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BUSINESS CYCLES, GROWTH, AND IMPORTED ENERGY IN A SMALL-OPEN GROWTH MODEL

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Abstract: *This paper generalizes an economic growth model proposed by Zhang (2017) by allowing all constant coefficients to be time-dependent. This paper shows existence of business cycles in the generalized model due to periodic shocks. Zhang's original model is developed for a small open economy with imported energy and imported goods. The economy is composed of two sectors and all markets are perfectly competitive. The economy has fixed land and population. Production side is the same as in neoclassical growth theory, while demand side is modelling with Zhang's utility and concept of disposable income. We generalize and simulate the model. We demonstrate existence of business cycles due to different exogenous periodic shocks.*

Keywords: business cycles; price of energy, price of imported goods, land distribution; propensity to save; small open economy

JEL clasification: F43; L83

1. Introduction

Energy is vital for economic development. Some economies are richly endowed with energies, while some economies have little energies. Typical examples of poor energy and fast economic growth in contemporary economies are Japan, Hong Kong, and Singapore. These economies are consumer of energies. It is thus important to address relationship between consumption of energy and economic development. This study examines a question which a few theoretical economic models address. It is dynamic progress of a small open economy which is dependent on importing energies from global economies. By small economies we mean that they have no strong impact on international markets, for instance, with regard to interest rate, energy price, and some foreign goods.

Our attention is focused on energy as it is an important part of some small economies, such as Hong Kong and Singapore. Moreover, it is well known that the energy crises in the 1970s and recent years had strong effects on the economic structure and growth of some small economies. There are many studies on how global prices of input factors may affect economic growth (e.g., Sachs, 1982; Svensson and Razin, 1983; Matsuyama, 1987; Ghalayini, 2011). As different sectors and households need energy, a change in the price of energy in global market may affect the energy-poor national economy in different ways (Kim and Loungani, 1992; Backus and Crucini, 2000). In order to comprehensively study possible effects of the price of energy on national economic development and economic structure, it is necessary to deal with the issues within a dynamic general equilibrium framework. This study studies the price of energy and economic growth on basis of Uzawa's two-sector growth model in context of a small-open economy. This study analyses how global prices of energies and imported goods affect transitory processes and long-term economic development within neoclassical growth framework for a small-open economy. We focus on identifying existence of business cycles due to periodic exogenous shocks. The study is also a contribution to the literature of business cycles and economic growth. Although there are many studies on business cycles, there are

only a few theoretical economic models with energies and imported goods for small-open economies (e.g., Zhang 1991, 2005, 2006; Lorenz 1993; Chiarella and Flaschel 2000; Shone 2002; Gandolfo 2005; Puu 2011; Stachurski, et al. 2014).

The model is developed within neoclassical growth theory for a small-open economy. Modern neoclassical growth theory was developed by Solow (1956). Since Solow's seminal work, there are different extensions and generalizations of the Solow model. One of important extensions was developed by Uzawa model. Uzawa (1961, 1963) generalized Solow's one-sector growth model to tow-sector economy. This extension makes it possible to study economic structures. There are many models for extending and generalizing the Uzawa two-sector model. They deal with issues related to, for instance, fictions and adaption speeds in various markets, money and inflation, externalities, knowledge, and human capital (e.g., Takayama, 1985; Galor, 1992; Drugeon and Venditti, 2001; Herrendorf and Valentinyi, 2006; Li and Lin, 2008; and Stockman, 2009). This study models domestic production on the basis of neoclassical growth theory with multiple sectors for small-open economies. In fact, there is a large number of the literature on dynamics of small-open economies in neoclassical growth theory (e.g., Obstfeld and Rogoff, 1996; Lane, 2001; Kollmann, 2001, 2002; Benigno and Benigno, 2003; Galí and Monacelli, 2005; Uya, *et al.* 2013; and Ilzetzki, *et al.* 2013). Our model is influenced by this literature, especially by a model by Schubert and Turnovsky (2011). The Schubert-Turnovsky model is a small-open growth economic model with imported energy (oil). We apply a different Utility function proposed by Zhang and introduce land and housing (Zhang, 2013).

Another important issue for small economies is that as economies are small, they tend to consume many imported goods. It is important to understand economic mechanisms of consuming foreign, for instance, luxury goods. It is obvious that preferences for imported goods play a significant role in determining consumption of foreign goods. As consumption of foreign goods uses income, economic structure and economic growth may be strongly affected by consuming imported goods. Although the effects of importing foreign goods are often in public debates, economics lacks a proper general equilibrium framework for analyzing the impact on short-run as well as long-run economic growth. The general equilibrium framework by Zhang (2017) deals with these issues in an integrated manner. This paper generalizes an economic growth model proposed by Zhang (2017) by allowing all constant coefficients to be time-dependent. We deal with a small open economy which has no energy and has to import energy from global markets. We organize the study as follows. Section 2 develops generalizes Zhang's model for a small open economy with imported energy by allowing all constant coefficients to be time-dependent. Section 3 shows that the movement of the generalized m is given by one differential equation. Section 4 confirms existence of business cycles due to exogenous shocks. Section 5 concludes the study. The Appendix checks the results in Section 3.

