may facilitate a convergence between employees’ career choices and their life purpose.

Workplace counselling initiatives are becoming commonplace in large Western organizations, and to a lesser extent, examples of such programs can be seen in developing countries. Although research evidence exists about employee interest and satisfaction in relation to private-life and work-life problems, little is known about employees’ opinions concerning the guidance to be provided by counsellors for their career development. Lim and Patton (2006), after a review of career development literature, concluded that research studies involving a comparison of client expectations of counselling with counsellor expectations and/or perceptions are limited and the findings are inconsistent. Thus, the aim of the current study is to examine the expectations of employees about the potential contributions of workplace counselling practice in terms of managing their careers.

Theoretical framework

Contributions of employee counselling for reducing work and private life problems

Increasing pressure on employees in today’s workplace has resulted in several negative consequences for both individuals and organizations. Long work hours, short deadlines, overload or underemployment, and redundancy are some of the factors that produce tension for employees. Since employee strain is also costly for the organizations, efforts are being directed towards the goal of alleviating workers’ distress.

As the difficulties at work increase, employee anxiety and depression seem to increase rapidly which result in impaired work performance, reduced safety, and absenteeism (Haslam et al., 2005). Literature on employee strain indicates that well-being at work is threatened by job demands or facilitated by job resources. While job demands absorb the physical and psychological effort of employees, job resources aid the workers to achieve work-related objectives, decrease the cost of demands, and encourage growth. Providing social support is a way of strengthening the resources of employees which may be expected to improve the quality of psychosocial work environment (Koivu et al., 2012). Thus, promoting employee wellness through organization-based instruments may be considered as a valuable resource for employees in the course of handling difficulties.

Fisher (2010) believes that employee happiness has significant consequences for the workplace. Happy employees are expected to experience job satisfaction, work engagement, and affective organizational commitment. Increased core and contextual performance, customer satisfaction, safety, attendance, and retention also seem to be related with happiness at work. Thus, the author asserts that striving to improve happiness at work is a valuable objective to be reached.

Organizations help employees to cope with stress and restore their well-being through a variety of methods. Several interventions are utilized and they have been found to be effective. Workplace initiatives such as recreational facilities, stress management training, health and fitness programs, and spiritual/meditation programs appear to be helpful in relieving employee stress derived from relationships with immediate supervisor and co-workers (Wickramasinghe, 2010).

Employees who face several challenges in terms of adapting to a new work environment that requires continuous learning and growth are supported by organizations through plans oriented toward personal development. These plans aid employees to undertake learning activities, acquire expertise in a variety of domains, demonstrate flexibility towards changing conditions, and increase their performance (Beausaert et al., 2011). In a supportive workplace where efforts are spent for improving the competencies of workers, it is also possible to observe increased levels of self-esteem and decreased levels of stress in the long run.

Aside from the above mentioned initiatives, employer sponsored counselling programs are used for eliminating or decreasing the work-related or personal difficulties experienced by employees. Lack of support at work, negative attitude to work, work-related problems affecting life and work, psychological difficulties, demanding approach towards oneself such as a perfectionist attitude, personal or family-related difficulties affecting work, and prior negative experience of mental health services are stated as basic factors leading employees to seek psychological help in the workplace. Problems experienced in work and personal life areas are expected to influence each other which make the issue of coping quite challenging for the employee (Athanasiaides et al., 2008).

These programs have been generally found to be successful for protecting employees' physical and mental health. Positive consequences related to organizational issues have also been obtained. Alker and Cooper (2007: 181) recorded that programs were cost-effective in terms of the savings made due to reduced absenteeism, health insurance and lost time claims together with improvements in quality and quantity of work.

A review by McLeod (2010) revealed that workplace counselling was generally effective in decreasing the levels of anxiety, stress, and depression. It was also seen that sickness absence rates were reduced to a great extent. In terms of job commitment, work functioning, job satisfaction, and substance misuse, on the other hand, moderate amount of improvement was recorded.

A study by Collins et al. (2012) indicated the efficacy of time-limited counselling as a tool for helping employees to deal with several work-related and individual issues which undermine their ability to work effectively. The follow-up studies showed that employee well-being was maintained for at least six months after counselling sessions. The researchers concluded that workplace counselling is an acceptable instrument for producing a positive change in employees through reducing distress, dysfunction, and under-performance.

Career development issues

Career development is conceptualized as an interactive process between an individual's internal career identity formation and the significance gradually attributed to one's career by external environment constituents (Hoekstra, 2011). While constructing their careers, individuals experience several difficulties. These difficulties are categorized as lack of readiness (lack of motivation, general indecisiveness, dysfunctional beliefs), lack of information (about the process, about the self, about occupations, about additional sources of help), and inconsistent information (unreliable information, internal conflicts, external conflicts). Such setbacks either prevent individuals from making a decision or lead to a less than optimal decision (Gati et al., 2010: 399).

The ambiguities related to making career decisions can be resolved by organizational or individual career management. Organizational career management involves the support provided to employees by giving training to help develop their career and introducing to people who might help their career development. Individual career management, on the other hand, includes activities such as making one's accomplishments visible or gaining marketable knowledge which are aimed at furthering the career inside or outside the organization (Verbruggen et al., 2007).

When the culture of an organization is positive and supportive in terms of career development, employees are encouraged for developing a higher level of awareness about their talents and a clearer understanding of the relationship between their assets and organizational opportunities. In such a case, the consequences are rewarding both for the individual and the organization. While employees capture the chance of realizing their full potential; improved productivity and financial profitability results for the organization (Conger, 2002). Thus, in such cultures, self-planning of careers or organization-driven attempts seem to reinforce each other rather than appearing as isolated forms of achieving career objectives since they contribute to the satisfaction, motivation, and well-being of employees as well as hindering negative organizational and economic outcomes (Dries, 2011).

Although endeavours by individuals and organizations in terms of career development are both appreciated, the new conceptualization of the career shaped in 1980's and 1990's under the influence of economic and organizational changes have increased the burden of employees in this respect. As part of the new trend, employees are expected to create their career themselves. Looking for a structured

initiative started by the organization to determine employee future is a less preferred alternative within this framework. The so called “boundaryless” or “protean” careers seem to have replaced the concept of “traditional career” and forced employees to be more proactive in structuring their career moves (Inkson et al., 2012). Research indicates that individuals with a protean career attitude who consider themselves as the primary responsible for managing their career in an independent way report higher levels of career satisfaction and perceived employability. As opposed to individuals who adopt a relatively passive attitude in managing their career, employees with a protean attitude display higher satisfaction with their career status, current job, and career progress and feel more secure about obtaining a comparable job elsewhere (De Vos and Soens, 2008).

Since life-long careers within a particular organization no longer appear to be likely for most individuals, increased responsibility for developing knowledge, ability, and skills appropriate for the new work environment requires a condensed effort on the part of employees. The process of adapting to new requirements may involve positive experiences such as curiosity, excitement, and creativity although negative emotional states like confusion, anxiety, and insecurity may also be experienced. Thus, employees, in their search for career prospects may benefit from the guidance of a professional with an expertise in career issues (Sinclair, 2009).

Changing role of career counsellors

Career counselling is defined as a process wherein a counsellor and client conduct discussions about occupational choice, employment adjustment and transitions, and getting prepared for retirement so as to aid the person meet the challenges related to these issues (Young and Domene, 2012: 15). However, as the concept of career changes so does the concept of helping professions. It is recommended that counselling and career guidance disciplines are united so as to provide the utmost benefit for clients. In such a case, counsellors will have access to a wider range of instruments for dealing with issues presented by those who utilize the service. Showing concern for non-work areas of life for the purpose of making sense of work experiences is a contribution of this paradigm shift. This approach based on a holistic conceptualization of life areas appears to be promising in terms of offering an enriched perspective for employees who are in search of a new career design (Westergaard, 2012).

Systems theory framework which recognizes the constant interaction among the intrapersonal system of the individual, the social system, and the environmental-societal system as a determinant of career development is perceived to provide the basis for the transformation of the role of the counsellor. The assumptions of the theory imply that counselling may be conceptualized as a tool for learning instead of a means for fixing problems. The emphasis is on listening and facilitating rather than advising, directing or prescribing. Accordingly, where career counsellors assume the role of learning facilitators, the clients act as learners who make meaning of their life experiences (McMahon et al., 2012).

Constructivist approaches which are based on methods such as story telling appear to be promising for employees who are in need of structuring their careers. Life stories of employees generate a source for them from which unique definitions of career goals are created. Different interpretations of life experiences which do not lead to a predetermined type of career are revealed during the story telling process. These approaches with their emphasis on subjectivity and meaning, prescribe a cooperative

relationship between the client and counsellor so as to facilitate the search of individuals' career-related decisions and actions. As the counsellors change their roles from an expert to a facilitator, the clients feel much more responsible for developing self-awareness and gain perspectives which represent an integration of life and career objectives (Dries, 2011; Lamsa and Hiillos, 2008; McIlveen and Patton, 2007).

An effort directed towards suggesting new perspectives for clients requires creativity, courage, and flexibility on the part of counsellors. The attempts of the counsellor about formulating fresh views in terms of uniting personal issues with work issues are expected to be helpful for himself/herself as well as the employee who is in need of becoming enthusiastic for the future. Negative feelings of counsellors such as boredom, burnout or worthlessness may be reduced through a revised version of the counselling process (Dollarhide, 1997). Positive influences in terms of organizations may also be anticipated since employees are likely to display a high level of motivation at work due to being treated in a responsive manner. Therefore, workplace counsellors assuming an active role for handling career issues besides typical issues that come forth in counselling sessions may be in a better position in terms of being resourceful for all related parties striving to achieve their goals.

Rationale of the study

Workplace counselling has been mainly observed to deal with mental health difficulties and stress management and in some instances with serious psychological issues (Sinclair, 2009). Positive consequences are reported in terms of improving psychological and physical well-being of employees. However, employees have also expressed concerns about uncertainty and indecisiveness in relation to their future positions and put forward an expectation involved with the coverage of career development issues within the counselling provision (Torun, 2012). Negative experiences of employees in relation to career issues such as perceived lack of career advancement are likely to produce undesirable consequences including increased turnover intentions (Kraimer et al., 2009). Such findings indicate that employees' needs about shaping their career deserve researchers' interest within the framework of workplace counselling. Therefore, this study is planned to reveal employee opinions about supportive interventions that may be undertaken by workplace counsellors pertaining to career development issues.

Methodology

Sample and procedure

In-depth interviews were conducted with a convenience sample of forty participants. The respondents were employed in a variety of areas including education, consultancy, public relations, health, finance, automotive, textile, construction, tourism, logistics, information technology, and production. There were twenty-five female and fifteen male respondents. The age range was between 23 and 63. Half of the participants were married. Twenty-three interviewees had graduate degrees and seventeen were university graduates. Tenure of the respondents ranged between 1 and 32 years.

The participants of the study were informed that the purpose of the research was to seek their opinions about employee counselling. A brief definition of the concept was provided and benefits in terms of

personal life and work life issues were emphasized. It was also mentioned that benefits related to career development were also likely and the present study aimed to reveal employee expectations in relation to career development aspect of the workplace counselling provision. Before starting the interview process, the interviewees were assured that the information they supplied would be kept confidential. Statements of the respondents were recorded by taking notes with their permission. When necessary, probing questions were asked and further explanations were requested. The duration of the in-depth interviews ranged between 45 and 90 minutes.

Data collection and analysis

A preliminary study has been conducted to form an interview guide. The study was implemented to determine the topics to be investigated for the purpose of exploring the expectations from workplace counsellors in relation to support for the career development of employees. In this study, 20 respondents from a variety of sectors were informed that a research was carried out on the subject of employee career development. The participants were asked two questions:

1. What roles can an employee assume for his/her career development?
2. What roles can the organization assume for employee career development?

The data obtained from these respondents were classified and the resulting themes were utilized to prepare questions about the support to be provided by the workplace counsellor for meeting employee expectations related to individual and organizational career development initiatives (see Table 1 and Table 2).

Table 1. Individual issues about fostering employee career development

Category	Theme
<i>Self-awareness</i>	Identifying self-strengths and weaknesses
	Improving weaknesses
	Giving priority to enforcing strengths
	Asking for feedback from managers
	Deciding about the ideal job
	Evaluating the gap between the ideal and the present job
<i>Setting goals</i>	Setting goals in life
	Determining the barriers to career development
	Reviewing career goals
	Changing the job to take up a new career

<i>Changing life style</i>	<p>Sacrificing personal pleasure in order to provide space for assuming new responsibilities</p> <p>Demanding challenging tasks</p> <p>Focusing on social relationships and joining social networks</p> <p>Trying to create a positive image</p>
<i>Learning</i>	<p>Using technology (web sites, e-mail groups, educational compact disks, and internet resources)</p> <p>Reading books</p> <p>Keeping track of publications</p> <p>Joining courses and certificate programs</p> <p>Applying to graduate education</p> <p>Participating in self-development activities</p>

Table 2. Organizational issues about fostering employee career development

Category	Theme
<i>Training</i>	<p>Implementing work-related training activities</p> <p>Organizing personal development activities such as time management</p> <p>Giving permission to employees who want to participate in training courses outside the organization</p> <p>Providing financial support for participating in training courses outside the organization</p> <p>Encouraging participation in congresses and seminars</p>
<i>Performance evaluation and rewards</i>	<p>Adopting performance-based payment</p> <p>Giving performance feedback on a regular basis</p> <p>Appreciating positive behaviour and success</p>

<i>Career counselling</i>	Helping individuals to prepare their career plans Assigning duties to employees that are compatible with their career plans Providing opportunities for employees to assume challenging responsibilities Providing opportunities to rotate between departments and jobs Informing employees about career opportunities within the company Encouraging employees to develop internal and external networks
<i>Coaching and mentoring</i>	Presenting role models Assigning coaches and mentors to employees

Semi-structured interviews conducted with a convenience sample of 40 participants from different work environments included the following questions that were based on the themes revealed in the preliminary study:

“In your opinion, what kind of support may be provided by a workplace counsellor to employees in terms of career development concerning the following issues?”

1. Helping employees to develop a higher level of awareness about their strengths and weaknesses
2. Motivating employees to dedicate themselves to the goals devoted to self-improvement
3. Encouraging employees to make the necessary changes in their way of life to reach their long-term goals
4. Guiding employees for participating in activities that would facilitate self-growth
5. Assuming a facilitator role in terms of improving organizational practices, such as; training, performance evaluation, reward system, career planning, coaching, mentoring, that are conducive to employee career development

Qualitative methodology has been used to analyze the data. Such a methodology is suggested as an appropriate tool to be utilized in workplace counselling research (Athanasias and Winthrop, 2007). Qualitative techniques make free expression of cognitions, emotions, and experiences possible on the part of study respondents. Leedy and Ormrod (2005: 133) have emphasized that in qualitative research, numerous forms of data are collected and they are examined from various angles to construct a rich and meaningful picture of a complex, multifaceted situation. The researcher sifts through the data in order

to arrive at valid generalizations (Herzog, 1996: 136). Following a nonlinear and cyclical path, the researcher gains new insights and creates a feeling for the whole (Neuman, 1997: 331).

Data analysis involved reading the interview notes several times for deriving meaning from the elements of the content. Responses of the participants were examined and meaningful expressions extracted from the statements were written one after another. It was seen that expectations were raised in relation to all interview questions. These expectations were sorted under the categories of individual and organizational support. A systematic review of the data by the researcher and a colleague was realized to ensure the trustworthiness of the analysis.

Results

Questions directed to the participants about the support to be provided by the workplace counsellor revealed that they hoped to be guided in terms of individual actions pertaining to career development. The respondents also attributed a facilitator role to the counsellor who would be responsible for contributing to organizational practices within the framework of employee career development. Responses given to five interview questions were grouped under two categories labelled as *individual support issues* and *organizational support issues*. Under these titles, subcategories are also included and narrative examples are displayed.

Individual support issues

The individual-based supportive acts expected from a workplace counsellor included topics as developing awareness about strengths and weaknesses, internalizing goals that are oriented towards self-improvement, making attitudinal and behavioural changes for achieving long-term goals, and participating in activities that would facilitate self-growth.

Developing awareness about strengths and weaknesses

The participants who underscored a need to know their limits stated that the workplace counsellor could be helpful in terms of administering psychological tests, making appraisals about competencies, and presenting an accurate picture of the congruence between individual characteristics and the job. Personality and intelligence tests, interest inventories, attitude scales, memory evaluations, and mental health assessments were expected to provide cues for employees about their traits, skills, abilities, interests, values, and psychological health. Through counsellor feedback about their potential, the respondents hoped to identify and understand the source of their past and present failures or shortcomings and obtain information about their cognitive distortions related to their performance. The specific knowledge and techniques that they learned would lead them to be better informed about the requirements of their present task and direct them to seek assignments compatible with their talents.

The respondents believed that the guidance provided by a counsellor would make it possible for them to define the ideal job for themselves, realize the inconsistencies between their ideal and present jobs, and identify realistic task and career objectives. Discovery of strengths about which the employee might not be fully aware, on the other hand, were presumed to arise during this process of evaluation. The participants also anticipated figuring out specific types of training that would be instrumental for

relieving inadequacies, reinforcing accomplishments, and consequently facilitating their career advancement.

“Even if I had self-knowledge, I would certainly be willing to be evaluated by an expert. People should be aware of how they are perceived by others. If I make a mistake, I would like to know why did it happen and need advice in order not to repeat it. It’s not easy for a person to be aware of all stuff by oneself.”

Internalizing goals that are oriented towards self-improvement

The role attributed to a workplace counsellor was one of clarifying the concept of self-improvement. Study participants emphasized the importance of determining life goals in general and career goals in particular so as to create the indicators of improving themselves and forming a vision. They suggested that the counsellor could assist them to define these goals by means of inviting them to focus on their dreams and wishes. In their opinion, employee dreams could be converted to career objectives within a particular time framework with a short-run and long-run perspective. As each employee would voluntarily and consciously set goals for himself/herself, he/she might be expected to develop internal motivation and to assume responsibility for achieving them.

The respondents stated that during the course of the work day which is full of pressure for completing daily tasks and assuming essential responsibilities, it did not seem plausible to concentrate on plans for the future. Managers, on the other hand, may be quite busy with challenging issues pertaining to the survival of the organization and have limited time to spare for employee development. However, counselling sessions were perceived as outlets for new prospects and suggestions related to their improvement. They believed that anecdotal examples presented by the counsellor about individuals who have been successful in setting their goals and overcoming difficulties could be of great help. Employees, recognizing such examples, thus, could increase their chances of committing themselves to a particular course of action. The participants also mentioned that the quality of the interaction between the counsellor and the client was quite important in order for the counsellor to motivate employees for developing goals for themselves.

“Some individuals spend years at work without making any progress while others are achieving one goal after another. The difference between the two lies in the ability of the latter to determine goals for oneself. It is at this point that the counsellor may be of help in terms of encouraging people to question their objectives in life.”

Making attitudinal and behavioural changes for achieving long-term goals

During the course of achieving their long-term goals, the respondents stated a desire to eliminate some of their habits that make it difficult for them to realize their aims, change their behaviours, and resolve emotional or relational problems which inhibit success at work. Sacrificing personal pleasure was deemed essential for creating opportunities to assume new responsibilities. Poor time management, reserved attitudes that hinder making one visible, choosing routine work assignments, inability to join networks, and submission to others were among the issues that they expected to handle. Skills expected to be obtained in terms of spending time on fruitful matters, adopting a self-confident attitude,

assuming tasks that involve some degree of risk, enlarging the sphere of relationships, and interacting with people in an assertive manner were seen as means of starting a positive change.