2. The model with imported goods and energy

We now allow the constant coefficients in Zhang's model to be time-dependent. The generalization makes Zhang's model more robust as it is possible to analyze impact of different time-dependent shocks on the economic system. The economy is small and open. It an internationally traded (industrial) good and a non-traded good (services). As in the model of Eicher *et al.* (2008), the economy also consumes imported good, which is not produced by the national economy. The open economy freely borrows resources from the world or exports goods and lends resources abroad. The price of the industrial good is unity. We use $\delta_k(t)$ and $r*(t)$ to represent depreciation rate and interest rate. The rate of interest is determined in global markets. As the economy is small, it is reasonable to assume that price of imported goods $p_z(t)$ and price of imported energy $p_x(t)$ are exogenously given in global markets. National wealth and

land are owned by households. Land is fully used for residents and services. All markets are perfectly competitive. No international emigration or/and immigration is allowed.

The industrial sector

We apply subscript index, i and s, to stand for industrial and service sector, respectively. We use $K_j(t)$ and $N_j(t)$ to denote capital stock and labor force employed by sector j, $j = i, s$. Let $X_j(t)$ stand for energy used by sector j. Production function $F_i(t)$ of the industrial sector takes on the following form:

$$F_i(t) = A_i(t)K_i^{\alpha_i(t)}(t)N_i^{\beta_i(t)}(t)X_i^{b_i(t)}(t), \quad \alpha_i(t), \beta_i(t), b_i(t) > 0, \quad \alpha_i(t) + \beta_i(t) + b_i(t) = 1, \quad (1)$$

where $A_i(t)$, $\alpha_i(t)$, $\beta_i(t)$, and $b_i(t)$, are parameters. The wage rate $w(t)$ is determined in domestic labor market. The marginal conditions for industrial sector imply

$$\begin{aligned} r_\delta(t) &= \alpha_i(t)A_i(t)k_i^{\alpha_i(t)-1}(t)x_i^{b_i(t)}(t), \quad w(t) = \beta_i(t)A_i(t)k_i^{\alpha_i(t)}(t)x_i^{b_i(t)}(t), \\ p_x(t) &= b_i(t)A_i(t)k_i^{\alpha_i(t)}(t)x_i^{b_i(t)-1}(t), \end{aligned} \qquad (2)$$

where

$$k_i(t) \equiv \frac{K_i(t)}{N_i(t)}, \quad x_i(t) \equiv \frac{X_i(t)}{N_i(t)}, \quad r_\delta(t) \equiv r^*(t) + \delta_k(t).$$

From (2) we solve

$$k_i(t) = \left(\frac{b_i^{b_i(t)-1} b_i(t)A_i(t)}{p_x(t)} \right)^{1/\beta_i(t)}, \quad x_i(t) = b(t)k_i(t), \quad w(t) = \beta_i(t)A_i(t)k_i^{\beta_i(t)}(t)x_i^{b_i(t)}(t), \qquad (3)$$

where

$$b(t) \equiv \frac{b_i(t)r_\delta(t)}{\alpha_i(t)p_x(t)}.$$

The service sector

We take account of four inputs, capital $K_s(t)$, labor force $N_s(t)$, energy $X_s(t)$, and land $L_s(t)$ in service supply. Production function of the service sector $F_s(t)$ is

$$\begin{aligned} F_s(t) &= A_s K_s^{\alpha_s(t)}(t)N_s^{\beta_s(t)}(t)X_s^{b_s(t)}(t)L_s^{\gamma_s(t)}(t), \\ &\quad \alpha_s(t), \beta_s(t), b_s(t), \gamma_s(t) > 0, \quad \alpha_s(t) + \beta_s(t) + b_s(t) + \gamma_s(t) = 1, \end{aligned} \qquad (4)$$

where $A_s(t)$, $\alpha_s(t)$, $\beta_s(t)$, $b_s(t)$, and $\gamma_s(t)$ are parameters. Let $p(t)$ and $R(t)$ stand respectively for the price of the service and the land rent. The marginal conditions for the service sector are

$$r_\delta(t) = \alpha_s(t)A_s(t)p(t)k_s^{\alpha_s(t)-1}(t)x_s^{b_s(t)}(t)l_s^{\gamma_s(t)}(t),$$
$$w(t) = \beta_s(t)A_s(t)p(t)k_s^{\alpha_s(t)}(t)x_s^{b_s(t)}(t)l_s^{\gamma_s(t)}(t),$$
$$p_x(t) = b_s(t)A_s(t)p(t)k_s^{\alpha_s(t)}(t)x_s^{b_s(t)-1}(t)l_s^{\gamma_s(t)}(t),$$
$$R(t) = \gamma_s(t)A_s(t)p(t)k_s^{\alpha_s(t)}(t)x_s^{b_s(t)}(t)l_s^{\gamma_s(t)-1}(t), \tag{5}$$

where

$$k_s(t) \equiv \frac{K_s(t)}{N_s(t)}, \quad x_s(t) \equiv \frac{X_s(t)}{N_s(t)}, \quad l_s(t) \equiv \frac{L_s(t)}{N_s(t)}.$$

From (5) we get

$$k_s(t) = \frac{\alpha_s(t)w(t)}{\beta_s(t)r_\delta(t)}, \quad x_s(t) = \frac{b_s(t)r_\delta(t)}{\alpha_s(t)p_x(t)}. \tag{6}$$

Full employment of input factors
We use $K(t)$ and $N(t)$ to represent total capital stocks employed by the country and population, respectively. Full employment of labor and capital implies

$$K_i(t) + K_s(t) = K(t), \quad N_i(t) + N_s(t) = N(t).$$

We rewrite the above equations as

$$k_i(t)N_i(t) + k_s(t)N_s(t) = K(t), \quad N_i(t) + N_s(t) = N(t). \tag{7}$$

From (7), we solve

$$N_i(t) = (K(t) - k_s(t)N(t))k_0(t), \quad N_s(t) = (k_i(t)N(t) - K(t))k_0(t), \tag{8}$$

where $k_0(t) \equiv (k_i(t) - k_s(t))^{-1}$. We require $k_0(t) \neq 0$.

Behavior of domestic households
We use $L(t)$ and $R(t)$ to represent land and land rent, respectively. It is assumed that national land is equally owned by domestic households. Income from land per household is

$$\bar{r}(t) = \frac{L(t)R(t)}{N(t)}.$$

Current income is

$$y(t) = r^*(t)\bar{k}(t) + w(t) + \bar{r}(t), \tag{9}$$

where $r^*(t)k(t)$ is interest payment. Disposable income is

$$\hat{y}(t) = y(t) + \bar{k}(t). \tag{10}$$

Disposable income is distributed between saving and consumption. The household spends the disposable income on lot size $l(t)$, consumption of services $c_s(t)$, industrial goods $c_i(t)$, imported goods $c_z(t)$, energy consumption $c_x(t)$, and saving $s(t)$. The budget constraint is

$$R(t)l(t) + p(t)c_s(t) + c_i(t) + p_z(t)c_z(t) + p_x(t)c_x(t) + s(t) = \hat{y}(t). \tag{11}$$

From (11) we see that the household's disposable income is used for the consumption and saving. The utility $U(t)$ is assumed to be related to $l(t)$, $c_s(t)$, $c_i(t)$, $c_x(t)$ and $s(t)$ as follows

$$U(t) = \theta(t)l^{\eta_0(t)}(t)c_s^{\gamma_0(t)}(t)c_i^{\xi_0(t)}(t)c_Z^{\varsigma_0(t)}(t)\,c_x^{\chi_0(t)}(t)s^{\lambda_0(t)}(t),$$
$$\eta_0(t),\,\gamma_0(t),\,\xi_0(t),\,\varsigma_0(t),\,\chi_0(t),\,\lambda_0(t) > 0,$$

in which $\eta_0(t)$, $\gamma_0(t)$, $\xi_0(t)$, $\varsigma_0(t)$, $\chi_0(t)$, and $\lambda_0(t)$ are the household's elasticity of utility with regard to the lot size, services, industrial goods, imported good, energy consumption, and saving. We call $\eta_0(t)$, $\gamma_0(t)$, $\xi_0(t)$, $\varsigma_0(t)$, $\chi_0(t)$, and $\lambda_0(t)$ propensity to consume lot size, to consume services, to consume industrial goods, to consume imported goods, to consume energy, and to hold wealth, respectively. Maximizing $U(t)$ subject to (11) yields