Employees believed that personal change experiences of the counsellor himself/herself shared with them would facilitate their efforts for adopting new attitudes and behaviours. Thus, counsellors who preferred to indicate the benefits of change with concrete examples would gain a higher chance of motivating employees for transition. The respondents, however, emphasized that it is not realistic to expect dramatic changes on the part of employees since it is a difficult decision to change oneself.

“People usually do not know how to spend their time effectively. They waste most of their time on the computer or by watching serials and sitcoms on TV after they come home. With the guidance of the counsellor, it may be possible to use time in a purposeful way.”

Participating in activities that would facilitate self-growth

The participants desired to be guided by the counsellor for the purpose of increasing their knowledge and skills. It was stated that the counsellor could encourage employees for attending to several events, workshops, and seminars to develop themselves. Providing advice about developmental exercises, planning particular training activities for employees that would satisfy their job requirements, and informing them about the institutions that supply such programs were initiatives expected to be displayed by the workplace counsellor. According to the respondents, these programs would enable the employees to meet new people and professionals possessing a potential to contribute to their self-growth with new ideas and know-how.

It was suggested that the counsellor's referral of employees to appropriate events had to be based on an evaluation of the worker's liability and willingness to participate in the personal development activities. For employees who appeared eager to be involved in a developmental process, capacity building activities were seen as means for increasing work motivation as well as investments in future career moves. The participants emphasized that the responsive attitude displayed in terms of meeting their growth-related needs would lead them to feel more enthusiastic about their work. Besides, such activities recommended by the counsellor were thought to be beneficial for employees who perceived themselves too much involved with their jobs to dissociate from work, experience relaxation, and get socialized.

“The counsellor has access to information which may not be available for the employee. With the assistance of the counsellor, I might have a chance to be notified about upcoming events with high-priority for self-improvement which certainly should not be missed.”

Organizational support issues

The participants of the preliminary study stressed that it was important for the organization to improve practices such as training, performance evaluation, systems of rewards, career planning, coaching, and mentoring for assisting employee career development. Therefore, interviewees of the main study were asked about their expectations in relation to the efforts of the workplace counsellor for facilitating organizational practices. Several expectations mentioned in this respect are described in the following paragraphs.

Study participants expressed that the workplace counsellor had to be part of all processes that were oriented towards employee development. Coordinated efforts between the human resource management department and workplace counsellors were believed to be quite beneficial for employees. The skills of workplace counsellors were seen as effective tools to be utilized by HRM professionals. Counsellors were anticipated to exchange ideas with managers and present recommendations to them about supervisor-subordinate relationships. Besides helping individuals about emotional issues, workplace counsellors were also expected to provide aid for employees on organizational matters. Consequently, career planning was recommended to be designed with the cooperation of the counsellor, HRM, and managers. However, it was suggested that an analysis of needs about workplace issues should form the basis of counsellor interventions. Finally, it was mentioned that the support of top management was crucial for the success of workplace counselling initiatives.

The respondents emphasized that a workplace counsellor could assume the role of a facilitator in several areas for the purpose of contributing to employee career development. Training was one of the fields where the assistance of workplace counsellors might be observed. Carrying out an employee survey to specify the training topics needed to develop particular skills, determining the best methods of training, and planning the training programs to be implemented were among the expectations stated in this context. Study participants suggested that workshops about stress management, conflict resolution, and time management conducted by counsellors would be helpful.

It was believed that counsellors could play a significant role in communicating performance goals to employees and showing concern for workers who exhibited low performance. Besides, counselling professionals were expected to formulate sound methods about the evaluation of employee competencies. In terms of positive appraisal, counsellors' recommendations about activities for increasing employee morale and suggestions for rewards with a motivating potential had to be taken into account in participants' opinion.

Coaching and mentoring at work might be facilitated by the initiatives of the workplace counsellor. Counsellors exploring the needs of employees about such guidance might also be involved in the process of selecting individuals who seemed likely to benefit from this provision. Integration of coaching and psychological counselling, on the other hand, was perceived as a promising attempt for consolidating career planning.

“The workplace counsellor can speak out the needs of employees pertaining to their self-improvement which were neglected or remained unnoticed by the human resources specialists. Needs and preferences revealed through an in-depth analysis by the counsellor can shape fine-tuned development initiatives.”

In summary, results of this study put forward anticipations of participants in terms of being individually assisted by the counsellor and the guidance to be provided for the organization. Efforts in both areas were perceived to be beneficial for developing careers. Categories related to employee expectations about career development initiatives to be displayed by the workplace counsellor can be seen in Figure 1.

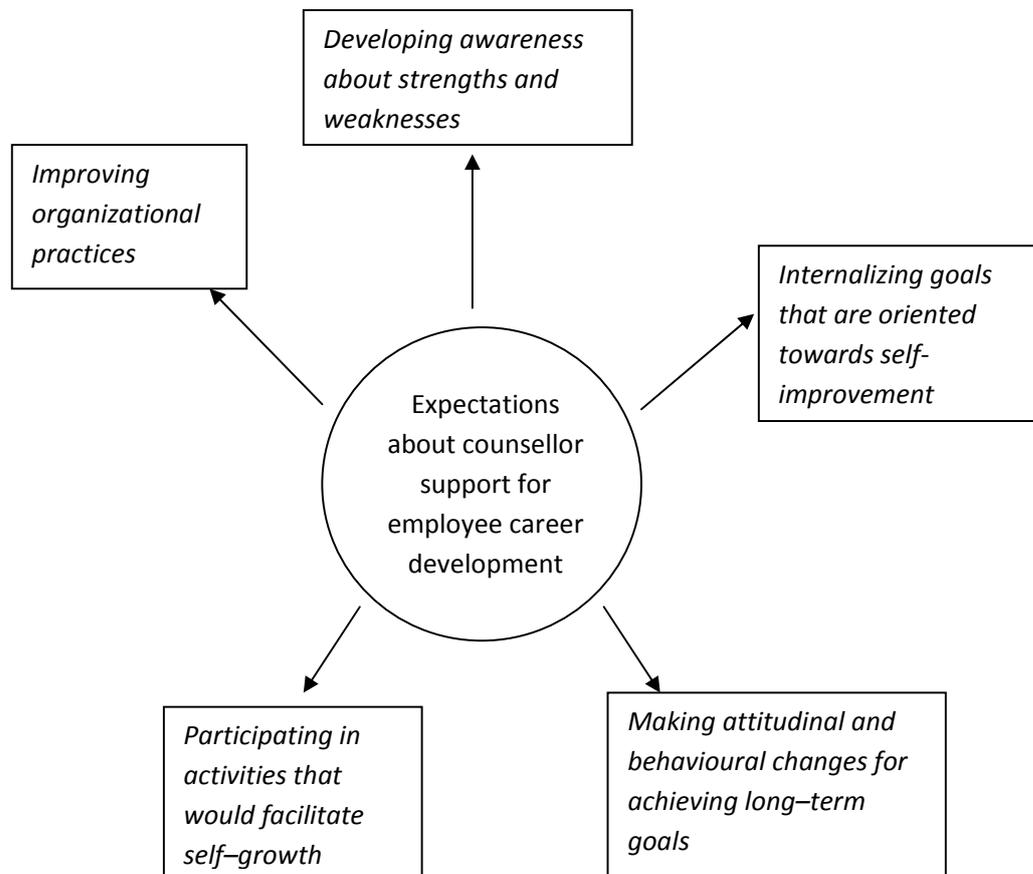


Figure 1. A schematic representation of the individual and organizational support issues related to employee career development.

Discussion

Findings of the present study which sought to reveal opinions about the career aspect of employee counselling indicated that, for the participants, personal efforts to develop their career with the assistance of a workplace counsellor meant recognizing their strong and weak aspects, setting goals for self-improvement, adopting new patterns of attitudes and behaviours, and increasing their knowledge and skills. Psychological testing, feedback about one's potential, and evaluation of person-job fit were seen as instrumental for improving weaknesses and enforcing strengths. In terms of setting goals for improving themselves, the participants underscored the issues of clarifying the concept of self-improvement, determining long and short-term life and career goals, and gaining a unique perspective for development. Achieving long-term goals required eliminating dysfunctional habits and acquiring new behavioural modes facilitated by the counsellor acting as a role model for employees. Participating in developmental activities for the purpose of increasing knowledge and skills were seen as investments in their future career besides creating a source of motivation and an opportunity for socializing.

Literature review about the topic of employee personal development offers examples of career development initiatives which seem to be similar to the approach of the study participants about building up career objectives. Research related to career aspirations of university students for instance, has indicated an inclination on the part of young people to display a self-directed and boundaryless career mindset (Chan et al., 2012). Studies about human resources tools such as personal development plans that aim to foster employee learning for improving the expertise of workers also confirm this conjecture. Such initiatives which involve self-direction by the employee for reviewing past and future competencies have revealed the need for stimulating the individual for learning and motivating him/her with the help of a supervisor or a coach (Beausaert et al., 2011). Thus, present and future employees including the respondents of this study appear to have attached importance to assuming individual responsibility for developing themselves besides seeking the encouragement of a professional for managing their career moves.

Participants' desires about changing some dysfunctional habits and developing new skills like behaving assertively or joining social networks indicate that they perceive personal growth and relationship enhancement as part of the process of following career pursuits. Thus, personal issues appear to be related to career issues in an inseparable form. An overview of career counselling literature presents perspectives related to the challenges produced by the disconnection between career and personal counselling. Dollarhide (1997) claims that like people with personal-life problems who display a potential to develop mental health problems such as depression, individuals with career problems are also faced with the same risk. Since career help seekers do not seem to be different from non-career help seekers, a flexible approach which does not view different areas of life as distinct from each other is suggested. In line with this assertion, it is stated that separating career development issues from personal development issues leads to a "loss of knowledge", thus, efforts for integrating these experiences may improve research and practice in both fields. Focusing on a variety of subjects such as emotional difficulties, relationship issues, and family concerns within the context of career counselling is expected to provide valuable information for professionals and benefit clients (Young and Domene, 2012).

In relation to the contributions of the workplace counsellor to organizational practices such as training, performance evaluation, systems of rewards, career planning, coaching, and mentoring, participants expressed several expectations. Statement of such expectations indicated that the workplace counsellor was perceived as a stakeholder of the organizational career development process. Cooperative efforts demonstrated by all layers of management, human resource professionals, and workplace counsellors were seen as constructive undertakings for improving organizational practices. The expectations about the benefits of this cooperation were based on the belief that the guidance of the counsellor would be promising in terms of raising the quality of the applications conducive to career development.

Most of the initiatives expected to be assumed by the workplace counsellor for supporting individual development seem to overlap with the initiatives expected to be displayed by the organization through the facilitating attempts of the counsellor. Individual expectations and the expected guidance for the organization share some common points such as participating in counsellor-recommended self-

improving activities and being part of counsellor-supervised formal organizational training sessions. Such anticipations point out a need for considering individual-based and organization-based career development issues as a whole. The desired cooperation between counselling and human resource professionals seems to be the key factor for accomplishing this objective.

Conclusion

The participants of the present study expected to be supported by the workplace counsellor for their individual needs pertaining to career development and attributed a facilitator role to the counselling professional who would be responsible for assisting in organizational practices within the framework of employee career development. Personal issues and career issues, on the one hand, and individual and organizational issues, on the other hand, appeared to be intertwined within the process of developing one's career. The study highlighted that employee counselling was perceived as an alternative for determining career related decisions. The present research contributed to the literature on workplace counselling in terms of pointing out potential support of counsellors for relieving employee uncertainty and indecisiveness in relation to career issues.

The supportive activities anticipated from a counsellor involved a psycho-educational role related to the acquisition of skills for healthy conduct and provision of information. The counselling activity, rather than fulfilling an existential purpose such as contributing to the meaning of life as suggested by some career counsellors, was believed to function as an instrument for providing systematic knowledge and teaching social skills. In future research, it may be investigated whether employees are willing to explore their work goals within the framework of self-actualization and overall life objectives. Research with such a purpose may shape the approaches of counsellors for structuring effective interventions for clients who have sophisticated career expectations aside from concrete objectives with a technical nature.

Success of counselling in terms of facilitating career development was deemed to be based on the cooperation between workplace counsellors and other organizational stakeholders. The collaboration between several constituents of the organization such as workplace counsellors and human resource professionals responsible for the growth of human capital appears to be promising in terms of producing positive consequences for the individual and the organization. Organizational practices such as training, performance evaluation, systems of rewards, career planning, coaching, and mentoring which are jointly planned and implemented by these groups of professionals may be instrumental for attracting and retaining the most competent employees and motivating them to perform at a high level. The responsive attitudes displayed by the organization, on the other hand, may help these employees to cope effectively with the challenges of surviving in an increasingly uncertain business environment.

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Youth Labour Market Analysis

Abstract:

The purpose of this paper is to analyse the determinants of youth unemployment in the European Union and to compare the Member States in terms of youth labour market performance. Youth unemployment is a delicate problem given the fact that young people represent an exceptional resource for society, but labour market inefficiencies are preventing the maximum use of their potential. There is a high interest among researchers and policy makers to understand the factors that influence youth unemployment and the link between youth unemployment and various macroeconomic and socio-economic indicators. The present study will address this issue using a panel data econometric model. Also, the Data Envelopment Analysis method will be used in order to rank the Member States and to identify the top performers on youth labour market – countries that demonstrate effective labour market policies.

Keywords: youth unemployment, labour market, Data Envelopment Analysis, panel data

1. Introduction

Labour market policies generally have a dual purpose: to improve the functioning of the labour market and to reduce the social consequences of unemployment. The unemployment rate is an important indicator with social and economic implications. A rise of the unemployment rate leads to a loss of income for individuals, increases government spending on social benefits and lowers tax revenues. From an economic perspective, unemployment may be considered unused labour resource (ILO, 2012).

Youth unemployment and long term unemployment seem to be more sensitive to cyclical economic changes than the total unemployment rate. Social policy makers are often faced with the challenge to address this situation by designing ways to increase employment opportunities for different groups, for those working in certain economic activities or for those who live in certain regions.

Over the past two decades, governments and international organizations have focused a lot of attention on the problem of youth unemployment (15-24 years). Unemployment among young people is, in most

countries, at least twice as high as the total unemployment rate. Youth unemployment is an issue of particular interest because unemployment occurred during the early years has a demoralizing effect, and young people who fail to find a job after graduation are facing a deterioration of human capital and employment opportunities which could lead to social exclusion.

Youth unemployment is a problem not only for those affected, but also for the overall economy. First, youth unemployment implies unused labour which has a negative impact on growth potential. Given that European countries face a thorny demographic situation of an aging population and the labour force is expected to decline, it will become increasingly important to use the full potential of young people. Second, youth unemployment means there is less labour input from those who, despite having less work experience than older workers, are supposed to improve the production processes with their innovative expertise (Gomez-Salvador and Leiner-Kilinger, 2008).

2. Literature review

Youth labour market has been a major research topic over the past years, since the occurrence of persistently high youth unemployment rates in the 1980s. The analysis of youth unemployment has many facets, depending on the considered explanatory factors, the countries included in the study or the chosen techniques. Factors most often identified as determinants of youth unemployment relate to changes in the state of the economy, changes in the proportion of young people in the total population, labour market institutions, as well as education and training.

From an economic perspective, unemployment is caused by an imbalance between supply and demand for labour. A possible justification for young people unable to find a job is the mismatch between education and the skills required to achieve a particular occupation. Employers cannot find the right skills and work experience needed within the young labour force (ILO, 2011).

Low level of education and experience are undoubtedly significant aspects of youth unemployment, but they are not the only ones. Several studies have attempted to explain the social factors that cause this condition among young people. Their common denominator suggests that the main reasons are related to country characteristics such as economic conditions, labour market policies, as well as family characteristics (Contini, 2010).

Since the early 2000s, the business cycle and institutional factors have gained ground in macro-analytical models. Youth unemployment is more sensitive to business cycle conditions than the adult unemployment (Blanchflower and Freeman, 2000, OECD 2006).

Traditionally, the empirical research follows two ways in order to assess the effects of technological change. The first route is dedicated to investigating the positive effect of research and development (R & D) and investment in innovation on productivity, competitiveness, economic growth and ultimately on employment dynamics. The second route is dedicated to testing the direct impact of technological change on employment.

The results of Piva and Vivarelli (2005) reveal a significant and positive effect of innovation on employment at the firm level. Evangelista and Savona (2002) found a positive effect on employment in the more innovative services sectors and a negative relationship for the more traditional services sectors

such as trade and transport. The final impact of innovation on employment at macroeconomic level depends on the economic and institutional mechanisms, such as macroeconomic conditions and labour market regulations.

The literature on the evolution of medium and long-term unemployment has long ignored the empirical negative relationship between unemployment and capital investment, although this is clear from the macroeconomic data. Recently, researchers have focused on the rediscovery of this relationship and highlighted its importance in explaining the changes in the unemployment rate. Herbertsson and Zoëga (2002) estimated the relationship between unemployment and capital investment using data for a group of OECD countries. Their results showed that the relationship is statistically significant and robust, both over time and between countries. Furthermore, when controlling for the effects of labour market institutions on unemployment the authors came to the conclusion that investment is one of the most important determinants of changes in unemployment. Also, in a recent study, Sigurdsson (2013) analysed this relationship based on a labour market search model for several OECD countries, obtaining a robust relationship between capital investment and unemployment.

In addition to the business cycle, population growth is also an important factor in the analysis of youth unemployment. Changes in the cohort size depend on fertility rates and regional mobility or migration (Bell and Blanchflower, 2011). Several studies on youth unemployment have analysed the impact of changes in the population's age structure on the young people's success on the labour market. The tested hypothesis was that a decrease (increase) in the relative cohort size, i.e. the ratio between young and adult population, should improve (worsen) the prospects of young people in the labour market relative to adults, as long as youth and adult workers are not perfectly substitutable. The results indicated that increasing the share of youth in relation to adults has a negative effect on employment and wages of young people (Gomez-Salvador and Leiner-Kilinger, 2008). The main reason is that if the young people and adults are complementary to the labour market in terms of qualifications and skills, the labour demand for young people and adults is set at a certain price level. An increase in the size of the youth cohort relative to that of adult workers would tend to raise unemployment, reduce employment and put downward pressure on the wages of young workers.

Also, research has focused on exploring the institutional effects of unemployment. In the centre of attention were the national characteristics of labour market institutions and social systems and their specific impact on youth unemployment. A broad set of institutional factors that prevent young people from entering the labour market or increase the risk of them becoming unemployed were considered (Martin, 2009, Bell and Blanchflower, 2011, Dietrich 2012).

There is an extensive literature certifying a positive correlation between employment protection legislation and national levels of youth unemployment (Noelke, 2011). In general, restrictive employment protection legislation can be harmful to young people for several reasons. First, high dismissal costs tend to discourage firms to hire more people in times of economic expansion because later would be too expensive to fire those people, if the economic situation would not be so favourable. A high level of employment protection tends to trigger employers to fill vacancies only with suitable employees, as layoffs are costly. This may often prove to be a drawback for young and inexperienced

workers because firms have little knowledge about their capacity and abilities. Second, in times of economic crisis, when companies consider layoffs as inevitable, there is a tendency to dismiss a larger number of young workers than adult workers ("last in, first out").