$$l(t) = \frac{\eta(t)\hat{y}(t)}{R(t)}, \quad c_s(t) = \frac{\gamma(t)\hat{y}(t)}{p(t)}, \quad c_i(t) = \xi(t)\hat{y}(t), \quad c_Z(t) = \frac{\varsigma(t)\hat{y}(t)}{p_Z(t)},$$
$$c_x(t) = \frac{\chi(t)\hat{y}(t)}{p_x(t)}, \quad s(t) = \lambda(t)\hat{y}(t), \tag{12}$$

where

$$\eta(t) \equiv \rho(t)\eta_0(t), \quad \gamma(t) \equiv \rho(t)\gamma_0(t), \quad \xi(t) \equiv \rho(t)\xi_0(t), \quad \varsigma(t) \equiv \rho(t)\varsigma_0(t), \quad \chi(t) \equiv \rho(t)\chi_0(t),$$
$$\lambda(t) \equiv \rho(t)\lambda_0(t), \quad \rho(t) \equiv \frac{1}{\eta_0(t) + \gamma_0(t) + \xi_0(t) + \varsigma_0(t) + \chi_0(t) + \lambda_0(t)}.$$

Change in wealth is savings minus dissavings

$$\dot{\bar{k}}(t) = s(t) - \bar{k}(t). \tag{13}$$

Equation (13) tells that the saving minus the dissaving equals the change in wealth.

Full use of land and demand of and supply for services
The national land is distributed between the residential use and service production

$$l(t)N + L_s(t) = L(t). \tag{14}$$

The equilibrium condition for services implies

$$c_s(t)N(t) = F_s(t). \tag{15}$$

The GDP is defined as

$$Y(t) = F_i(t) + p(t)F_s(t) + R(t)l(t)N(t).$$

Trade balance
We introduce $\overline{K}(t) = \bar{k}(t)N(t),$ which is total wealth owned by the economy. Balance of trade $E(t)$ is defined as follows:

$$E(t) = r^*(t)(\overline{K}(t) - K(t)). \tag{16}$$

We thus built the growth model of a small open economy. The rest of paper examines behavior of the dynamic system.

3. The Dynamics of the National Economy
The Appendix shows that the dynamics of economic system is given by a single differential equation. The following lemma is confirmed in the Appendix.

Lemma
We determine $k_i(t),$ $x_i(t),$ $k_s(t),$ $x_s(t),$ and $w(t)$ as functions of $r^*(t)$ and $p_x(t)$ by (3) and (6). The land rent is given by the following differential equation

$$\dot{R}(t) = \overline{\Lambda}(R(t), t), \tag{17}$$

where $\overline{\Lambda}$ is given as a function of $R(t)$ and t in the Appendix. The other variables are determined as functions of $R(t)$ and t as follows: $\bar{k}(t)$ by (A10) $\rightarrow$ $K(t)$ from (A9) $\rightarrow$ $p(t)$ by (A8) $\rightarrow$ $K_i(t)$ and $K_s(t)$ from (A1) $\rightarrow$ $N_i(t)$ and $N_s(t)$ with (A1) $\rightarrow$ $X_i(t) = x_i(t)N_i(t)$ $\rightarrow$ $X_s(t) = x_s(t)N_s(t)$ $\rightarrow$ $\hat{y}(t)$ by (A4) $\rightarrow$ $l(t),$ $c_i(t),$ $c_s(t),$ $c_z(t),$ $c_x(t),$ $s(t)$ from (12) $\rightarrow$ $L_s(t)$ by (14) $\rightarrow$ $F_i(t)$ in (1) $\rightarrow$ $F_s(t)$ in (4).

The Lemma means that the motion of economic system can be uniquely determined by the land rent and the other exogenous variables. Once we determine the movement of the land rent, it is straightforward to describe the movement of the whole system. Another issue in trade theory is about how a country's terms of trade can change the economy's growth (e.g., Mendosa, 1995; Kose, 2002; and Turnovsky and Chattopadhyay, 2003). According to Harberger (1950) and Laursen and Metzler (1950), a deterioration in the terms of trade reduces real income, which decreases saving and investment. The current account balance is deteriorated. This is the so-called Harberger-Laursen-Metzler effect. It should be noted that according to Eicher *et al.* (2008), "Previous authors have specified the borrowing cost to increase with the nation's level of debt. This specification, together with a constant rate of time preference and inelastic labor supply, implies that terms of trade shocks have no dynamic effects. The only response is that consumption fully adjusts instantaneously, with the current account remained unchanged." Our study has similar conclusions. To see this, we show in the appendix that the price can affect the system only through $p_Z(t)c_Z(t) = \varsigma(t)\hat{y}(t)$. We thus get

$$\frac{d\,c_Z(t)}{d\,p_Z(t)} = -\frac{c_Z(t)}{p_Z(t)}.$$

There are other studies which address issues related to the Harberger-Laursen-Metzler effect (e.g., Obstfeld, 1982; Mansoorian, 1993; Ikeda, 2001).

The rest of this section follows Zhang (2017) to simulate a special case of our model when all the parameters are constant as follows:

$$r^* = 0.06, \quad p_Z = 4, \quad p_Z = 6, \quad \delta_k = 0.05, \quad N = 10, \quad L = 1, \quad A_i = 1.5, \quad A_s = 1, \quad \alpha_i = 0.3,$$

$$\beta_i = 0.6, \quad \alpha_s = 0.2, \quad \beta_s = 0.5, \quad b_s = 0.1, \quad \lambda_0 = 0.6, \quad \xi_0 = 0.15, \quad \gamma_0 = 0.06, \quad \eta_0 = 0.1,$$

$$\varsigma_0 = 0.04, \quad \chi_0 = 0.06. \tag{18}$$

The rate of interest is fixed at 6 per cent. We chose the population 10. The land is fixed at unity. We specify the propensity to save at 0.6 and the propensity to consume the industrial good at 0.15. The propensity to consume the industrial good is higher than the propensity to consume services, or propensity to consume imported goods, or to consume housing. The specified parameter values are not according to empirical observations. The time-independent variables are determined by international markets as follows

$$k_i = 4.47, \quad k_s = 3.58, \quad w = 0.98, \quad x_i = 0.027, \quad x_s = 0.009. \tag{19}$$

We choose the initial condition $R(0) = 6$. The motion of the dynamic system is plotted in Figure 1. We start the land rent with its value higher than its equilibrium value. The land rent decreases over time. The price of services falls over time. The household does not change the lot size and the service sector employs the same land. The household reduces the consumption levels of the energy, foreign good, good, and services.

F_i
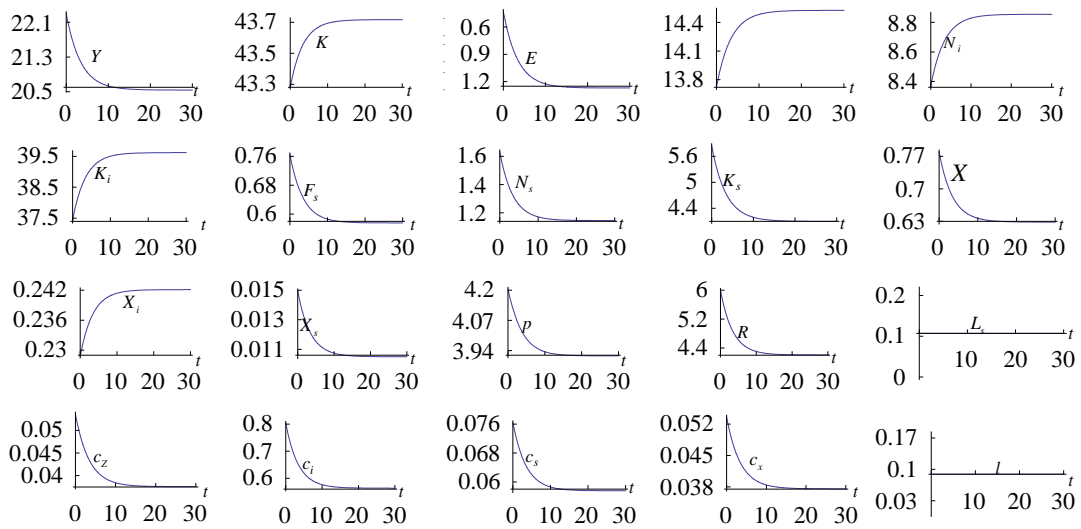
Figure 1 The Motion of the National Economy

Figure 1 shows how the system approaches its equilibrium point. We calculate the equilibrium values of the variables as follows

$$p = 3.92, \ R = 4.21, \ Y = 20.54, \ X = 0.63, \ E = -1.27, \ K = 43.72, \ \overline{K} = 22.54,$$

$$N_i = 8.85, \ N_s = 1.15, \ K_i = 39.62, \ K_s = 4.10, \ X_i = 0.24, \ X_s = 0.10, \ L_s = 0.11,$$

$$F_i = 14.53, \ F_s = 0.58, \ c_i = 0.56, \ c_s = 0.06, \ c_Z = 0.04, \ c_x = 0.04, \ l = 0.09. \quad (20)$$

The eigenvalue at the equilibrium point is -0.29. The unique equilibrium point is stable.

4. Comparative Dynamic Analysis

The previous section showed the movement of the small-open economy. The simulation results are given in Zhang (2017). We now show existence of business cycles due to periodic exogenous changes. Zhang's original model fails to deal with this kind of issues as it did not allow time-dependent parameter changes. We define a variable, $\overline{\Delta}x(t)$, which represent the change rate of the variable, $x(t)$, in percentage due to changes in value of a parameter.