Bernal-Verdugo et al. (2012) found that the hiring and firing regulations and employment costs have the strongest effect on unemployment, especially youth unemployment, the effect being significant for both OECD countries and groups of non-OECD countries.

Regarding the correlation between labour supply and demand, it depends on a different set of institutional variables such as the transition process from school to work. The economic crisis deepens the structural problems affecting this transition process. Due to labour demand reduction, those who complete their studies have to compete with more individuals for fewer vacancies (Scarpetta et al, 2010.). The risk of having a "lost generation" highlights the need to adopt effective policies and to have an adequate educational system in order to minimize the number of young people who lose contact with the labour market. O'Higgins (2012) warns that the problem is not only that young people are more vulnerable than adults to the effects of an economic crisis, but also that these effects are likely to be long-term for them. Long periods of unemployment deteriorate the skills of young workers, reduce the employability and lead to a permanent loss of human capital. In other words, there are long-term negative consequences in terms of employment prospects and salaries.

3. Data description

The main objective of this paper is to analyse the determinants of youth unemployment in the EU-27, using a panel data econometric model, and to compare the Member States based on their performance on the labour market of young people, using the Data Envelopment Analysis method.

In addition to the youth unemployment rate - the variable of interest - in this study we used various macroeconomic and socioeconomic indicators to describe the youth labour market: labour productivity, youth activity rate, expenditure on research and development (R&D), capital investment and the level of education.

The database used in the empirical analysis covers the period 2005 - 2011 and includes 27 Member States of the European Union (EU-27). The data were obtained from the website of the European Commission (Eurostat database).

Figure 1 reveals the youth unemployment rates of the Member States at 3 different moments of time: the beginning of the analysis (the year 2005), the onset of the economic crisis (the year 2008) and the final year considered in this study (2011).

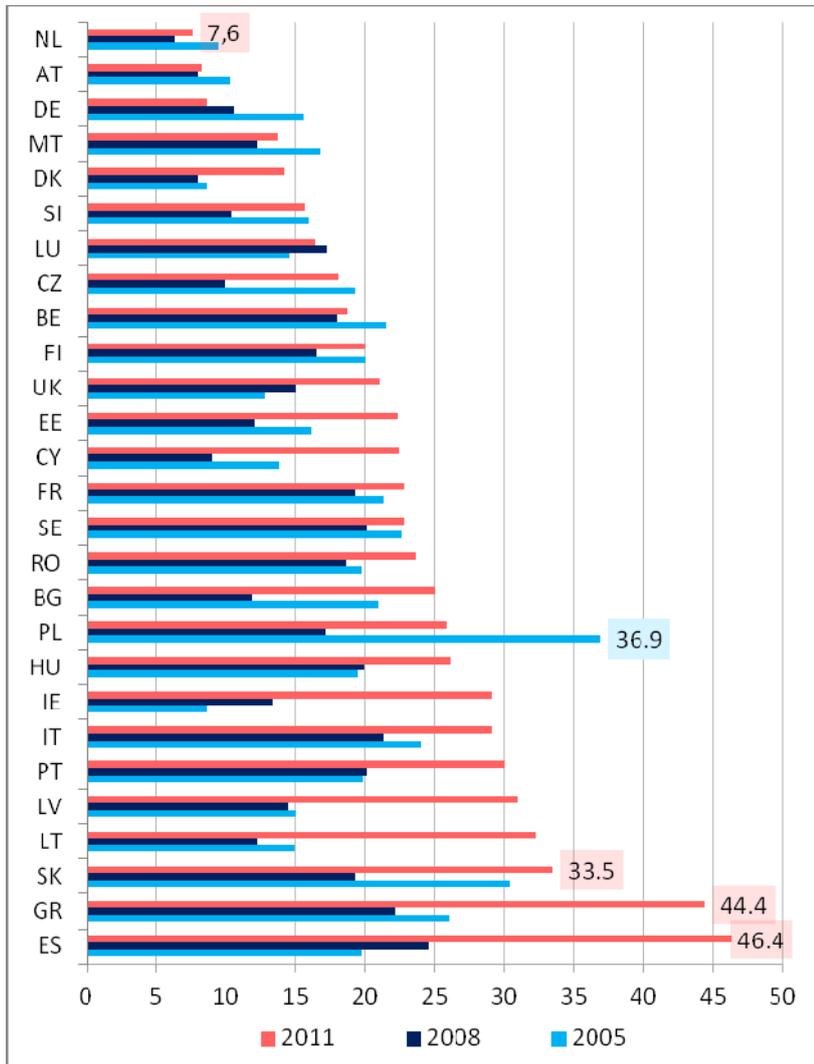


Fig. 1 Youth unemployment rate

In 2005, the unemployment rate among young people (15-24 years) was below 10% in Denmark, Ireland and the Netherlands. Greece and Slovakia recorded high youth unemployment rates of over 25%. The worse situation was in Poland, a country which in 2005 recorded the highest value for the youth unemployment rate, 36.9%, 18.3 percentage points above the EU average.

The period 2005-2008 was characterized by a favourable economic situation which also translates in the evolution of the youth unemployment rate. Thus, in 2008, no European Union country has youth unemployment rates exceeding 25%. At the beginning of the economic crisis, in 2008, the European Union countries that registered low youth unemployment rates, below 10%, were: Austria, Cyprus, Czech Republic, Denmark and the Netherlands. Greece and Spain are the countries with the highest unemployment rates (22.1% and 24.6%).

In most EU countries the young people have been deeply touched by the economic crisis in terms of unemployment. In many cases, youth unemployment rates have doubled from 2008 to 2011 (in Cyprus, Bulgaria, Ireland, Latvia, Lithuania and Greece). Many EU countries have youth unemployment rates over 25% (Slovakia, Latvia, Lithuania, Ireland, Hungary, Italy, Poland, and Portugal). Greece and Spain experienced extremely high youth unemployment rates of 44.4% and 46.4%. In 2011, the youth unemployment rate was below 10% only in the Netherlands, Austria and Germany. It is worth mentioning that throughout the analysed period the Netherlands have had the lowest values of youth unemployment, always below 10%.

When analysing the performance of the labour market, labour productivity cannot be overlooked. This variable is often included in studies on economic growth, competitiveness, employment, poverty reduction, and so on. Clearly, higher labour productivity provides a great competitive advantage to an economy/country.

In figure 2 one can see the position of the countries with respect to the youth unemployment rate and the labour productivity (GDP per capita). The figure is divided in four by the lines indicating the EU-27 average for the two variables.

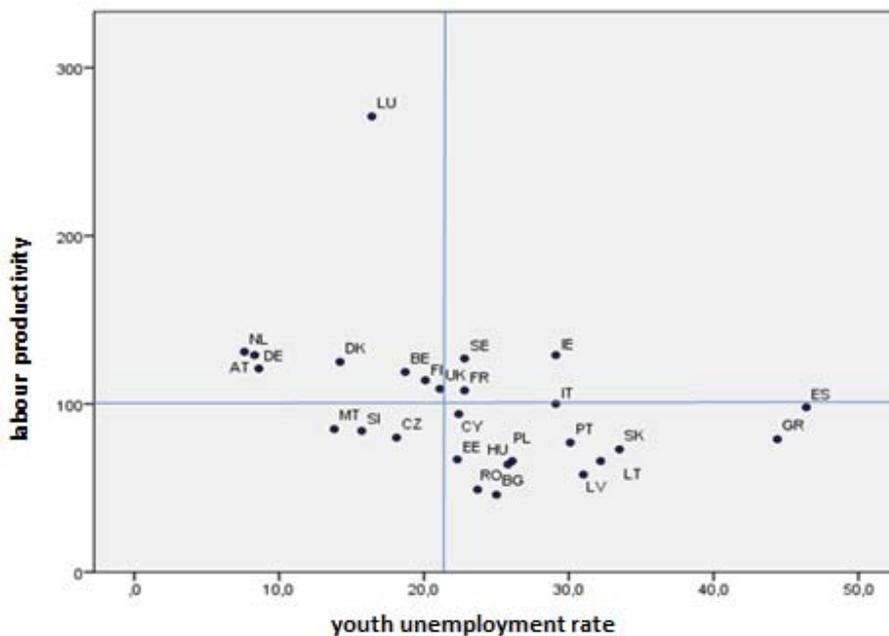


Fig. 2 Scatter plot of youth unemployment rate and labour productivity, 2011

The upper left quadrant groups the countries with an efficient labour market for young people, characterized by a high level of labour productivity and low youth unemployment rates. The best performers are the Netherlands, Germany and Austria, with youth unemployment rates below 10% and

above average labour productivity. Luxembourg has by far the highest GDP per capita, but the youth unemployment rate is relatively high (16.4%).

On the opposite side, the bottom right quadrant meets the less efficient countries in terms of youth labour market. They have youth unemployment rates above the EU average (21.4%), and low levels of labour productivity. Spain and Greece stand out: although labour productivity level is relatively close to the EU average, they experience very high values for the unemployment rate among young people.

Another indicator used in the analysis is GERD (gross domestic expenditure on research and development), an indicator that measures the key investments in R&D, supports competitiveness and engages further increases in gross domestic product. GERD is one of the main engines of growth in a knowledge-based economy. This indicator provides significant information about the future competitiveness of an economy. The promotion of research and development and innovation is one of the main objectives of the European policy, part of the Europe 2020 strategy of devoting 3% of the gross domestic product (GDP) to R&D activities.

As it can be seen in figure 3, high values of gross domestic expenditure on R&D as share of GDP were recorded in Finland, Sweden and Denmark (over 3%). At EU level, this share was about 2% in 2011. At the bottom of the ranking are Cyprus and Romania, with less than 0.5% share of R&D expenditure.

Compared to 2005, gross domestic expenditure on R&D as a share of GDP declined in Sweden (0.19 percentage points) and Luxembourg (0.13 percentage points). For all other Member States this indicator has been rising, Estonia and Slovenia standing out with more than 1 percentage point increase in the period 2005-2011.

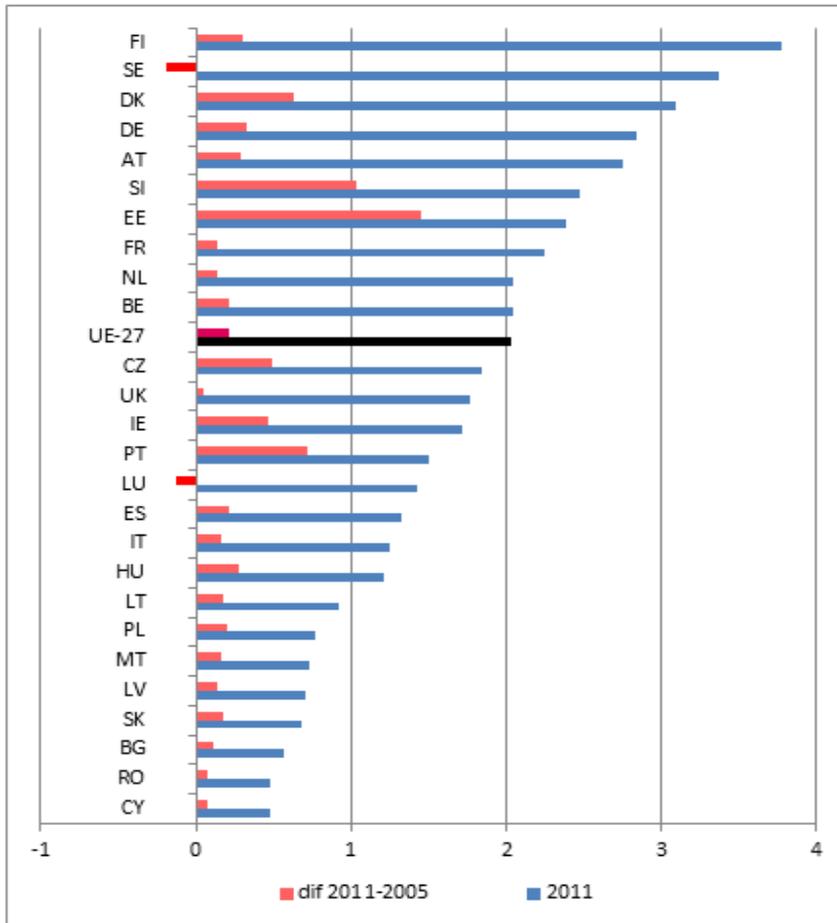


Fig. 3 Gross domestic expenditure on research and development as share of GDP in 2011 and the difference between 2011 and 2005

The third considered indicator was the gross fixed capital formation (GFCF) as share of gross domestic product. GFCF includes the investments of national companies and the fixed assets of foreign companies, and it is strongly influenced by the influx of foreign investment, particularly foreign direct investment. This indicator is considered the engine of competitiveness and innovation in an economy.

In 2011, the gross fixed capital formation as share of GDP recorded high values for Romania (26%), the Czech Republic (23.9%), Slovakia (23.1%), Estonia (21.7%) and Austria (21.4%). At the opposite pole are found Ireland (10.1%), United Kingdom (14.1%), Malta (15.1%) and Greece (15.1%). EU average was 18.6%. Compared to 2005, the share of GFCF in GDP decreased in most of the countries. Ireland faced the greatest gap (16.6 percentage points decrease), but also Estonia (10.4 pp.), Latvia (9.7 pp.) and Spain (8.3 pp.) have had lower levels for this indicator. Still, there are countries where the gross fixed capital formation held a larger share of GDP: Romania (2.3 percentage points increase), Poland (2.1 pp.), France (0.8 pp.), Germany (0.8 pp.), and Sweden (0.5 pp.). Regarding the EU-27 average, it decreased by 1.3 percentage points in 2011 compared to 2005.

Another important indicator included in the analysis of youth labour market of the EU Member States is represented by the persons with tertiary education attainment. According to OECD studies, workers with higher education are more effective than uneducated people in looking for jobs and obtaining higher wages. There is a lower risk of unemployment among people of higher education as they manage to find jobs more easily. Also, workers with higher education can adapt faster to changes in labour demand.

4. Methodology

4.1. Data Envelopment Analysis

When performance is evaluated, the production units or the decision making units (DMUs) can be described as more or less "efficient" or more or less "productive". Productivity of a DMU is determined using the relationship between outputs and inputs. The efficiency of a production unit means a comparison between the observed values of outputs and inputs and their optimal values, the optimum being defined in terms of production possibilities and technical efficiency.

The notion of comparing production plans lead to the need for a "standard of excellence" to serve as a reference point. This standard must be that level of technical efficiency that is achieved with: a) the least amount of inputs and constant outputs (for input orientation) and b) the maximum of outputs with constant inputs (for output orientation).

The literature reports three approaches to measure technical efficiency: the index numbers approach, the econometric approach, and the mathematical programming approach.

The mathematical programming approach does not require the specification of a functional form for production data. This nonparametric method of performance evaluation was initiated by Charnes, Cooper and Rhodes (1978) under the name DEA - Data Envelopment Analysis. DEA approach uses linear programming techniques to analyze the inputs consumed and outputs produced by the decision making units and builds an efficient production frontier based on best practices. The efficiency of each decision making unit is then measured relative to this frontier. This relative efficiency is calculated based on the ratio of the weighted sum of all outputs and the weighted sum of all inputs.

DEA identifies the inefficient decision-making units and the sources and amounts of inefficiency. A DEA model can be input or output oriented as well as with constant or variable returns to scale.

The CRS model was originally proposed by Charnes, Cooper, and Rhodes (1978), also being known as CCR model. It assumes constant returns to scale: if all inputs are increased with a certain amount, then the outputs will increase proportionally with the same amount.

The model requires complete information about inputs and outputs for a set of homogeneous decision-making units. The CRS model is a linear program that compares the efficiency of each DMU with all linear combinations of other units, including the one under consideration.

Let N be the inputs and M the outputs for each of I DMUs, with X the $N \times I$ input matrix and Q the $M \times I$ output matrix. The CRS input oriented model is:

$$\begin{aligned}
 & \min_{\theta, \lambda} \theta \\
 & -q_i + Q\lambda \geq 0 \\
 & \theta x_i - X\lambda \geq 0 \\
 & \lambda \geq 0
 \end{aligned}$$

where θ is a scalar and λ is a $I \times 1$ vector of constants (Coelli *et al.*, 2005).

Banker, Charnes and Cooper (1984) noted that the assumption of constant returns to scale distorts the results when comparing decision making units which significantly differ in size. In such cases it is relevant to know how the scale of operation of a decision unit influence its efficiency. Therefore, Banker, Charnes and Cooper developed a new formulation of data envelopment analysis known in the literature as *the VRS model* (by assuming variable returns to scale).

The VRS model allows the use of other production function and is used to calculate efficiency under the assumption of variable returns to scale: an increase of inputs does not necessarily lead to a proportional increase in outputs. The VRS model is focused on the maximal movement towards the efficient frontier by proportional reduction of inputs (for the input orientation) or by proportional augmentation of outputs (for the output orientation).

The VRS output oriented model is:

$$\begin{aligned}
 & \max_{\phi, \lambda} \phi \\
 & -\phi \cdot y_i + Y \cdot \lambda \geq 0 \\
 & x_i - X \cdot \lambda \geq 0 \\
 & N_1 \lambda = 1 \\
 & \lambda \geq 0
 \end{aligned}$$

where $1 \leq \phi < \infty$, $N_1 \lambda = 1$ is the convexity condition and $1/\phi$ defines the TE score that varies between zero and one (Coelli *et al.*, 2005). A TE score of 1 means that the DMU is technically efficient. The lower the efficiency score, the more inefficient the DMU is.

A downside of DEA analysis is that it offers no information on estimates' uncertainty, therefore we cannot determine if the estimates are statistically significant. A possible solution to this problem is to apply a bootstrap method to resample the estimates and to use the empirical distribution of resampled estimates to calculate bootstrap confidence intervals that establish the statistical inference (Simar and Wilson, 1998).

4.2. Panel data models

The econometric analysis is based on panel data estimation. A panel data regression has the form:

$$y_{it} = \alpha_i + x_{it}'\beta + \varepsilon_{it} \quad i = 1 \dots N, t = 1 \dots T \quad (1)$$

The i subscript denotes the cross-section dimension and t denotes the time-series dimension. Most of the panel data application utilizes a one-way error component model for the disturbances (Baltagi, 2008):

$$u_{it} = \alpha_i + \varepsilon_{it} \quad (2)$$

There are several different linear models for panel data. The individual fixed effects may be either assumed to be correlated with the right hand side variables (fixed effects model: FEM) or be incorporated into the error term (random effects model: REM) and assumed uncorrelated with the explanatory variables (Baum, 2001).

One of the main motivations behind pooling a time series of cross-sections is to widen the database in order to get better and more reliable estimates of the parameters of the model. Baltagi (2008) considers that the question is “To pool or not to pool the data?” The simplest poolability test has its null hypothesis the OLS model: $y_{it} = a + b'X_{it} + \varepsilon_{it}$ and as its alternative the FE model: $y_{it} = a + b'X_{it} + \alpha_i + \varepsilon_{it}$ (Kunst, 2009). In other words, we test for the presence of individual effects.

The next step would be to decide whether a FE model or a RE model is more appropriate. The decision between the two models can be made based on different tests, economic reasons and/or information criteria. Baltagi suggests all of these methods; hence one can estimate both models and choose between them according to the information criteria and/or based on economic arguments. When one cannot consider the observations to be random draws from a large population—for example, if the data refers to states or provinces—it often makes sense to think of the individual effect as parameters to estimate, in which case one should use fixed effects methods (Wooldridge, 2002).

The Hausman principle can be applied to all hypothesis testing problems, in which two different estimators are available. In the case of panel models, we know that the FE estimator is consistent in the RE model as well as in the FE model. In the FE model it is even efficient, in the RE model it has good asymptotic properties. By contrast, the RE–GLS estimator cannot be used in the FE model, while it is efficient by construction in the RE model (Kunst, 2009).

Considering the case of the fixed effects model, the estimator that is mostly used is called the within estimator. It performs OLS on the mean-differenced data. Because all the observations of the mean-difference of a time-invariant variable are zero, using a time-invariant variable is not recommended.

The fixed-effects α_i can be eliminated by subtraction of the corresponding model for individual means $\bar{y}_i = \bar{x}_i'b + \bar{\varepsilon}_i$ leading to the within model or mean-difference model:

$$(y_{it} - \bar{y}_i) = (x_{it} - \bar{x}_i)'b + (\varepsilon_{it} - \bar{\varepsilon}_i) \quad (3)$$

The within estimator is the OLS estimator of this model. Because the fixed effects have been eliminated, OLS leads to consistent estimates of b even if α_i is correlated with x_{it} as is the case here.

This result is a great advantage of panel data. Consistent estimation is possible even with endogenous regressors, provided that x_{it} is correlated only with the time-invariant component of the error, α_i , and not with the time-varying component of the error, ε_{it} .

For the random-effects model, the α_i from (1) is incorporated into the error term and assumed uncorrelated with the explanatory variables. Considering this assumption, and the relations (1) and (2) we have:

$$y_{it} = x_{it}'\beta + u_{it} \quad i = 1 \dots N, t = 1 \dots T \quad (4)$$

Because the α_i is incorporated in u_i in each time period, we might say that we have to deal with autocorrelation of the error. Therefore the general least squares method is used for the estimation of a RE model.

An advantage of the RE model is that it allows the use of explanatory variables that are constant over time, but a great disadvantage is that if the FE model would be more appropriate those estimates would be inconsistent.

The default standard errors assume that, after controlling for the fixed effects α_i , the error ε_{it} is independent and identically distributed (i.i.d) (Cameron and Trivedi, 2009).

Also, the model is estimated assuming the homoskedasticity of the residuals. When heteroskedasticity is present the standard errors of the estimates will be biased and one should compute robust standard errors correcting for the possible presence of heteroskedasticity. The most likely deviation from homoskedastic errors in the context of panel data is likely to be error variances specific to the cross-sectional unit. When the error process is homoskedastic within cross-sectional units, but its variance differs across units we have the so called groupwise heteroskedasticity.

Because serial correlation in linear panel-data models biases the standard errors and causes the results to be less efficient, researchers need to identify serial correlation in the idiosyncratic error term in a panel-data model. While a number of tests for serial correlation in panel-data models have been proposed, a new test discussed by Wooldridge (2002) is very attractive because it requires relatively few assumptions and is easy to implement (Drukker, 2003).

Stata has a long tradition of providing the option to estimate standard errors that are robust to certain violations of the underlying econometric model. The Stata program *xtscc*, implemented by Daniel Hoechle (2007), estimates pooled OLS and fixed effects regression models with Driscoll and Kraay standard errors. The error structure is assumed to be heteroskedastic, autocorrelated up to some lag and possibly correlated between the groups.

5. Results

The quantitative analysis performed in this study has two components. First, we used the Data Envelopment Analysis method in order to evaluate the labour market performance of young people in the European Union whereas in the second part we analysed the determinants of youth unemployment rate, using a panel data model.

5.1. Youth labour market efficiency analysis

We used Data Envelopment Analysis (DEA) as a multi-input multi-output optimization model to measure youth labour market relative efficiency of the best practice countries. We chose an output orientated model because the countries' objective is to maximize output resulting from input values.

The two outputs considered are the labour productivity (GDP per capita) and the youth unemployment rate. In an output-oriented model, DEA will seek to maximize these indicators. The desirable situation is high labour productivity and low youth unemployment. In other words, we are facing with an unwanted output. To solve this issue we used a different variable, $a = (100 - \text{the youth unemployment rate})$, where a is the new output to be maximized.

The efficiency analysis was performed using only 25 countries of EU-27, Luxembourg and Greece were not included. The reason for not considering Greece was the lack of data. For Luxembourg, the statistical analysis showed that GDP per capita has a very high value compared to other EU countries. Since the DEA method is sensitive to the presence of outliers, we felt the need for a more thoroughly investigation of the possibility to consider this country an outlier. The literature suggests a method to test the presence of outliers. According to Destefanis and Mastromatteo (2012) super-efficiency scores above 150 are an indicator that the unit may be an outlier. By computing the super-efficiency scores on the available data we obtained very high values for Luxembourg in the whole period, therefore we decided to consider Luxembourg an outlier and to exclude it from the analysis.

I calculated the efficiency scores under the assumption of constant returns to scale (CRS model) as well as of variable returns to scale (VRS model), the latter being also used to study the operating scale of the countries.

Next, we applied a bootstrap technique to obtain confidence intervals for the efficiency scores. The bootstrap mean has the same value as the initial efficiency score only for the efficient countries; all other countries obtained lower efficiency scores after bootstrap.

The comments on the results are made based on the bootstrap mean for the efficiency scores obtained by running a CRS output oriented model in PIM-DEA Software. These scores are available in table 1. The lower the efficiency score, the more inefficient the country is.

Table 1. The corrected efficiency scores of the CRS output oriented model

	2005	2006	2007	2008	2009	2010	2011
Austria	100	100	100	100	100	100	100
Belgium	100	100	100	100	100	100	100
Bulgaria	100	100	100	100	100	100	100
Cyprus	100	100	100	100	100	100	100
Czech Republic	98.36	98.88	100	100	100	100	100
Denmark	91.52	87.28	89.93	93.26	96.04	96.05	89.96
Estonia	79.32	76.93	77.11	76	80.52	76.23	77.02
Finland	87.91	90.69	89.89	91.9	85.55	82.18	78.95
France	99.77	96.23	95.9	94.76	91.77	88.42	86.93
Germany	100	100	100	100	100	100	96.96
Hungary	100	100	100	100	100	100	100
Ireland	100	100	100	100	100	100	100
Italy	100	100	100	100	100	100	100
Lithuania	87.67	80.89	83.49	82.34	80.21	78.01	79.89
Latvia	100	100	100	100	100	92.71	92.77
Malta	100	100	100	100	100	100	100
Netherlands	99.47	100	100	100	98.73	98.6	93.66
Poland	87.89	93.54	100	100	100	95.8	92.01
Portugal	94.67	94.92	93.76	89.17	89.07	90.29	85.95
Romania	100	100	100	100	100	100	100
Slovakia	95.37	100	100	100	100	100	99.94
Slovenia	88.12	85.1	84.26	81.63	91.48	95.36	97.32
Spain	77.84	77.47	75.59	74.44	77.14	76.18	77.49
Sweden	100	100	100	100	90.63	87.32	85.16
United Kingdom	100	100	100	100	100	93.89	86.05

Table 1 suggests that nine countries are technically efficient during the whole period: Austria, Belgium, Bulgaria, Cyprus, Hungary, Ireland, Italy, Malta and Romania. Correlating this information with the statistical analysis we can draw several conclusions.

Of the countries listed above, Austria is the only state with very good values for the output indicators, i.e. levels of labour productivity above the EU average and very low unemployment rates (8.3%), in other words it was expected to be among the efficient countries.

The same cannot be said about the other technically efficient Member States. Cyprus, Hungary, Bulgaria and Romania are among the countries with the lowest values of labour productivity and the highest youth unemployment rates. The reason why they have proved to be efficient is based on their ability to efficiently transform the limited resources in the best possible results.

In the analysed period (2005-2011) several countries have experienced decreases in the ability to transform the available inputs into specific labour market outputs: Germany, Latvia, Sweden and the UK. Germany was technically efficient during 2005-2010; only in 2011 it obtained a lower efficiency

score of 96.96. Latvia followed a similar pattern: it was technically efficient during 2005-2009, the last two years of the analysis being marked by a decrease of its performance on youth labour market.

For the United Kingdom we can observe a strong downward trend for the final period of the analysis: in 2010 the UK's efficiency score was 93.89 and in 2011 it was only 86.05. The year 2011 was marked by a decrease in labour productivity compared to the previous year and an increase of the youth unemployment rate. Also, all the input variables decreased. In these circumstances, it appears that the UK is no longer able to efficiently transform inputs into outputs when facing a contraction of the available resources.

A similar situation is noticed for Sweden, which was on a descending slope in terms of technical efficiency since 2009. If we take a look at the output indicators in this period we see that the year 2009 was the worst for Sweden both in terms of youth unemployment (the highest value, 25%) as well as GDP per capita (the lowest level of all analysed years). Even if these indicators have improved in the coming years, Sweden's technical efficiency continued to decrease.

The Czech Republic had a positive evolution. In 2005 and 2006 it was not technically efficient (although the efficiency scores were quite high), but in the following years the Czech Republic was on the efficiency frontier. Poland, the Netherlands and Slovakia draw a concave curve, being characterized as technically efficient only in the middle of the period.

The countries belonging to the group with average technical efficiency (efficiency scores over 80) are Denmark, Finland, France, Portugal and Slovenia.

Farthest from the efficiency frontier are Spain and Estonia, with scores below 80. Regarding their outputs, Spain has the highest youth unemployment rate (over 40% in 2010 and 2011), while Estonia is characterized by low levels of labour productivity. In the hierarchy of the EU Member States' labour market performance, Spain was on the last position 5 years out of 7.

The analysis showed that the peak of the youth labour market efficiency was in 2007 and 2008 when 17 countries out of 25 were technically efficient. In the following years many of them have gradually lost effectiveness, in 2011 only 10 countries being technically efficient. The conclusion is obvious: the economic crisis has eroded the ability of the Member States to be good performers on the youth labour market.

5.2. The determinants of youth unemployment rate – a panel data approach

The second objective of this paper is to investigate the factors that influence the youth unemployment rate. The economic and socio-economic indicators used as explanatory variables in the panel data model were selected from the ones already used in the DEA analysis (GDP per capita, gross fixed capital formation, R & D expenditure and tertiary graduates).

The general form of the equation that was estimated as a panel data is the following:

$$\text{ury}_{it} = \text{cons} + b_1 * \text{gdp}_{it} + b_2 * \text{gerd}_{it} + b_3 * \text{gfcf}_{it} + b_4 * \text{terteduc}_{it} + \alpha_i + \varepsilon_{it}$$

where the dependent variable is the youth unemployment rate (ury), and the explanatory variables are GDP per capita, expressed in PPS (gdp), R & D expenditure as share of GDP ($gerd$), gross fixed capital formation as share of GDP ($gfcf$) and the persons with tertiary education attainment aged 15-64 years ($terteduc$). In the above equation, the i subscript stands for the countries of the European Union and t refers to the period 2005-2011. We excluded from the analysis two countries: Greece, for missing data reasons and Luxembourg, considered an outlier.

One of the first things that need to be checked when working with panel data is whether we should actually use the panel data model in favour of a pooled OLS regression. After running a poolability test, we rejected the null hypothesis that all α_i are zero, meaning that the OLS estimator is biased and inconsistent and we accept the presence of the individual effects.

To account for the presence of unobserved heterogeneity among countries, it was considered appropriate to estimate a fixed effects model which eliminates the country specific effect.

When performing the Wald test for groupwise heteroskedasticity in the FE model as well as the serial correlation test the results showed that the errors are both autocorrelated and heteroskedastic. Ignoring the heteroskedasticity of the disturbances or the correlation in the estimation can lead to a severe bias of the results. Any statistical inference that does not take these issues into consideration is invalid.

In order to overcome the above problems, we decided to estimate a robust FE regression model using Driscoll and Kraay standard errors in order to account for the error structure that is assumed to be heteroskedastic, autocorrelated up to some lag and possibly correlated between the groups.

The functional relationship describing the youth unemployment rate in the EU countries, obtained by robust estimation (Driscoll and Kraay standard errors) is:

$$ury_{it} = 65,106 - 0,195 * gdp_{it} - 4,385 * gerd_{it} - 1,419 * gfcf_{it} + 0,43 * terteduc_{it}$$

The coefficients are statistically significant at 5% significance level, except for the coefficient of education, which is statistically significant at 10%.

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Regression with Driscoll-Kraay standard errors   Number of obs   =   175
Method: Fixed-effects regression               Number of groups =   25
Group variable (i): id                        F( 4, 24)      = 1479.52
maximum lag: 2                                Prob > F       = 0.0000
                                                within R-squared = 0.7283
    