4.1. The price of imported energy oscillates periodically

First, we study a case that the price of imported energy oscillates periodically as follows:

$$p_x(t) = 6 + 0.1\sin(t).$$

The simulation result is plotted in Figure 2. It should be noted that there is no change in the land distribution, even though the plots show extremely small change.
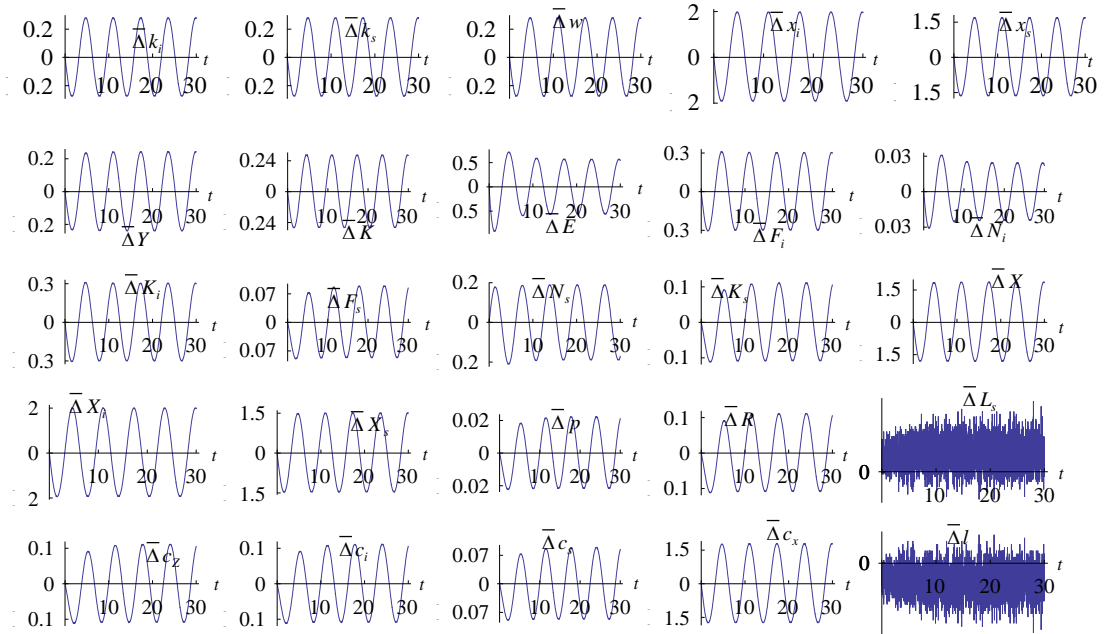
Figure 2. The Price of Imported Energy Oscillates Periodically

4.2. The propensity to consume imported goods oscillates periodically
We now allow the propensity to consume imported goods to be changed as follows:

$$\varsigma_0(t) = 0.04 + 0.002\sin(t).$$

The changes in the time-dependent variables are plotted in Figure 3. The variables in (19) are not affected. There are business cycles due to the periodic perturbations.
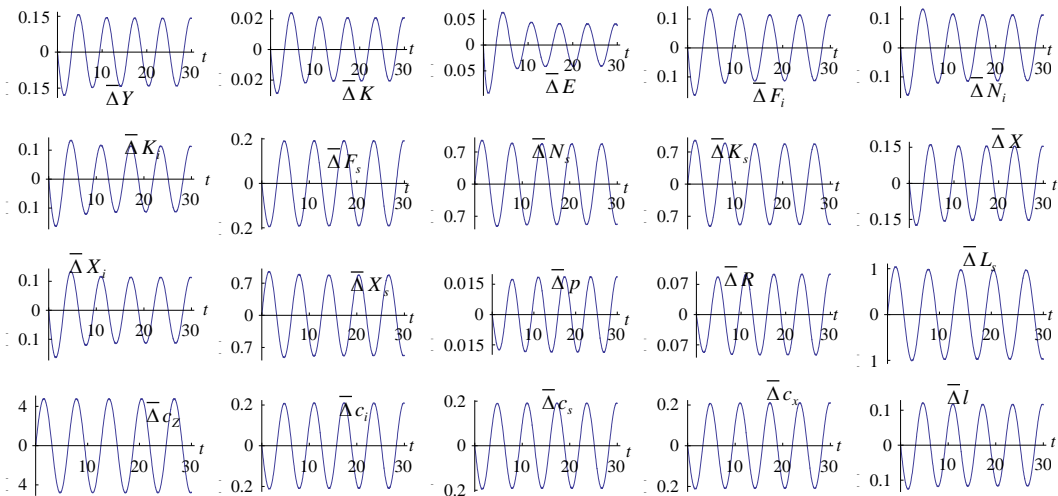
Figure 3. The Propensity to Consume Imported Goods Oscillates Periodically

4.3. The rate of interest oscillates periodically
We now study movement of the economic system when the rate of interest oscillates periodically

$$r^*(t) = 0.06 + 0.002\sin(t).$$

The result is given in Figure 3.