```

ury	Drisc/Kraay				
	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
gdp	-.1955752	.0277135	-7.06	0.000	-.252773 - .1383774
gerd	-4.385193	1.806937	-2.43	0.023	-8.114527 -.655859
gfcf	-1.419685	.0459659	-30.89	0.000	-1.514554 -1.324816
terteduc	.4304993	.2105758	2.04	0.052	-.0041077 .8651064
_cons	65.1067	3.463129	18.80	0.000	57.95916 72.25425

Fig.4 The robust estimation of the fixed effects panel data model using Stata software

The variable that mostly influences the youth unemployment rate is the R&D expenditure. If gross expenditure on R&D as share of GDP increases by 1%, the youth unemployment rate would decrease by 4.3%. This negative relationship is very easy to interpret; the investments in research and development have a job-creating effect. Moreover, young people are the first to benefit from technological progress because they have a more updated and innovative knowledge, they are flexible and can easily adapt to changes.

The relationship between labour productivity and youth unemployment, although statistically significant, is not very strong: a 1 percentage point increase in labour productivity (GDP per capita) will lead to decrease of the youth unemployment rate by 0.19%.

The influence of gross fixed capital formation on youth unemployment rate is stronger, so that a 1% increase in the share of GFCF in GDP will lead to a 1.4% fall in the youth unemployment rate.

The only variable which is in a directly proportional relationship with the youth unemployment rate is the number of persons aged 15 to 64 with higher education attainment. The direction of this relationship may be due to the fact that people with higher education can be seen as potential "enemies" in the fight to find a job. Because people with high level of education usually find a job easier and faster, young people compete with them in the job searching process.

6. Conclusions

A recent report of the International Labour Office states that in many economies young people are two to three times more likely than adults to be unemployed and this problem is rapidly growing in almost every region of the world. Although today's young people are the most educated generation ever, both

industrialized countries and developing ones fail to increase employment opportunities for them. The lack of opportunities is linked to the general state of the economy and employment situation, but is also a result of the mismatches between the skills that young people possess and the skills required by the labour market. All of these factors can lead to long periods of unemployment which is not only detrimental to young people but has a significant negative impact on the economy and society in general (ILO, 2011).

Therefore, the need for more detailed studies in this area becomes evident. The empirical results and conclusions are forming the core background in the formulation of specific policies designed to facilitate young people's integration into the labour market and to reduce youth unemployment. Moreover, by investigating the youth labour market performers we can point out the successful policies in order to retrieve, adapt and transfer them, as far as possible, towards the countries with young people in distress.

The research in this article comes precisely to complement the international knowledge in the field of youth unemployment. The panel data analysis of the determinants of youth unemployment in the EU member states has brought to the fore both macroeconomic indicators and socio-economic factors. There was evidence of a negative statistically significant relationship between youth unemployment rate and labour productivity (as GDP per capita), capital investment (gross fixed capital formation as share of GDP) and R&D expenditure as share of GDP. The education has proved to be an important factor in the analysis of unemployment: an increase in the number of persons with higher education attainment generates higher youth unemployment rates, by placing additional pressure on young people in finding and keeping a job.

The negative relationship between the unemployment rate and productivity (GDP per capita) shows the lack of foundation for people's tendency to believe that higher productivity leads automatically to labour saving. What people do not consider is that periods in which productivity is high (or rising) are usually associated with periods of prosperity, characterized by low rates of unemployment. The result of the econometric estimation is a functional one and cannot capture all the macroeconomic mechanism that translates the impact of labour productivity on reducing youth unemployment. Most likely, behind this result is the fact that labour productivity growth leads to increased production which generates an increase in the aggregate demand and hence a greater need for manpower.

An important conclusion of this study was that youth unemployment rate is influenced by investment as well as expenditure on research and development, two relevant indicators for innovation and technological progress. Given the interest in stimulating investment as a driver of economic growth and in achieving the 2020 target of 3% share of R&D expenditure in GDP, we can state that this trend is also in favour of young people. It remains "only" to find concrete ways to successfully achieve these objectives.

The DEA analysis for the EU Member States in the period 2005-2011 showed that only 9 countries are technically efficient throughout the whole period, namely: Austria, Bulgaria, Belgium, Cyprus, Hungary, Ireland, Italy, Malta and Romania. An interesting remark is that these countries are not necessarily the most developed ones. Only Austria is a country with great outputs (high productivity

and low youth unemployment rate), and is also technically efficient, successfully using its inputs. Cyprus, Hungary, Bulgaria and Romania are countries with very low values of labour productivity and relatively high youth unemployment rates. The reason why they have proved to be technically efficient is the ability to convert the limited resources in the best possible results.

After the year 2008 there was a gradual decrease in the number of technically efficient countries from 17 to just 10 in 2011. An important conclusion concerns Germany, Sweden and the UK, which registered serious damage in the ability to efficiently transform available inputs into labour market specific outputs towards the end of the analysed period. Therefore, in spite of having well developed economies, these countries were affected by the economic crisis in terms of youth labour market performance.

A country with severe problems regarding young people is Spain, where the youth unemployment rate reached alarming levels (41.6% in 2010 and 46.4% in 2011). This issue is already in the attention of researchers, as well as policy makers, many resources being channelized in finding quick and effective solutions in order to remedy the situation. Garcia (2011) already made the recommendation to adopt the Austrian model regarding the social security system. In other word, Austria stands out internationally as the best performer in the youth labour market and the present study comes to support this conclusion.

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Conducting changes in an organization under conditions of considerable shortage of qualified personnel

Abstract:

The topic of organizational change became quite popular in recent publications of researchers and practitioners all over the world. This interest can be explained by growing market turbulence and highly dynamic development of technologies that dramatically change landscapes of particular industries. Companies that fail to change in accordance with those new trends, or cannot foresee those trends and change before they become real, are condemned to quick death. Most academic publications in this area are focused on the process and mechanisms of conducting changes in organizations, and in many cases they proceed from several simplifications related to availability of personnel of certain qualification and irreversible nature of particular changes. In this regard, many authors who try to simulate the process of organizational change under ideal conditions of the theory, reach a deadlock in practical situations when the process of implementing changes cannot even be started because it is not possible to recruit specialists of required qualifications and skills. In many cases because of the time pressure it is not even possible to provide existing specialists with additional training. Thus, it is easy to see that while simplifications cannot be implemented, and indeed these are 90% of cases of real businesses, the value of theoretical advancements in the field of practical organizational change is decreased. All this leads to the situation when theorists and practitioners exist in parallel worlds and are quite skeptical about each other's activity.

Authors of the paper for a number of years combine research and academic activity with practical managerial work on Russian plants. The paper examines particular specifics and conditions of conducting necessary changes in organizations which are "not equipped" with employees of needed qualification and there are limited opportunities to improve the situation because of the tight schedule of changes. Results of research conducted by

authors will be essential, first of all, for small and medium businesses that function under considerable limitations of internal and external organizational resources.

Keywords: Organizational Change, Personnel Recruitment, Technological Development, Working Conditions, Labor Market

JEL classification: O3, M54

1. Introduction

Authors would like to start their paper with a strong statement but the only thing that comes in mind after analyzing issues that we would like to raise on the following pages, is that the world is characterized by quick and unpredictable changes and by the lack of justice. This idea is well-known and repeated by many authors but those who work in business and especially who are involved in running a company, recall these words several times a day.

Issues of conducting changes in organizations became quite popular in publications of numerous authors all over the world (Dopson and Neumann, 1998; Whelan-Berry et al., 2003; Bergquist, 1993; Armenakis and Bedeian, 1999; Nutt, 2003, Struckman and Yammarino, 2003; Alas, 2007 and others). It happened because of growing market turbulence and high dynamics of technological development, those factors stimulate fast and unpredictable changes of markets and industries and thus organizational changes within companies. In most cases companies choose to change because there is no other option to survive (fast developing technologies set conditions for a considerable shrinkage of some markets and complete collapse of others), but there are situations when companies enjoying resources and most importantly managerial talent pioneer changes both technological and managerial. Those “stars” are able to shape landscapes of particular industries for years in advance, until a new pioneer comes to stage.

Today human resources become more and more significant for any business, along with such non-material assets as reputation and brand identity. People of necessary qualification, headed efficiently by a prominent leader become a guarantee of successfully introduced and realized changes both technological and organizational. In numerous publications related to this topic there are a lot of wise recommendations and descriptions of how to build and develop efficient teams, how to stimulate leadership, to manage organizational knowledge and to design the working process. Issues of recruiting qualified professionals that include both managers and workers of different areas are not observed in detail, since most authors claim that labor market conditions are pretty much country specific. In practice, the issue of hiring and/or training professionals till they are qualified enough for supporting and realizing changes in a company is a foundation stone of any successful change introduction. The situation of shortage of human resources in particular areas is normally aggravated by rigid time limits if a company tries to initiate a change. Life is particularly tough in those cases to small and medium

companies that yet do not possess a strong and attractive reputation of an industry leader that undoubtedly works as an attractivity factor in the recruitment process.

The paper is organized as follows. The next section provides a general context of organizations introducing changes with a focus, first, on those who choose changes not for their survival but rather for gaining leading positions in their industries, and second, on a gap that exists between an academic approach and a practical approach to the situation. Section 3 examines difficulties that companies face in the process of finding and training personnel needed for successful introduction and implementation of changes, section 4 brings practical observations and conclusions.

2. Changes for a success

Dopson and Neumann (1998) argue that change is a necessary evil for survival under conditions of uncertainty. In a publication by Whelan-Berry (2003) organizational change is seen as an individual-level phenomenon since it occurs only when the majority of individuals change their behavior or attitudes. Multiple-interacting changes in a global environment have led to a situation of high complexity, confusion and unpredictability. Thus, the focus of the change process is now shifted from product innovation and technological change, to behavioral aspects of change and to attitudes about change (Bergquist, 1993).

Many scholars analyze in their works such features of organizational change as type, content, process and structure. Armenakis and Bedeian (1999) distinguished the following types of research on organizational change:

- content research,
- contextual research,
- process research, and
- criterion research.

Nutt (2003) combines process and structure. The structural research offered by Nutt (2003) is similar to content research by Armenakis and Bedeian (1999), and process research is presented in both typologies.

The type and process of change are quite important bricks in any model for dealing with change, but there is also a third important factor – a readiness to change in a particular company. The readiness factor acts as a bridge between identifying what shall be the final result of change, and the activity of implementing the change. Struckman and Yammarino (2003) analyze types of change in connection with the readiness to change, but they do not pay enough attention to the process. Alas (2007) offers a model that combines types of changes, process of change, the readiness to change and the institutional environment as the context of change.

In addition, it is necessary to mention that several researchers outline the crucial role of leaders as a driving force in organizations that manages and guides changes (Graetz, 2000; Stace, Dunphy, 1996; Kanter, Stein, Jick, 1992; Limerick, Cunningham, 1993; Ulrich, Wiersema, 1989). Others argue that

those leaders must also create a climate "that welcomes, utilizes, and exploits uncertainty" (Clampitt & Williams, 2005; p. 212) in order to be flexible enough to address unceasing internal and external volatilities.

As it is clear, the world is changing and we shall address the question of what are key features of a company that will be able not only to survive under such conditions but moreover, become successful? Definitely, this is a company that is able to change the world, to become a pioneer, but not the follower of changes dictated by others. Pioneering companies are able to create so called "temporary monopolies". As Abraham (2006) argues, those monopolies may be global (a good examples here will be Apple corporation that created an iPhone – *authors' comment*), and local (a local company may provide best goods or services in a given region or territory). Key factors that allow to achieve a temporary monopoly, in our opinion, include,

- an ability to change (organizational factor), and
- an ability to create unique products (functional factor), or at least to be able to offer well-known products in a unique manner.

Authors are aware that some of those statements were made earlier by industry practitioners and management gurus. Companies that are not able to reflect changes happening locally and globally, and moreover, to create those changes, will not be able to survive in today's turbulent reality.

In all publications mentioned above a good academic approach is demonstrated, but unfortunately in most cases it illustrates only key stages of the process of change or general principles of creating unique products and services. Other published materials contain so called "success stories" (Peter, Waterman, 1982; Collins, 2000; Jackson, 2001; Kanter, 1985&1990; Handy, 1994&1997; Kotter, 1985&1996), many of them come from industry practitioners who pioneered changes in their organizations and achieved certain results. These stories are useful without any doubt, they provide essential material for analysis and practical managerial tools. But we shall not forget a phrase of Sir Winston Churchill "Generals always prepare for the past war". A conclusion is that most authors do not take into account an irreversible nature of some organizational changes, and considerably simplify issues related to company's personnel and its qualification. Thus, normally it is suggested that in case of need companies shall recruit, train or outsource personnel, while in many real situations it is not possible to do so easily. Let us pay attention to some possible difficulties that emerge in practice.

3. Searching for professionals when changes are on the way

Aspects related to personnel in such complicated situations of organizational change as, for instance, mergers and acquisitions, have been in focus of several studies (Aguilera and Dencker, 2004). Effective management of human resources can potentially play an important role, for example, by reinforcing the system of managing human resources and corporate culture and providing leadership and communication to reduce turnover (ibid). But what happens in practice when a change is planned and certain requirements to personnel qualification are formulated, and a line manager is supposed to "equip" his/her team with necessary skills, or in some cases with new professionals?

Here it is essential to mention that real cases that we keep in mind, are derived from the managerial practice of small and medium Russian companies that work in Russian regions. So, if a manager wishes to hire a qualified specialist, he/she can either send a request to the corporate HR-department or to involve an HR-agency, or finally, if a highly qualified and expensive professional is needed, it is possible to seek for recommendation from the manager's professional contacts. The first difficulty for a manager in this process always will be to achieve clear understanding of qualifications and skills this new specialist shall have in order to fulfill tasks that he is expected to fulfill. Also, in 99% of cases an expensive highly qualified specialist will not only require high salary but also certain working conditions and infrastructure, which largely determine his success at the new position, but in most cases are not paid enough attention to. Lack of those conditions which also involve high expenditures, may result in a failure of a newly hired expensive specialist and lost expectations of the company, while corporate management believed that new appointment will solve all their problems. At the same time, the chase for qualified expensive professionals results in an overheating of particular segments of the labor market. In many cases if a company does not have a "sound" name and reputation it is difficult for them to recruit such a professional, and even if he/she agrees to take a position, salary requirements may be higher than expected. Finally, there are situations - and it is true for 30% of cases analyzed, - when a company is not able to find a professional of required qualification on the market.

If professionals of needed qualification are not available on the labor market for some particular reasons (see above), a company may decide to train existing employees in order to gain necessary qualifications. In practice three questions have to be answered here: first, who will train the employees (and how expensive those trainings may be); second, who shall be trained, and third, how long it will take to train selected employees. Answering the third question we meet the inertia of existing educational approaches, which means that on average 6 months are needed for training a manager (there may be training periods of different length for workers and other specializations). Thus, as far as the pace of organizational changes is concerned, a company may be equipped with required professionals by the time when it is already too late. Thus, the option of training employees may work only in cases when changes are planned 1-2 years in advance, which is not feasible for small and medium businesses.

There is a third solution – a company may outsource necessary specialists, but here we face with a simple but very dangerous risk. If outsourced specialists are involved in works that are strategically important for a company, there is a high probability that future outcomes of innovations and changes will be enjoyed by "providers" of those professionals. Numerous papers are focused on those issues, but a solution is still not found.

In order to conclude this part, we shall say that a situation described above results in serious mutual misunderstanding between theorists and practitioners. First ones offer solutions that in practice do not work, second ones often are not able to give necessary feedback and summarize difficulties that they face trying to provide their businesses with qualified specialists needed for conducting successful changes and obtaining leading positions on the market. As a result, practitioners approach recommendations and solutions offered by academicians and consultants with a grain of salt.

4. Conclusions and observations

Authors of this paper for a number of years wear two hats – the hat of scientific researchers and the hat of industry practitioners, thus trying to conciliate these two areas and to follow a well-known quote of Kurt Lewin “There is nothing so practical as a good theory” (K. Lewin quoted in Marrow, 1969).

So, we are looking at the following, quite common situation in a company when, first, it already works on the market for a number of years and faces certain difficulties of both internal and external nature; second, its shareholders have decided that certain steps shall be undertaken in order to overcome difficulties and bring their company to effective performance; third, it is known that the company has limited resources for conducting necessary changes and bringing into practice a new plan offered by the board of directors and top-managers. Given the topic of our paper, we will not focus our attention on particular steps that the company should undertake, since those steps depend very much on industrial and country specifics, but will look at internal managerial aspects and organizational changes, as well as particular mechanisms and factors that determine an efficiency of changes conducted.

The first thing that an organization needs to do in this case is to agree about terms and concepts used. This issue only seems to be simple. But in practice we shall keep in mind that specialists involved have different levels of qualification and different experience, so they may have different understanding while operating such well-known terms as “process”, “project”, “department”, “change”, “instruction” etc. As a consequence, there will be an individual vision of what shall be done and when. When a common understanding of basic concepts and terms is achieved, all professionals involved, including engineers, financial specialists, IT-specialists etc., will speak “the same language” within a company. Definitions taken from books are often too complicated, so in practice it may be useful to simplify key terms and concepts that will be used in the process of work. Only necessary and important issues should be kept from broad explanations, one of the top-managers interviewed in the course of our work explained that he approaches the issue of writing instructions for his department as a military commander who has to put together documents under high stress with little time given for understanding written instructions by the troop. As we can see, global economic crisis is not much different from the front line.

Another important observation that should be kept in mind is that lack of qualification of employees presumes highly detailed descriptions and explanations while preparing for activities. This means that before a manager sets a task for an employee, he/she should decompose it to simple elements that do not cause questions, need clarification or have double meaning. In practice this leads to considerable changes of deadlines and time planned for particular works. The period of preparation may be increased in times, as well as the process of conducting the work itself. This happens partially because of an increased number of control operations that are necessary in order to minimize alterations. Now, if we compare time indicators and costs of doing the work by professionals of different qualification, we eventually will see that the costs will be not much lower in case of a team of qualified specialists, meanwhile the time spent will be much less. But in many cases changes have to be conducted with an existing team of professionals and there are no resources, including time, to change them or train them.

We cannot "freeze" our company and make all necessary personnel replacements and then "restart the engine", this means that the task of a manager is more similar to the task of a surgeon, rather than a task of a mechanist. The "engine" should be repaired while working. Even if it is decided to considerably change the policy related to personnel in a company, changes will have to be done gradually and will require some time. On average, it is more or less harmless for the key business process when one new employee comes to a plant instead of two old ones every six months. This means that most organizational changes are started with existing employees, and only in the process of change some new appointments could be made. Nevertheless, there are some exceptions, for instance, when a company hires not one professional but a team of professionals who used to work together effectively for a number of years and fulfilled a number of projects.

Our third observation is that while planning changes, one should remember the fact that personnel is the most conservative element of the management system. This means, first of all, that if numerous changes will be happening simultaneously in a company, this situation may become rather stressful for the personnel, especially if their qualification is not high. Moreover, if a manager continues to conduct changes in the same manner for a number of months, he/she is risking to face a mass sabotage and extremely negative reaction to any changes, regardless how justified and constructive they are. In this regard, our research shows that changes should be considerable but they shall take place not often, and definitely they shall be carefully prepared and effectively managed. What do we mean when we say, that changes shall be carefully prepared?

- objectives and results of changes are formalized, and became known to all interested parties but not only to those who will be involved in bringing changes to realization;
- the timeline for changes is agreed and takes into account duties that professionals involved should fulfill according to their regular work schedule; the timeline for changes is realistic and became known to all people that participate in the process of change, including those who will use the results of changes, but do not participate in the process of change realization and approbation;
- the process of implementing changes is equipped with necessary resources and their use is properly controlled.

This list could be prolonged but further points could be easily found in literature related to project management.

Another important observation that shall be made, is that special attention should be paid to psychological climate among professionals involved in the process of implementing changes. If a manager knows well his/her subordinates, he/she has a clear understanding who forms "a core" of this group. Those employees are normally involved in most considerable changes happening in the company, at the same time they usually determine quality and efficiency of the company's regular performance. This situation sooner or later results in their overload. In two or three month a manager deals with their physical and moral depletion. Thus, in order to avoid such risk a manager should carefully monitor a number of tasks and responsibilities that each key employee has for a certain period

of time. Some situations may be solved by applying various motivation techniques, but the worse case would be if an employee is under such level of stress and is so overloaded that he/she loses any interest in what he/she does at work. A long vacation may help, but it will considerably increase the time needed for conducting an organizational change that may be vital for a firm. That is why emotional and psychological state of employees should be constantly monitored and maintained by a manager, usually about 20% of his time is spent on this procedure which presumes informal communication as well as day-to-day observation.

The process of conducting changes is an uneasy task especially under conditions of local or global economic crisis. In this paper we draw attention to a few simple issues related to this process with an intention to talk later about more complicated things. In the focus of our ongoing research are issues of managing changes and crisis situations in companies of particular industries.

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Existing and Preferred Organizational Cultures In Arab and American Organizations

Abstract:

In organization behavior it is of interest to know the extent to which local organizations adopt values held in their society. Considerable research, therefore, is expended in search of culture's influence on organizations and attitudes of managers inside them. Hence, this study examines if national values could explain types of organizational culture. It draws its methodology from Hofstede (2001) idea, that national culture impacts organizational operations; Harrison's (1992) types of organizational culture (Power, Role, Achievement and Support); and Pheysey's (1993) notion that Hofstede national culture could explain Harrison's (1992) types of organizational culture. The study first investigates the culture of organizations operating in an Arab society, namely Jordan, then, it compares its results with those reported by Harrison on American organizations. Results are of interest for human resources managers, change management professionals and comparative management researchers. Results also have important implications for international companies who need to take account of national cultures when deciding how much autonomy they should give to units in different countries to determine their own culture.

Keywords: Organizational Culture, Arab, American, Organizations

Introduction

The interest in organizational culture stems from the belief that culture influences behavior, decision-making and organizational strategies and performance (Schein, 2010; Kotter & Heskett, 2011). Globalization has also heightened awareness of the need to not only understand the organizational culture but also the impact of national and international cultures (Hofstede, 2010). Several management scholars maintain, however, that there is no culture free theory of management (Hofstede, 2001; House, *et.al*, 2004; Pheysey, 1993; and Hickson & Pugh, 2002). They argue that organizational culture is a product of individuals whose understanding is influenced by societal values, beliefs, work and social experiences. Within this context, Arab customs and values have often been linked to a bureaucratic

form of organization structure (Sabri, 2012, 2011, & 2007; Barakat, 2008; and Weir, 2005). To date, however, there has been little empirical support for this idea. Although Arab organizations exist in a culture that is different from that of the West, its influence may be outweighed by other organizational constraints, including those of size, technology, dependence and external environment.

This study examines the extent to which the culture of organizations could be explained by particular dimensions of their national culture within the context of an Arab country, namely, “Jordan”. The study then employs a comparative approach to investigate to what extent the differences between the Jordanian/Arab and American national cultures account for significant variations in the culture of their organizations. The author believes that this is of interest for international comparative management researchers and has important implications for international and global companies who need to take account of national differences when deciding how much autonomy they should give to units operating in different countries to determine their own culture.

THEORITICAL BACKGROUND

National Culture

Various authors have set dimensional frameworks for the study of culture (Hofstede 2001; Trompenaars and Hampden-Turner, 1997; and House *et al.*, 2004). The dimensions of interest in this paper are those set by Hofstede (1984-2013). Hofstede (1984) studied fifty countries and three regions on four dimensions of national culture: power distance, uncertainty avoidance, masculinity/femininity and individualism/collectivism. Each of the countries studied by Hofstede were ranked from high to low by giving 1 to the largest and 53 to the smallest on each dimension, and thus each had a distinctive cultural profile. Each of Hofstede four dimensions of national culture has its own distinctive characteristics, illustrated as follows:

Power Distance (PDI) explains extent to which the less powerful people in a culture accept and expect power to be distributed unequally. It has to do with the fact that a society’s inequality is endorsed by the followers as much as by the leaders. Power is based on family, friends and charisma and the ability to use force.

Uncertainty Avoidance (UAI) describes how people become nervous in unstructured, ambiguous situations, and try to avoid such situations by developing rules to guide behavior and a belief in absolute truth.

The Individualism-Collectivism (IDV) reflects how culture encourages individuals as opposed to collectivist, group-centered concerns. It has to do with whether people’s self-image is defined in terms of “I” or “We”. In Individualist societies people are supposed to look after themselves and their direct family only. In Collectivist societies, people belong to ‘in groups’ who take care of them in exchange for loyalty. Meanwhile individualistic cultures emphasize personal commitment and achievement, collectivist cultures tend to cooperate and stick with their in-groups and family.

Masculinity–Femininity (MAS) highlights 'masculine' cultures where performance is what counts and challenging work satisfies the sense of accomplishment. A high masculine score indicates that the society will be driven by competition, achievement and success. This value system starts in school and

continues throughout one's life, both in work and leisure pursuits. A low masculine score means that the dominant values in society are caring for others and quality of life. A feminine society is one where quality of life is the sign of success and standing out from the crowd is not admirable. The fundamental issue here is what motivates people, wanting to be the best (masculine) or liking what you do (feminine).

Organizational Culture

Schein (1996:229) argues that organizational culture is the "shaped norms, values and assumptions of how organizations function." Ravasi and Schultz (2006:437), however, define organizational culture as "a set of shared mental assumptions that guide interpretation and action in organizations by defining appropriate behavior for various situations." Hill and Jones (2001:396) state that it is the "beliefs and ideas about what kinds of goals members of an organization should pursue and ideas about the appropriate kinds or standards of behavior organizational members should use to achieve these goals." Different scholars (Hofstede, 1984; Pheysey, 1993; Gannon 1994; and Hickson & Pugh, 2002) argued, however, that managers are not separable from their indigenous cultures. Hofstede et al., (2010) recognized, for instance, that organizational culture differences are composed of other elements than those that make up national culture differences. At the national level cultural differences reside mostly in values, rather than in practices. At the organizational level, cultural differences reside mostly in practices, and less in values. Yet, Hofstede (1993:1) asserts that "organizational and national culture overlap and affect the different programs in people's minds."

Harrison (1992) and Handy (1993) argue that organizations are as different and varied as the nations and societies of the world. Organizations have different culture-sets of values and norms and beliefs, reflected in different structures and systems. Harrison (1992) identified four cultural orientations inside organizations: Power, Role, Achievement and Support cultures. In *power culture*, leaders display strength, justice and are paternalistic. Subordinates are submissive and are expected to be compliant, willing and loyal. *The role orientation* requires less direct supervision assuming that people work most efficiently and effectively when they have clearly defined tasks. Clarity and precision of the roles and procedures are also a must. Unlike the power and role cultures, *the achievement culture* relies on self-motivating strategies and is based on competence. Although people supervise themselves, but still structure and system are necessary in this culture. Like the achievement culture, the *support-oriented* organization assumes that people want to contribute. Hence, this culture offers its members a satisfaction that stems from relationships, mutuality, connection and belonging.

Typologies of National and Organizational Cultures

In her analysis of Hofstede dimensions of national culture and Harrison's types of organizational culture, Pheysey (1993:15) suggested a link between Hofstede (1984) four dimensions of National culture (power distance, uncertainty avoidance, individualism and masculinity) and Harrison's (1990) four cultural orientations (power, role achievement and support). From the perspective of Hofstede (1984) dimensions, Pheysey noticed the organizational cultures, which might exist within every society as follows:

1. In Power Distance terms, the organization is seen as embedded with 'Power Culture' where there is 'relatively bounded and stable occurrences of social order based on habits of deference to authority'.
2. In Uncertainty Avoidance terms, an organization is seen as having a 'Role Culture' where people work most effectively and efficiently if they have relatively simple and clearly defined tasks. Clarity of roles and procedures fits the parts of organization together like a machine.
3. In Individualism terms, people are interested in the work itself; thus, an organization tends to have 'Achievement Culture', which assumes that people will be self-motivated and enjoy working at tasks, which are intrinsically satisfying. People also emphasize their personal commitment and achievement.
4. The Femininity Culture offers satisfaction through relationships, mutuality, belonging and connection. People contribute out of a sense of commitment to the organization. Thus it would match a 'Support Culture' in organizations.

However, Harrison (1995) commented on the relationship between national and organizational cultures, and maintained that since the structure of modern organizations and modern production methods constrain the culture, the national culture's orientation would be expected to show up more in the culture that employees prefer rather than the perceived existing culture.

Arab and American National Cultures

By exploring American and Arab cultures we can get a helpful overview of the deep drivers of culture relative to other world cultures. Table 1 illustrates American and Arab cultural orientations as reported by Hofstede (1984). Figure 1 also illustrates a comparison between the USA and Arab Group on Hofstede dimensions of national culture (Hofstede, 2013).

Take in Table 1 here

Take in Figure 1 here

On Power Distance dimension the Arabs scored high, the American scored low. On Uncertainty Avoidance dimension, the Arabs scored large, the American scored weak. The Arabs scored low on individualism, tending to be collectivist societies. The US scored high on individualism tending to be an individualistic society. On Masculinity, both the Arabs and Americans scored high tending to be more masculine societies.

Hofstede (1984) analysis of the Arab culture, demonstrates that large power distance and uncertainty avoidance are predominant characteristics for Arab countries. Hofstede (2010) asserts that when the two dimensions of power distance and uncertainty avoidance are combined, it creates a situation where leaders have virtually ultimate power and authority, and the rules, laws and regulations developed by those in power reinforce their own leadership and control. On masculinity index the Arab group scored slightly high. It is believed that in masculine cultures to be important is to have an opportunity for higher earnings, to attain recognition by doing a good job with a chance for advancement. The Arab

culture is classified as collectivist society with long-term commitment to the member 'group', that being a family, extended family, or relationships.

Several studies (Attiyeh, 1993, Ali, 1996; Sabri, 2004; Hickson and Pugh, 2002; Dorfman and House, 2004; Barakat, 2008)) concluded that Arab managers give priority to friendships and personal considerations over organizational goals and performance. They are also reluctant to delegate authority; avoid responsibility and risk-taking; prefer stable lifestyle over rewarding but challenging work. Gregg (2005) implies that status-consciousness are often said to be important values in traditional Arab culture, especially within tribal cultures. Effective Arab managers were reported by Dorfman and House (2004) to score significantly higher on 'self-protective' traits, namely self-centeredness, status-consciousness, face-saving, conflict induction and reliance on procedure.

Arab societies are more likely to follow a caste system that does not allow significant upward mobility of its citizens. They are also highly rule-oriented with laws, rules, regulations, and controls in order to reduce the amount of uncertainty, while inequalities of power and wealth have been allowed to grow within the society.

Jordan shares with other Arab countries some major features of the Arab culture, among which are the tribal and family structure. Managers in Jordanian organization are so prejudiced by their family structure that they behave like fathers and protectors of the business. In addition, in Jordanian public organizations, family and friendship obligations take precedence over all others. There is a high tendency for Jordanian managers to lean towards prestigious positions, being very title oriented. Decisions are mostly centralized in the hands of persons in upper management. Thus, like other Arab workers, Jordanian employees expect an autocratic leadership style, which is counteracted by the support given to subordinates' families (high collectivism) (House, et al, 2004).

The American management style focuses on role of employees as the culture is low on power and avoidance on uncertainty. In low power culture a key idea is 'participative management', a situation in which subordinates are involved into decisions at the discretion and initiative of their managers. It is also tolerant of deviant and innovative ideas and behavior. Motivation is practiced by achievement and esteem or belongingness. Superiors are always accessible and managers rely on individual employees and teams for their expertise. At the same time, communication is informal, direct and participative.

The American culture is also more individualistic and masculine culture. In individualistic and masculine cultures management is management of individuals, hiring and promotion decisions are supposed to be based on skills and rules only, self-actualization by every individual is an ultimate goal and task prevails over relationship. Performance is what counts. Hence, the emphasis is on personal commitment and achievement. In the business world, employees are expected to be self-reliant and display initiative. Also, within the exchange-based world of work, hiring and promotion decisions are based on merit or evidence of what one has done or can do. The United States is also considered a 'masculine' society. Behavior in school, work, and play are based on the shared values that people should strive to be the best they can be. As a result, Americans will tend to display and talk freely about their "successes" and achievements in life, here again, another basis for hiring and promotion decisions in the workplace. Typically, Americans 'live to work' so that they can earn monetary rewards and

attain higher status based on how good one can be. Conflicts are resolved at the individual level and the goal is to win.

However, American society is described as ‘uncertainty accepting.’ Consequently, there is a larger degree of acceptance for new ideas, innovative products and a willingness to try something new or different, whether it pertains to technology, business practices, or foodstuffs. Americans tend to be more tolerant of ideas or opinions from anyone and allow the freedom of expression. At the same time, Americans do not require a lot of rules and are less emotionally expressive than higher-scoring cultures.

Hypotheses

Based on the above analysis of Arab and American cultures (Hofstede, 2001) the author elaborated the following hypotheses, which predict a relationship between Hofstede four dimensions of national culture and Harrison’s four constructs of organizational culture as suggested by Pheysey (1993):

H1: Jordanian/Arab organizations will tend to be more Power and Role oriented cultures and American organizations will tend to be more Achievement and Support oriented cultures.

H2: Jordanian/Arab employees are expected to have a stronger preference for Power and Role cultures and American employees are expected to have a stronger preference for Achievement and Support cultures.

METHOD

Measurement of national culture: Hofstede (1984) dimensions of national culture were selected in this study as they provide the most comprehensive data available on national cultures that has received widespread acceptance. Hofstede (1984 and 2001) classification of world’s cultures still figures prominently in most recent studies on societal cultures and because it was their relative influence on the organizational culture that was of interest.

Measurement of organizational culture: Harrison and Stokes’ instrument “Diagnosing Organizational Culture” (1992), is used in this study to measure the culture of Jordanian/Arab organizations first because it assesses respondents’ perceptions of existing and preferred organizational cultures, and second it was the same instrument utilized by Harrison to measure American organizations’ culture. The instrument contains 15 statements. Each statement has four possible alternatives (a, b, c and d), each of which represents a particular culture. Alternative ‘a’ refers to the Power culture, alternative ‘b’ assesses the Role culture, alternative ‘c’ describes the Achievement culture and alternative ‘d’ describes the Support culture. There are two columns for each alternative: existing and preferred cultures. Participants are asked to rank each alternative for both columns from 4 (the most dominant view) to 1 (the least dominant view). The current reliability coefficient ranges from .66 to .85. Harrison conducted tests of reliability and discovered that of the four scales Power, Achievement and Support had moderately good reliability. While the Role scale proved to be the exception. The reliability coefficient for each of the four culture indexes was: Power= 0.90, Role= 0.64, Achievement= 0.86 and Support= 0.87 (Harrison, 1992).

In order to indicate how high or low the organization is on each of the four cultural orientations (Power, Role, Achievement and Support), Harrison (1990) studied a sample of 190 managers from different Western countries which he called the 'Norm group'. Results of the 'Norm group' represented a standard scale, with which most researchers, nowadays, can explain their studies results. As such, the results of this study will be compared to the results of Harrison's Norm group.

Database and samples

In Jordan, data were collected from a random sample of employees working in different firms representing product and service organizations. 360 questionnaires were distributed and 234 usable questionnaires were returned. The sample comprised (58) percent managerial and (42) percent non-managerial positions. (72) percent of the sample were university graduates and (82) percent of them were males. Over (50) percent of the sample were 40 years of age or older.

The American data is drawn from a study conducted by Harrison (1990) on a sample of 311 managers working for a variety of companies, tending towards the technical and professional occupations including some manufacturing personnel. Harrison used the same instrument of measurement 'Diagnosing Organizational Culture.'

RESULTS

Table 2 highlights the differences in the mean scores and standard deviations between American and Jordanian/Arab organizations on existing and preferred organizational cultures.

Take in Table 2 here

Comparing Jordanian and American organizations to the Norm group

To examine if the shown means in Table 2 are significantly high, they were compared with those of the Norm group as shown in Tables 3 and 4.

Take in Tables 3 and 4 here

Table 3 showed that the Norm group was significantly higher than American sample on existing Power culture ($t=3.9$), but the latter was significantly higher than the Norm group on Existing Achievement culture ($t=2.7$). Results also showed that the Jordanian/Arab sample scored significantly higher than the Norm group on existing Power culture ($t=2.8$), but the Norm group scored significantly higher than the Jordanian/Arab sample on existing Achievement culture ($t=4.1$).

On Preferred cultures, Table 4 indicated that the Norm group was significantly higher than the American sample on preferred Power ($t=5.0$) and Role ($t=3.9$) cultures, but the American sample was significantly higher than the Norm group on both preferred Achievement ($t=4.5$) and Support ($t=4.0$) cultures. The Jordanian/Arab sample was only significantly higher than the Norm group on preferred Role culture ($t=3.8$).

In view of these results it could be concluded that, compared to the Norm Group, Jordanian/Arab Organizations were significantly high on existing Power culture and on preferred Role culture and

American organizations were significantly high on existing and preferred Achievement and Support cultures.

Comparing Jordanian to American Organizations

Table 5 provides a comparison of Jordanian and American employees' responses, giving means, standard deviations and *t- test* results of the existing organizational culture and Table 6 shows the differences between Jordanian/Arab and American employees preference of organizational culture.

Take in Tables 5 and 6 here