Rise in capital cost reduces the capital intensities, the wage rate and the energy intensities as follows

$$\Delta k_i = \Delta k_s = -6.45, \quad \Delta w = \Delta x_i = -2.20, \quad \Delta x_s = 4.55.$$

The time-dependent variables are plotted as in Figure 4.
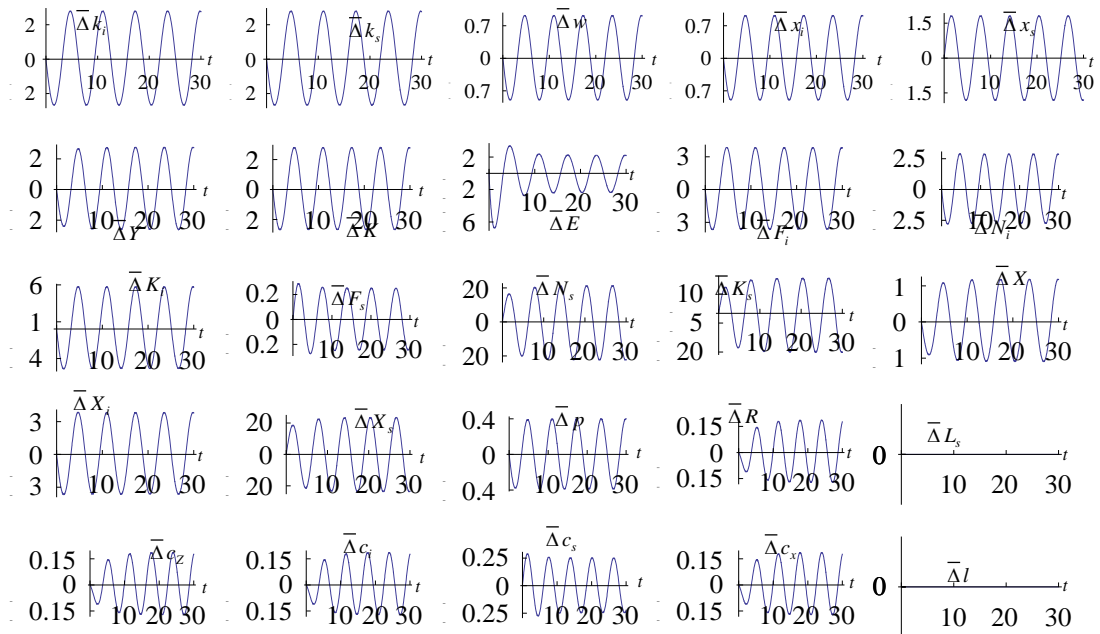
Figure 4. The Rate of Interest Oscillates Periodically

4.4. The propensity to save oscillates periodically
We now allow the propensity to save to oscillate periodically as follows:

$$\lambda_0(t) = 0.6 + 0.01\sin(t).$$

The changes in the time-dependent variables are plotted in Figure 5.

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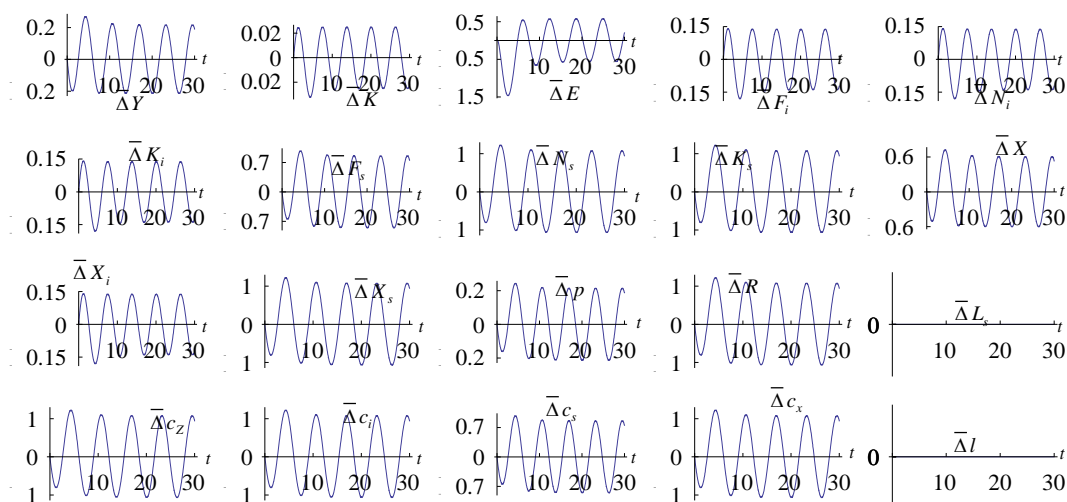
Figure 5. The Propensity to Save Oscillates Periodically