Table 5 indicates that Achievement and support cultures are less common in Jordanian organizations that are more power and role oriented than American organizations that tend to be more achievement and support oriented. This result seems to lend support for ***H1*** which assumes that Jordanian organizations will be more power and role oriented than American organizations that will be more achievement and support oriented.

Moreover, Table 6 illustrates that Jordanian/Arab employees have a significant preference for power and role orientations than American employees, who significantly prefer organizations that are more achievement and support oriented.

This result also supports ***H2*** that Jordanian employees will have a stronger preference for power and role oriented organizations than American employees who will have a stronger preference for Achievement and Support cultures.

DISCUSSION AND CONCLUSION

It is argued in this study that the Arab society has its own unique social and cultural environment which plays a major role in molding its organizational processes and managerial systems. Compared to other cultures, that are low on power and uncertainty avoidance, the significant existing power and role cultures of Jordanian organizations demonstrated well the high power distance and strong uncertainty avoidance of Arab culture. Jordanian employees' responses clearly demonstrated the characteristics of the dominant power culture in Jordanian organizations. This was reflected in the high inclination of Jordanian managers to control their operations by highly centralized authority. Power was also obvious in the way people were treated, the way they were expected to behave, the way decisions were taken and rewards were granted. Employees were expected to be obedient, loyal, meet the demands of persons in higher positions and please their supervisors, in order to get ahead and gain rewards or avoid punishment. Moreover, the reliance of Jordanian organizations on formalization, which reflected a role culture, as a mean to control their operations, appeared to be a reflection of the remarkable inclination of Arab executives to assign duties according to their personal judgment calling on rules and procedures that are generally neglected, as a protective tactic to reinforce their power (Sabri, 2004).

On the other hand, compared to the American, Jordanian employees showed a significant preference for power and role culture which also reflects well the high power distance and strong uncertainty avoidance of the Arab culture. American respondents showed a preference to achievement and support cultures which reflects the low power distance and masculine American culture. However, looking at

the mean scores which showed Jordanian employees preference of organizational culture it is recognized that power was the least preferred culture to these employees who indicated strong preference to work in organizations that are more role (43.1), achievement (46.8) and support (35.7) oriented cultures.

It can be argued here that when the political, societal and economic environments change, people's cultural values also change and could affect work-related dimensions (Fernandez *et al.*, 1997). This change is evident as recent events in some Arab countries have shown that Arab youths have challenged, to a great extent, the argument that Arab populations have an expectation and acceptance that leaders will separate themselves from the group and this condition is not necessarily subverted upon the population, but rather accepted by the society as their cultural heritage (Hofstede, 2001). With the young Arabs taking part in political and economic transformation, it can be said that Arab society is in transition, discarding its old tribal and traditionalist beliefs to move towards the basis for a more modern economy (Ali, 2005).

It could be concluded that national culture influence on organizational culture might be expected to be weakest on existing culture because it is likely to be more open to influences from immediate contingencies such as market conditions and technological developments. For that reason, further research is required to improve the understanding of the relationship between societal culture and organizational culture and the consequences on management practices and employee behaviors.

The relationships between national culture and organizational culture may have important policy implications for the management of international and transnational organizations. Such organizations may need to consider whether promoting a consistent world-wide organizational culture will be more or less beneficial than adapting organization's culture to match the needs of different national cultures. This view implies that, in certain cultures, it will be more beneficial for international and transnational companies to develop 'strong' corporate cultures rather than to encourage local units to adapt to their national cultures.

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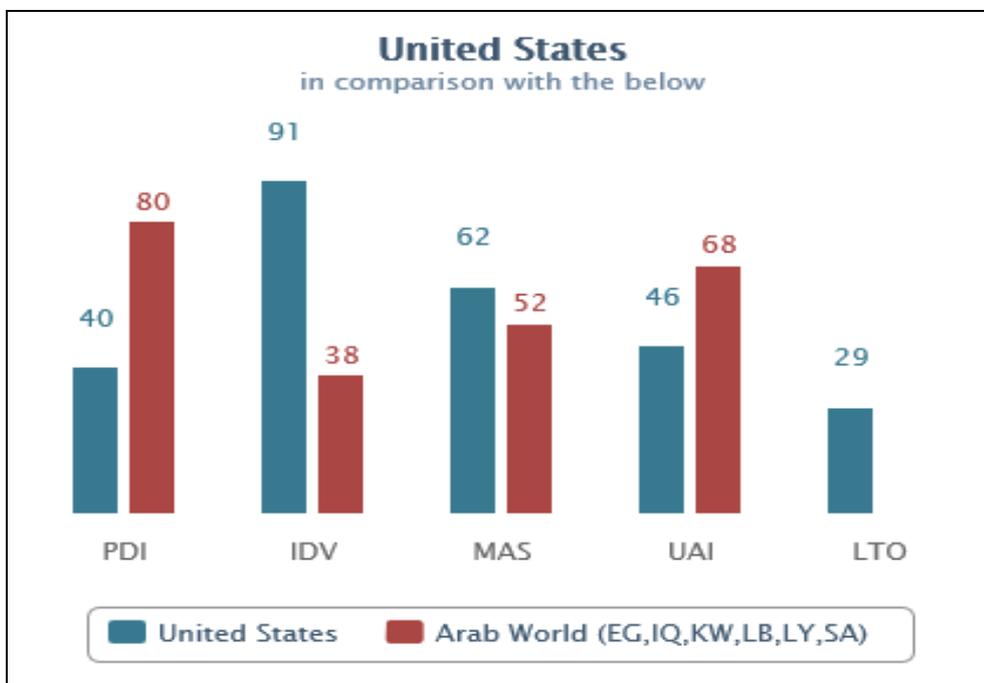
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Table 1: Illustration of American and Arab Cultures on Four dimensions: Power Distance, Uncertainty Avoidance, Individualism/Collectivism and Masculinity/Femininity (Hofstede, 1984)

Culture	Power Distance		Uncertainty Avoidance		Individualism/Collectivism		Masculinity/Femininity	
	Score / Rank	Rating	Score / Rank	Rating	Score/ Rank	Rating	Score/ Rank	Rating
American	40/38	Low	46/43	Weak	91/1	Individualist	62/15	Masculine
Arab	80/7	High	68/27	Strong	38/26	Collectivist	53/23	Masculine

Figure 1: Comparing the United States to the Arab Group on Hofstede Dimensions of National Culture



Depicted from Hofstede (2013). Comparing the United States to the Arab Group available from <http://geert-hofstede.com/united-states.html>

Table 2: Mean Scores and Standard Deviations of Existing and Preferred Organizational Cultures in American (n=311) and Jordanian/Arab (n=234) Organizations

Type of Organizational Culture	Country/Culture	American n=311	Jordanian/Arab n=234
Existing Power	Mean	36.3	45.9
	SD	12.6	9.7
Preferred Power	Mean	20.8	24.5
	SD	6.8	6.8
Existing Role	Mean	39.7	41.5
	SD	7.3	6.0
Preferred Role	Mean	33.4	43.1
	SD	5.4	5.4
Existing Achievement	Mean	41.5	33.6
	SD	7.5	6.4
Preferred Achievement	Mean	52.9	46.8
	SD	5.1	5.6
Existing Support	Mean	32.3	29.1
	SD	11.6	6.3
Preferred Support	Mean	42.8	35.7
	SD	8.0	6.7

Table 3: A Comparison between American (n=311), and Jordanian/Arab (n= 234) organizations with the Norm Group (n=190) on Existing Organizational Culture

Culture		Norm n=190 (1)	American n=311	Norm n=190	Jordanian/ Arab

				(2)	n=234
Power	Mean	41	36.3	41	45.9
	SD	12.6	12.6	12.6	9.7
	<i>t-value</i>	3.9***		2.8**	
Role	Mean	40	39.7	40	41.5
	SD	11.8	7.3	11.8	6.0
	<i>t-value</i>	0.32		0.95	
Achievement	Mean	39	41.5	39	33.6
	SD	11.4	7.7	11.4	6.4
	<i>t-value</i>	2.7**		4.1***	
Support	Mean	30	32.3	30	29.1
	SD	15.3	11.6	15.3	6.3
	<i>t-value</i>	1.8		0.5	

*** $p < 0.001$ at two tailed test

** $p < 0.05$ at two tailed test

(1) Degrees of freedom (500)

(2) Degrees of freedom (422)

Table 4: A Comparison between American (n=311) and Jordanian/Arab (n= 234) organizations with the Norm Group (n=190) on Preferred Organizational Cultures

Culture	Results	Norm n=190 (1)	American n=311	Norm n=190 (2)	Jordanian/ Arab n=234
Power	Mean	27	20.8	27	24.5
	SD	16.1	6.8	16.1	6.8

	<i>t-value</i>	5.0***		1.4	
Role	Mean	37	33.4	37	43.1
	SD	12.2	5.4	12.2	5.4
	<i>t-value</i>	3.9***		3.8***	
Achievement	Mean	48.0	52.9	48.0	46.8
	SD	15.4	5.1	15.4	5.6
	<i>t-value</i>	4.5***		0.7	
Support	Mean	38.0	42.8	38.0	35.7
	SD	12.3	8.0	12.3	6.7
	<i>t-value</i>	4.0***		1.4	

*** $p < 0.001$ at two tailed test

(1) Degrees of freedom (500)

(2) Degrees of freedom (422)

Table 5: A Comparison between Jordanian/Arab (n=234) and American (n=311) employees' perceptions of Existing Organizational Culture

Existing Culture	Results	Jordanian /Arab n=234	American n=311
Power	Mean	45.9	36.3
	SD	9.7	12.6
	<i>t-value</i>	10.1***	
Role	Mean	41.5	39.7
	SD	6.0	7.3

	<i>t-value</i>	3.2***	
Achievement	Mean	33.6	41.5
	SD	6.4	7.7
	<i>t-value</i>	13.1***	
Support	Mean	29.1	32.3
	SD	6.3	11.6
	<i>t-value</i>	4.1***	

*** $p < 0.001$ at two tailed test

Degrees of freedom (543)

Table 6: A Comparison between Jordanian/Arab (n=234) and American (n=311) employees' perceptions of Preferred Organizational Cultures

Culture	Results	Jordanian /Arab n=234	American n=311
Power	Mean	24.5	20.6
	SD	6.8	5.2
	<i>t-value</i>	7.3***	
Role	Mean	43.1	33.4
	SD	5.4	5.4
	<i>t-value</i>	9.4***	
Achievement	Mean	46.8	52.9
	SD	5.6	5.1
	<i>t-value</i>	13.7***	
Support	Mean	35.6	42.0
	SD	6.7	8.0
	<i>t-value</i>	10.0***	

*** $p < 0.001$ at two-tailed test

Degrees of freedom (543)

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From Family Business Performance to Regional Competitiveness. A Case of the Romanian Wine Industry

Abstract:

From a political economy perspective, development regions shape many rural areas and their communities across Europe. The paper aims contrasting the advantage brought by the wine regions to the economic development regions of Romania. To investigate the linkages between the performance of winegrowing family businesses and their contribution to regional development, we created an index of regional competitiveness across Romania. This model consists of a competitive framework based on three input factors: (1) business density (the number of firms operating in the wine industry, compared to the national demographics); (2) number of knowledge-based businesses (by inquiring winemaking businesses (family and corporate businesses) about the introduction of new products or processes to the market or the achievement of recognized quality of wines); (3) economic participation (turnover, profitability, sales of new products, employment trends), conceptualized as contributing to the output-productivity of a region.

The survey measures the vintners' performance impact on the economic progress/decline, business success being correlated with the competitiveness of areas relative to the performance of the host region (the geographical spread condition was accomplished). The analysis of answers collected from the winemakers uses the standard SPSS software.

Addressing Romanian development areas by comparison aims to generate potential catalysts for economic recovery. As might be expected, the firm's capacity to introduce new products and its spatial location in a "high performing area" are not a case in point. The fact that low-performing areas, in low-performing regions have innovative winemaking business constitutes a reason to support this sector.

In the context of this first-release analysis, the intention is to provoke further exploration of the impact of regional status of Romanian wine regions, meant

to make an example of successful rural restructuring and regional development, to apply to other industries as well.

Keywords: family business, index of competitiveness, regional development, standard development area, wine industry

1 Introduction. Wine Industry, an Opportunity for Regional Development

From a political economy perspective, development regions shape many rural areas and their communities across Europe. The priority set by the European Community from the very beginning refers to a sustainable, harmonious, balanced and coherent development of economic activities, able to generate a high degree of employability, social protection, raise in the standard of living, solidarity and economic and social cohesion among countries.

To this end, the path of action is twofold: (1) vertical cohesion, by reducing social disparities and establishing solidarity with disadvantaged social groups, (2) horizontal cohesion, by reducing regional disparities and establishing solidarity with the inhabitants of areas in decline. This politics, supported financially by structural funds, aims to boost the underdeveloped regions and to support conversion of areas and industries in difficulty, urban regeneration of cities and in parallel, diversification of economic activities in rural areas. (Constantin, 2010)

Disparities in regional development are the result of the differentiated "equipping" with human and natural resources, and the historical orientation of this evolution in terms of economic, technological, demographic, social, political and cultural features.

2 Background

This research is an introduction to my larger doctoral research conducted in the last 3 years, which splits in 3 directions:

- i) online asynchronous in-depth interviews with international experts from CEVI - European Confederation of Independent Winegrowers, to reassure my research ideas.
- ii) a quantitative analysis on wine family producers in the Languedoc-Rousillon (France) and Rioja (Spain) regions, for the elaboration of a model of corporate governance.
- iii) a part of face to face in-depth interviews with wine family producers in Romania, to establish the compatibility stage of corporate governance of Romanian family winegrowers with the model validated for foreign vintners.

In this regard, we find useful such an analysis, demonstrating a correlation between the success of winegrowers and the competitiveness of the region where they are located.

As in any analysis of this kind, which brings together results in areas with disparities of development, automatically some disapproving interventions may arise, regarding the level of reliability of the logic track of the research, in two ways:

- a) *business performance differences* between the quantitative study winegrowers and the target beneficiary winegrowers, which foster different development paces and directions;
- b) *regional embeddedness* between France and Spain (the countries of the quantitative research sample) and Romania (the country for which the model is proposed and where it should be implemented) and between the Romania's development regions;

In the context of the recent sharp debates on the regionalization of Romania, seen as an important objective of European integration, motivated by allowing an efficient zonal monitoring of the socio-economic development, by a more accurate allocation of investments and a more effective way of polarization of the increase, the calculation and correlation of some statistical indicators can justify the boost of certain economic activities. A secondary goal of our research is represented by the contribution to the enrichment of the statistical profile of Romania, more precisely (Ștefănescu et al., 2003):

- development of relevant indicators to depict the status of an industry or business environment, as premises for sustainable development policies;
- development of quality indicators, required by strategic spatial planning problems;
- particularization of statistical data regarding regional trends, in accordance with continuous changes in the economic activity.

To quantify the level of economic development of a region, an important instrument is global development index, with an important role in the hierarchy of administrative units. Tacu (1998) defines several steps in the elaboration of global development requires several steps:

- a) the identification of the most appropriate indicators and their structure in the system, requirements referring to the best reflection of the reality and the content on the most significant aspects of the socio-economic development process, the comparability and compatibility of indicators and the availability of statistical data in present and future;
- b) the determination of criteria and calculation methods in compliance with to the logical train of phases, in order to obtain the overall development index;
- c) the sensitivity analysis of this index dependence and variation upon the fluctuation of subcomponent indicators, in terms of dynamics and spatial/territorial affiliation.

Addressing Romanian development areas by comparison aims to generate potential catalysts for economic recovery. As might be expected, the firm's capacity to introduce new products and its spatial location in a "high performing area" are not a case in point. The fact that low-performing areas, in low-performing regions have innovative winemaking business constitutes a reason to support this sector.

2.1 Wine Regions

Our country presents significant differences in terms of eco-climatic features. Because of these differences, grape maturation, for the same variety, is performed 4-5 weeks earlier in Greaca (Giurgiu County) compared to Cluj-Napoca. Some differences are generated by altitude, exposure, slope,

presence of large pools of water, etc. Against this background, eco-pedological differences install, as with Dăbuleni (Dolj County), where on improved sands, for the Muscat Pearl of Csaba variety, grape maturation to be done 4-5 days earlier than to Zimnicele (Teleorman County), situated at the same latitude.

In this way, some large habitats known as wine regions result, which generally overlap provinces historically formed, which show some distinctivenesses of ecological conditions, varieties grown, applied technologies, production levels obtained and quality traits of the wines resulted.

According to the above peculiarities, the following wine regions have resulted:

- I. Transylvania Plateau (Transilvania)
- II. Moldovia Hills (Moldova)
- III. Muntenia Hills (Muntenia)
- IV. Oltenia Hills (Oltenia)
- V. Banat Hills (Banat)
- VI. Crișana & Maramureș Hills (Crișana-Maramureș)
- VII. Dobrogea Hills (Dobrogea)
- VIII . Danube Terraces & Sands and other southern lands (IX)

The Wine Region of Transylvania Plateau (I) comprises vineyards starting at Apold (Sibiu County) to Bistrița-Năsăud and Dej. This wine region is characterized by moderate heliothermic resources (highlighted by global radiation, IH and IA_{Oe}) amid rich water resources (resulting from CH and I_{bcv} values). The temperature during flowering (17.0 to 17.8 °C), the average annual temperatures in July (19.6 °C), the average maximum temperatures in August (25.7 °C), the average atmospheric moisture at every 1 p.m. of the same month (54%) and so on, are indicating the presence of a cool climate. This feature is conjugated with the relatively low number of frost-free days (- 2 °C), the interval of active daytime average temperature (> 10 °C), the length of the vegetation period and the number of days with maximum temperatures > 30 °C. Winters are the bleakest (extreme minimum mean -32.6 °C), reaching up to -35.2 °C in Dej. Globally, these eco-climatic conditions satisfy the requirements to obtain high quality wine products, given the long and sunny autumns and the high frequency of noble rot during grapes maturation in some varieties. Topography consists of hills and terraces with an average altitude of 411 m.

The Wine Region of Moldovia Hills (II) includes plantations on Moldovan lands, from Hlipiceni (Botoșani County) to Tîmboești (Vrancea County) and Smîrdan (Galați County). As a result, between the eco-climate in north and south there are considerable differences which are reflected in the quantity and quality of the wine obtained. Overall, the eco-climate, with strong Eastern European influences, is characterized by higher values of the heliothermic resources compared with those of the previous wine region, while water resources have obviously lower values. The higher heliothermic resources combine also with higher levels of multi-annual averages on temperatures at flowering (18.5 - 19.5 °C), the

maximum average temperature in July (21.4 °C), the mean of maximum temperatures in August (26.7 °C), etc. More differences, compared with the wine region of Transylvania Plateau, are recorded in terms of the number of frost-free days (214 days), the interval of active daytime average temperature (183 days), the growing season (171 days) or the number of days with temperatures > 30 °C. Harshness of winters is lower than in the previous wine region, still showing fairly low levels (extreme minimum mean -29.1 °C) reaching up to -32.5 °C at Răcăciuni. The average altitude of slopes occupied by vineyards is 179 m, which represents about 44% of the previous wine region altitude.

The Wine Region of Muntenia and Oltenia Hills (III and IV) brings together the vineyards in the south, starting from Râmnicu Sărat to Halanga (Mehedinți County) and Segarcea (Dolj County). Due to its southern position compared to the wine regions from above, the heliothermic resources are obviously higher given that water resources are lower, especially in relation to the wine region of Transylvania Plateau. Due to the same cause, appreciable positive differences are recorded in terms of wettability and air saturation deficit of the air with water vapors, the temperatures from June to August, and the longer vegetation period (185 days), the interval of active daytime average temperature (195 days), the number of days with maximum temperatures above 30 °C ('18 - 41) and that between the frosts of spring and fall (235 days). Although situated more to the south than the wine region of Moldavia Hills, the frost severity here is slightly greater (with a minimum extremes mean of -29.9 °C) reaching -35 °C to Banu Mărăcine. The average altitude of vineyards, although high (242 m), represents only about 60% of the average altitude that characterize the wine region of Transylvania Plateau.

The Wine Region of Banat Hills (V) comprises the insular vineyards starting from Moldova Nouă (Caraș Severin County) to Teremia Mare (Timiș County). This wine region is characterized by heliothermic resources comparable to those of Moldovan wine region taken as a whole, but in terms of higher water resources. It is noted, however, that by the August average maximum temperatures and the relative humidity at 1 p.m. during this month, and by the data relating to the length of the frost-free period, the period with positive temperatures and the length of the vegetation period, this wine region is resembling much to the wine region of Muntenia and Oltenia. In contrast, the extreme minimum winter temperatures are very close to those recorded in the wine region of Moldavia Hills, despite the large difference in geographical position. Viticulture is practiced on the piedmont hills (average altitude 231 m) that connect the Banat Mountains and the plains.

The Wine Region of Crișana and Maramureș Hills (VI) is bounded on the south by the Miniș Wine Estate (Arad County) and on the north by the Halmeu Wine Estate (Satu Mare County). Although this wine region goes north to near 48° latitude (the northern limit of the culture of the vine in Romania), due to the eco-climatic influence from Central Europe, the heliothermic resources are obviously higher compared to those of the wine region bordering it to the east (the Transylvanian Plateau). To this situation are also contributing the lower water resources (CH = 1.3) but at the same time very high, compared to the other seven wine regions. Similarly, the levels of heat in June, July and August, and the length of the vegetation period are higher. The positive influence of a warmer eco-climate in Central Europe is felt also during winter, which is more favorable than any other wine region presented

so far, the regional extreme minimum temperature mean being of $-27.2\text{ }^{\circ}\text{C}$, with the lowest minimum extreme of $-30.1\text{ }^{\circ}\text{C}$ in Măderat. Vineyards occupy the piedmont hills between Mureş and Tisa, as far as the contact of these hills with the Tisa Plain, respectively, the plain area between Oradea and Halmeu (average altitude 222 m).

The Wine Region of Dobrogea Hills (VII) goes from Mangalia to Tulcea and Măcin. This region has some of the greatest heliothermic resources which correspond to the poorest water resources. Conditions during flowering are most favorable, both in terms of high temperatures (18.9 to $20.3\text{ }^{\circ}\text{C}$) and low rainfall (15.9 - 19.5 mm). Due to thermal inertia generated by the Black Sea, the average temperature in July, the daytime maximum temperatures mean in August, the absolute maximum temperature of the same month etc., are lower than the values recorded in other wine regions in the south. Winters are less severe (extreme minimum mean $-26.6\text{ }^{\circ}\text{C}$); they include however wine estates where the extreme minimum goes down to $-33.0\text{ }^{\circ}\text{C}$ at Murfatlar. One distinctiveness in this wine region is the relatively small average altitude (71 m) where there are plantations of vineyards.

The Wine Region of the Danube Terraces (VIII) follows, like a band, the great river, from Zimnicea (Teleorman County) to Feteşti (Ialomita County). Due to its geographical position, this wine region has the greatest heliothermic resources ($HI = 2.50$) in the context of modest water resources ($CH = -0.8$). All these combine with very favorable conditions during flowering, both in terms of temperature and humidity (June), during the grain growth phenophases (July) and the maturation of the grapes (August). The low average altitude of vineyards, of 72 m, given that viticulture uses microporous and microrelief lands, is an important drawback, since, although it is situated in the south of the country, the Danube terraces region reaches an extreme temperature mean as low as $-27.0\text{ }^{\circ}\text{C}$, the lowest value being $-30.2\text{ }^{\circ}\text{C}$ which was recorded at Zimnicea and Greaca.

The Wine Region of Sands and other southern lands (IX) includes vineyards and wine estates from Vrata (Mehedinţi County) and Rîmnicelu (Brăila County). Eco-climatic, orographic and ecopedological conditions of this wine region are closer to those of the Terraces of the Danube. They are however less favorable for vine growing, both in summer and winter (the minimum extreme temperature mean of $-29.8\text{ }^{\circ}\text{C}$ and the lowest extreme maximum of $-33.4\text{ }^{\circ}\text{C}$ to Furculeşti - Teleorman County). This is due to the sandy soils and the more or less flat lands (average height 66 m). Because of this, insular wine areas dominate, often grouped in independent wine centers. (Oşlobeanu et al., 1991)

2.2 Development Regions under Scrutiny

The development regions are eight statistical quantities, lacking legal entity, created in 1998 by the County Councils of Romania to coordinate regional development necessary for Romania to join the European Union. Although becoming increasingly important in the field of regional development, these regions have no administrative status, not having a legislative council or executive body. Development regions are not administrative-territorial units, being the result of an agreement between the county and local councils. Their function is to allocate funds from the EU PHARE, for regional development, and to analyze and investigate regional statistics. Moreover, development regions coordinate regional infrastructure projects and became members of the Committee of Regions when Romania joined the EU in 2007.

Romanian development regions correspond to NUTS-II level divisions in the EU, consisting of:

- NUTS II level: 8 development regions, with an average population of 2.8 million inhabitants
- NUTS III level: 42 counties, reflecting Romania’s administrative-territorial structure
- NUTS V level: 265 towns and cities, 2,686 communes, with 13,092 villages that reflect Romania’s administrative-territorial structure

Rankings of the development regions will be provided further in this analysis, based on calculations that operate with the most frequent and important factors reflecting development.

2.3 Considerations on the Superposition of Wine vs. Standard Development Regions

The paper aims contrasting the advantage brought by the wine regions to the economic development regions of Romania. The confirmation of such supposed advantage is possible only if premises of superposition of the two categories of regions exist. The color code used in Table 1 shows the territorial correspondence of the wine regions in the development regions. The long history of actual Romanian lands was interrelated with the cultivation of vines and the production of the best quality wines, which represented in fact an attractor for enemy empires, for this reason wine regions have borrowed the names of the historical provinces.

Table 1. Territorial Correspondence Wine Regions – Standard Development Regions

Development Regions	Wine Regions
North-West	I. Transilvania Plateau (Transilvania)
Centre	II. Moldovia Hills (Moldova)
North-East	III. Muntenia Hills (Muntenia)
South-East	IV. Oltenia Hills (Oltenia)
South	V. Banat Hills (Banat)
Bucharest-Ilfov	VI. Crişana & Maramureş Hills (Crişana-Maramureş)
South-West	VII. Dobrogea Hills (Dobrogea)
West	Danube Terraces(VIII) & Sands and other southern lands (IX)

Source: Author’s compilation

The map available on Figure 1 depicts the areal distribution of wine regions, by varieties (white, red or both). One can see with the naked eye the density and the lengthiness of vineyards inside the standard development regions, imagining a tricky ranking of the “richest” development regions. Hereinafter we will see, however, how the standard development regions and the wine regions interrelate.

Figure 1. Distribution of Wine Regions on the Romanian Territory



Source: <http://www.premiumromania.com/regions/>

3 Methodology

3.1 The Regional Competitiveness Index

The calculation formula for the Regional Competitiveness Index - I_C is a weighted mean of three indicators: economic, social and technology-innovation. In turn, each of these three indicators is calculated as weighted mean of selected variables within each group of interest (economic, social and technological). The weights used for each of the three indicators (the sum of the weights of each index is 100) are presented below (GEA, 2007):

- Economic Indicator (I_E)

E1 - GDP per capita	10
E2 - GDP increase	10
E3 - Labour productivity	30
E4 - Net exports	10
E5 - Gross fixed capital formation	20
E6 - Average net monthly earnings	20

- Social Indicator (I_S)

S1 - Dispersion of regional employment rates	30
S2 - Employment (total)	40
S3 - Employment – women	10

S4 - Average life expectancy index 20

• Technology-Innovation Indicator (I_{T-I})

T1 - Total expenditure for R&D 40

T2 - Employment in high-tech sectors 30

T3 - Tertiary education qualification in research 30

The calculation model for the three indicators is:

$$I_E = (10 * E1 + 10 * E2 + 30 * E3 + 10 * E4 + 20 * E5 + 20 * E6) / 100 \quad (1)$$

$$I_S = (30 * S1 + 40 * S2 + 10 * S3 + 20 * S4) / 100 \quad (2)$$

$$I_{T-I} = (40 * T1 + 30 * T2 + 30 * T3) / 100 \quad (3)$$

Finally, the regional competitiveness index, I_C , is given by the weighted average of the three indicators, i.e.:

$$I_C = (40 * I_E + 30 * I_S + 30 * I_{T-I}) / 100 \quad (4)$$

We are entitled to make a few observations:

- i. The values of the weights are chosen to reflect the contribution of each of the three sub-indicators in the regional competitiveness index. The shares were granted based on a focus group of experts of The Group of Applied Economics (GEA).
- ii. In general, regions with higher labor productivity and higher employment rate tend to have a high competitiveness. This is the reason why the weights given to these two variables are higher.
- iii. Some of the variables used have a high degree of correlation, i.e. the net income per capita and the GDP per capita. Thus, practically, a large part of the same information content can be found in both. For this reason, even in case of a reweighting - within relatively close margins - of the above variables, it is unlikely to obtain a significant change in the order of regions in the regional competitiveness ranking.

3.2 The Wine Competitiveness Index

Moving from region to firm level reveals conceptual dangers we hope this paper avoids. The hypothesis we proposed, that regional competitiveness may be related to firm performance, has already extensively been tested and supported, the opposite one, that firm performance is related to regional competitiveness, is obvious. We sought to move beyond the confines of the firm to inquire about firm-milieu, that is, the local or regional *structural embeddedness* of institutions and organisations, without, however, putting on an equal footing the performance characteristics of the wine firm with the regional advancement. Our purpose is to identify regions characterized by firms that differentiate the spatial extent of social capital, thereby trying to say something helpful about the nature of regional

development. To do otherwise would risk a determinism that says innovative, growing firms cannot exist in less-favored locations. Our conclusion on this is rather interesting but by no means counterintuitive. Equally, our data allow us to make regional statement, since firms were asked "regional" questions.

In order to investigate linkages between firm performance and regional advancement, operational measures of these two variables need to be developed and employed. A way of differentiating wine companies' development conditions was to construct an index of regional competitiveness across Romania. As SMEs make up the vast majority of the business population (i.e. the largest density) in any given area, initially measuring regional performance is reasonable. Moreover, resource efficiency required publicly available statistical data comparable at regional and national level. Later, as the investigation of the nature of competitiveness as a separate issue was beyond the scope of our demarche, we went further in elaboration a model for the calculation of a wine competitiveness index.

This model consists of a framework of competitiveness based on three key input factors: (1) *business density* (the number of firms operating in the wine industry, compared to the national demographics);

(2) *number of knowledge-based businesses* (by inquiring winemaking businesses (family and corporate businesses) about the introduction of new products or processes to the market or the achievement of recognized quality of wines);

(3) *economic participation* (turnover, profitability, sales of new products, employment trends), conceptualized as contributing to the output-productivity of a region.

3.2 The Survey

For the purpose of our research, we have conducted a phone survey on the top 50 wine producers in Romania, between August 5-10, 2013. From the 50 business interviewed, 22 declared that are family businesses, having at least one family member associated officially in the business (although the notion of family business is rather subjective, many of the business being at their first generation). The survey measures the vintners' performance impact on the economic progress/decline, business success being correlated with the competitiveness of areas relative to the performance of the host region (the geographical spread condition was accomplished). The analysis of answers collected from the winemakers uses the standard SPSS software.

The survey was aimed at gathering measurable responses on changes in SME performance by turnover, profitability and employment during the three years prior the survey. The three-year interval was essentially a compromise between a period long enough for changes to be observed, and short enough for data to be readily available. It is appreciated that using just two observations may in some cases present a somewhat false picture (that is, the possibility of comparing peaks and troughs), but this method was judged to be the best compromise available within the constraints of the survey. Innovation performance was also measured over this period through standard measures, notably inquiring regarding SME introduction of products and processes new to the market, achievement of recognized quality standards (for example, winning international distinctions or medals in wine competitions, introducing new vineyard techniques or investments, oenological inventions, or business management

processes). Of central importance was a range of data that we have collected from the firms database, regarding turnover, profit and number of employees, quantitative indicators that we have assessed using Likert scales. The purpose of the objective extraction of these data was to ascertain how important the described information given by the sample members was to the overall performance of the firms in question. It is difficult to say much about the validity of the scales employed, that is, to what extent they are measuring the concepts they are intended to, do to their nebulous nature, but for orientation we had in mind standard international levels of those indicators obtained.

4 Results and Key Findings

4.1 Regional Competitiveness in Romania

All that established, we calculated each indicator, then we normalized the regional statistics by reporting them to the national average. The national average is 1.00, and the regional indicators will vary around this value (higher than one means above the national average, lower than one means below the national average). Then we aggregated each indicator by weighting each sub-indicator with the weights referred to in methodology section. All statistical data used in the calculation of indicators refer to 2010. Table 2 and Table 3 configure all the procedure for the economic indicator.

Table 2. The Economic Indicator, by Components - Regions' Rate Reported to the National Average*

Region	GDP per capita	GDP increase	Labour productivity	Net exports	Average net monthly earnings
Macro-Region One					
North-West	0.89	-3.47	0.74	-0.18	1.007
Centre	0.95	-2.58	0.85	-1.08	1.01
Macro-Region Two					
North-East	0.61	-2.07	0.47	-0.02	0.88
South-East	0.82	1.94	0.70	-0.07	0.87
Macro-Region Three					
South-Muntenia	0.83	-0.32	0.66	-0.22	0.97
Bucharest-Ilfov	2.37	0.22	1.76	-1.08	1.35
Macro-Region Four					
South-West	0.77	1.12	0.62	0.18	0.89

West	1.13	1.23	0.93	0.02	1.12
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*data on gross fixed capital formation was not available

Source: Calculated based on data collected from the Romanian Statistical Yearbook 2010

Table 3. The Aggregate Economic Indicator

Region	I _E
North-West	0.32
Centre	0.37
North-East	0.29
South-East	0.82
South-Muntenia	0.59
Bucharest-Ilfov	1.42
South-West	0.72
West	0.97

Source: Author's calculation

Table 4. The Social Indicator, by Components - Regions' Rate Reported to the National Average*

Region	Dispersion of regional employment rates	Employment (total)	Employment (women)	Average life expectancy index
Macro-Region One				
North-West	0.981	0.993	1.025	0.985
Centre	0.909	0.855	0.865	1.002
Macro-Region Two				
North-East	1.054	1.457	1.139	0.990
South-East	0.943	0.987	0.869	0.988
Macro-Region Three				
South-Muntenia	1.015	1.240	0.965	0.995

Bucharest-Ilfov	1.093	0.920	1.084	1.008
Macro-Region Four				
South-West	1.006	0.841	1.063	0.998
West	0.984	0.703	0.954	0.991

Source: Calculated based on data collected from the Romanian Statistical Yearbook 2010

Table 5. The Aggregate Social Indicator

Region	I _s
North-West	0.99
Centre	0.90
North-East	1.21
South-East	0.96
South-Muntenia	1.096
Bucharest-Ilfov	1.005
South-West	0.94
West	0.87

Source: Author's calculation

Table 4 (component configuration) and Table 5 (aggregate configuration) present the entire procedure for the social indicator.

Table 6. The technology-innovation indicator, by components - regions' rate reported to the national average*

Region	Total expenditure for R&D	Employment in high-tech sectors	Tertiary education qualification in research
Macro-Region One			
North-West	0.654	0.822	1.980
Centre	0.366	0.637	0.560
Macro-Region Two			

North-East	0.524	0.691	1.260
South-East	0.295	0.350	0.200
Macro-Region Three			
South-Muntenia	0.798	0.725	0.040
Bucharest-Ilfov	4.745	3.467	2.740
Macro-Region Four			
South-West	0.232	0.474	0.060
West	0.383	0.830	0.660

Source: Calculated based on data collected from the Romanian Statistical Yearbook 2010

Table 6 (component configuration) and Table 7 (aggregate configuration) present the entire procedure for the technology-innovation indicator.

It seems important to mention that more than 90% of the winegrowers that declared to be family businesses received scores for the quality standards (i.e., medals for wines), or implemented innovations, especially related to the vineyard and the winery (new varieties of grapes or new wines) and business management (brand launches, investments in production infrastructure), which is extraordinary, having in view the smaller social capital at their disposal.

Table 7. The Technology-Innovation Indicator

Region	I_{T-I}
North-West	1.10
Centre	0.50
North-East	0.49
South-East	0.28
South-Muntenia	0.54
Bucharest-Ilfov	3.76
South-West	0.25
West	0.60

Source: Author's calculation

Hereinafter, we weight the economic, social and technology-innovation indicators, in order to calculate the competitiveness index (Table 8).

Table 8. The Regional Competitiveness Index

Region	I_E	Weighting coefficient	I_S	Weighting coefficient	I_{T-I}	Weighting coefficient	Regional Competitiveness Index
North-West	0.32	0.4	0.99	0.3	1.10	0.3	0.75
Centre	0.37		0.90		0.50		0.56
North-East	0.29		1.21		0.49		0.62
South-East	0.82		0.96		0.28		0.70
South-Muntenia	0.59		1.096		0.54		0.72
Bucharest-Ilfov	1.42		1.005		3.76		1.99
South-West	0.72		0.94		0.25		0.64
West	0.97		0.87		0.60		0.82

Source: Author's calculation

One can note that the Bucharest-Ilfov region is the only region with a value higher than one, the differences between this region and all the others are great, but vary depending on the indicators: the technology-innovation indicator is the first in making a difference, while the social indicator is quite balanced for all regions, with a low inter-regional variation.

Table 9. Ranking of Regions - A Comparative Look

Region	Ranking by GDP per capita	Ranking by the regional competitiveness index
North-West	4	3
Centre	3	8
North-East	8	7

South-East	6	5
South-Muntenia	5	4
Bucharest-Ilfov	1	1
South-West	7	6
West	2	2

Source: Author's compilation

It is interesting to compare the results of the regional competitiveness index rankings calculated through the GEA methodology with the regions ranking by the GDP per capita. It is actually part of the aggregate economic indicator of the competitiveness index, but the existence of not meaningless differences between the two rankings shows the specificity and complexity of the regional competitiveness index (Table 9).

Therefore, Bucharest-Ilfov and West Region retain the first 2 positions in both charts, but Central Region does not appear in 3rd place, but last. 3rd place is occupied by the North West region, which according to the GDP / capita is placed 4th. This change is explained, on the one hand, by the fact that North West region has a much better technology-innovation indicator, especially in terms of tertiary education with specialization in research. Places 3-7 keep the ranking order according to the GDP / capita, but with a position deviation, demonstrating the consistency of the regional competitiveness index, but with a greater precision, since it takes into account other important factors.

4.2 A Multifactorial Statistical Model for Wine Regions Hierarchy in Romania

Ranks Method

Ranks model presents a classification of territorial units, according to the competitive framework based on the three input factors explained in the methodology section (Table 10).

Rank 1 is assigned to the unit with the highest performance and rank 8, equal to the number of territorial units investigated, is assigned to the unit with the lowest performance. For each development region, the algorithm calculates the ranks assigned to each indicator based on which the total score is obtained, and then the final rank can be established. Using ranks method, first position is held by South-East region, followed by the South-Muntenia, North-West and West regions. It is important to highlight that economic participation is the input factor gaining the major scoring, and business density in the wine industry, the poorest scoring.

Table 10. Romanian Development Regions Hierarchy Using Ranks Method in Calculating a Wine Competitiveness Index

Region	Scores of ranks assigned by (including subdivisions)			FINAL SCORE	FINAL RANK
	Business density	Knowledge-based	Economic participation		

		businesses			
Macro-Region One					
North-West	0	0	0	0	8
Centre	2	3	11	16	7
Macro-Region Two					
North-East	9	13	66	88	3
South-East	21	47	122	190	1
Macro-Region Three					
South-Muntenia	9	45	65	119	2
Bucharest-Ilfov	2	2	16	20	6
Macro-Region Four					
South-West	4	8	24	36	5
West	3	26	28	57	4

Source: Calculated by the author based on survey data

Relative Distances Method

Relative distances method is a much more efficient method, removing the deficiency of ranks method generated by the double smoothing of variable scores which abolishes real differences between regions, by replacing them with an arithmetic progression with ratio one. Hence, the relative distances method involves, firstly, the establishment of an ideal unit whose characteristics present the maximum performance achieved by the regions analyzed, secondly, the selection of a procedure for measuring the distance between the real unit and this ideal unit for every studied characteristics and finally, the determination of an aggregation process of the information obtained from the prior calculation step.

Table 11. Romanian Development Regions Hierarchy Using Relative Distances Method in Calculating a Wine Competitiveness Index

Region	Relative distances (%) according to				RANK
	Business density	Knowledge-based businesses	Economic participation	Average synthetic Index*	
Macro-Region One					
North-West	0	0	0	0	8

Centre	9.52	6.38	9.01	8.17	6
Macro-Region Two					
North-East	42.85	27.65	54.09	40.01	3
South-East	100	100	100	100	1
Macro-Region Three					
South-Muntenia	42.85	95.74	53.27	60.23	2
Bucharest-Ilfov	9.52	4.25	13.11	8.09	7
Macro-Region Four					
South-West	19.04	17.02	19.67	18.54	5
West	14.28	55.31	22.95	26.26	4

*Aggregation of coordination size for each region in an average synthetic index was obtained using geometric mean.

Source: Calculated by the author based on survey data

Expression of calculated distance for the characteristics studied was made as a coordination relative size, for each region, and compared with the unit having the maximum performance (Table 11). The maximum variation for each characteristic, ranging from 0 and 100%, was considered a basis of comparison. One can note the almost identical ranking obtained through the two methods used for the ranking by the wine competitiveness index that we have elaborated. These results guarantee the correctness of our methodology and calculations.

On the other hand, we find important discrepancies with the rankings based on the GDP per capita and the calculated regional competitiveness index (Table 9), that come to support our suppositions. So, rank 1 in the previous top, Bucharest-Ilfov, is now (Table 12) on the antepenultimate rank, not slipping yet to the last place of the ranking due to higher scores obtained in economic participation (that is, turnover, profit and number of employees), keeping in mind that it is the country capital. Rank 1 is now gained by the South-East region, followed closely by South, finding themselves in the second half of the first rankings (places 5-6). Rank 2 in the first rankings, West region, is now at the half of the ranking (place 2), deprived on the business density indicator (only 2 wine producers entered the top 50), but gaining on knowledge-based and economic participation indicators, specifically to the region's capability to support business growth and innovation. Place 3 is occupied by the last region in the first ranking, North-East, which, like the winner (South-East), is propelled by the great number of wine businesses in the region, despite the low level of regional performance. The South-West Oltenia region is doing better in this ranking (place 5), although the wine region mapping includes her together with

South-Muntenia, and despite the not so good economic performance, which could be explained by the larger number of winegrowers who have the capacity to sustain innovations and growth.

Table 12. Ranking of Regions - A Comparative Look

Region	Ranking by wine competitiveness index using rank method	Ranking by wine competitiveness index using relative distances method
North-West	8	8
Centre	7	6
North-East	3	3
South-East	1	1
South-Muntenia	2	2
Bucharest-Ilfov	6	7
South-West	5	5
West	4	4

4.3 Correlation between Regional Competitiveness Index and Wine Region Index

Next, we thought to undertake a statistical analysis of the correlation between the host development region and the competitiveness of companies in the wine industry, in order to demonstrate our purposes. Table 13 (family and corporate wine businesses) and Table 14 (family businesses) present this demarche. The degree of association between the location (the standard development region) and the state of the business (that we have decided to quantify by a 5-level scale for turnover) was analyzed using the Chi-Square test, found in the Crosstabs Descriptive Statistics in SPSS.

Table 13. Chi-Square Test of the Association between Location and State of the Business (for all Businesses in the Sample)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Region * State of business CA	50	100,0%	0	,0%	50	100,0%

Regiune * State of business CA Crosstabulation

Count							
	State of business CA						
	1 000 000 lei - 10 000 000 lei	10 000 000 lei - 25 000 000 lei	25 000 000 lei - 50 000 000 lei	50 000 000 lei - 100 000 000 lei	more than 100 000 000 lei	Total	
Region Bucharest- Ilfov	0	0	1	1	0	2	
Centre	2	0	0	0	0	2	
North East	6	2	0	0	1	9	
South	5	2	2	0	0	9	
South East	18	3	0	0	0	21	
South West	2	2	0	0	0	4	
West	2	0	0	1	0	3	
Total	35	9	3	2	1	50	

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42,918 ^a	24	,010
Likelihood Ratio	30,865	24	,158
N of Valid Cases	50		

a. 32 cells (91.4%) have expected count less than 5. The minimum expected count is .04.

Source: SPSS Software results based on inputs collected or calculated

In our sample, most of the business are in the SE region (18, of which 6 family businesses), but with the smallest level of turnover, followed by the NE (6, of which 4 family businesses) and S (5, of which 3 family businesses) regions. The business with the highest turnover is in the NE region, ranked 8 by the regional competitiveness index. That means, according to our suppositions, that firm's capacity to introduce new products and its spatial location in a "high performing area" are not correlated. The fact that low-performing areas, in low-performing regions have innovative winemaking business constitutes a reason to support this sector.

Other statistical analyses can be operated on these data, in order to test correlations and influences, or even simulations to find new intervention ways in the wine industry.

Table 14. Chi-Square Test of the Association between Location and State of the Business (only for Family Businesses in the Sample)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Region * State of business CA	22	44,0%	28	56,0%	50	100,0%

Region * State of business CA Crosstabulation

Count	State of business CA		
	1 000 000 lei - 10 000 000 lei	10 000 000 lei - 25 000 000 lei	Total
Region Centre	1	0	1
North East	4	0	4
South	3	1	4
South East	6	3	9
South West	2	0	2
West	2	0	2
Total	18	4	22

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,514 ^a	5	,621
Likelihood Ratio	4,906	5	,427
N of Valid Cases	22		

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,514 ^a	5	,621
Likelihood Ratio	4,906	5	,427

a. 11 cells (91.7%) have expected count less than 5. The minimum expected count is .18.

Source: SPSS Software results based on inputs collected or calculated

5 Conclusions

In the context of this first-release analysis, the intention is to provoke further exploration of the impact of regional status of Romanian wine regions, meant to make an example of successful rural restructuring and regional development, to apply to other industries as well. We have seen that despite the state of the development regions, some wine businesses manage to be efficient and to continuously generate innovations, which is the key for business success. Yet, we cannot deny the fact that wine industry beneficiaries from improved regional performance, which historically influences the trends of financial and technology-innovation indicators.

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