5. Conclusions

This paper generalized an economic growth model proposed by Zhang (2017). This paper showed existence of business cycles in the generalized due to periodic shocks. Zhang's original model is developed for a small open economy with imported energy and goods. The economy is perfectly competitive. The production side is the same as in neoclassical growth theory, while demand side is modelling with Zhang's utility and concept of disposable income. We generalized the model and simulated the model. We demonstrated existence of business cycles due to different exogenous shocks. Although it contains some important determinants of economic growth and its structure is already very complicated, the model may be generalized to take account other possibly important determinants of growth, for instance, endogenous human capital and government intervention in trade.

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Appendix: Proving the Lemma

With $K_j = k_j N_j$ and (8), we solve

$$K_i = (K - k_s N)k_0 k_i, \quad K_s = (k_i N - K)k_0 k_s.$$ (A1)

With (5), $l_s = L_s / N_s$ and $w_s \equiv w \gamma_s / \beta_s$, we obtain

$$R = \frac{w_s N_s}{L_s}.$$ (A2)

Insert (A2) in (15)

$$l N + \frac{w_s N_s}{R} = L.$$ (A3)

From the definition of $\hat{y}$, we have

$$\hat{y} = (1 + r^*)\bar{k} + w + \frac{R L}{N}.$$ (A4)

From (A4) and $l = \eta \hat{y} / R$ in (13), we obtain

$$l = \frac{(1 + r^*)\eta \bar{k} + \eta w}{R} + \frac{\eta L}{N}.$$

Insert this equation in (A3)

$$(1 + r^*)\eta \bar{k} + \eta w + \frac{w_s N_s}{N} = (1 - \eta)\frac{L}{N} R.$$ (A5)

With $r_\delta = \alpha_s p F_s / K_s$ and (15) we solve

$$c_s N = \frac{r_\delta K_s}{\alpha_s p}.$$ (A6)

Insert $c_s = \gamma \hat{y} / p$ in (A6)

$$\gamma \hat{y} N = \frac{r_\delta K_s}{\alpha_s}.$$

Insert (A4) in this equation

$$\left((1 + r^*)\bar{k} + w + \frac{R L}{N} \right)\gamma N = \frac{r_\delta K_s}{\alpha_s}.$$ (A7)

From (5) and $l_s = w_s / R$, we get

$$p = \frac{R^{\gamma_s}}{\gamma_s \, A_s \, w_s^{\gamma_s - 1} \, k_s^{\alpha_s} \, x_s^{b_s}}. \tag{A8}$$

Substituting $N_s = (k_i \, N - K)k_0$ from (8) into (A5) and $K_s = (k_i \, N - K)k_0 \, k_s$ from (A1) in (A7), respectively, we get

$$(1 + r^*)\eta \, N \, \bar{k} - w_s \, k_0 \, K \; = \overline{\Psi},$$
$$(1 + r^*)\gamma \, N \, \bar{k} + \frac{r_\delta \, k_0 \, k_s \, K}{\alpha_s} = \widetilde{\Psi}, \tag{A9}$$

where

$$\overline{\Psi}(R(t)) = (1 - \eta)L\,R - \eta\,w\,N - w_s \, k_i \, k_0 \, N \,,$$
$$\widetilde{\Psi}(R(t)) \equiv \frac{k_i \, N \, r_\delta \, k_0 \, k_s}{\alpha_s} - w\,\gamma\,N - R\,L\,\gamma \,.$$

Solve (A9)

$$\bar{k} = \Psi(R) \equiv \frac{1}{(1 + r^*)N}\left(\widetilde{\Psi} + \frac{r_\delta \, k_s \, \overline{\Psi}}{\alpha_s \, w_s} \right)\left(\gamma + \frac{\eta \, r_\delta \, k_s}{\alpha_s \, w_s} \right)^{-1}. \tag{A10}$$

We showed the procedure in the Lemma. From procedure and (13), we get

$$\dot{\bar{k}} = \Lambda(R,\, t) \equiv \lambda \, \hat{y} - \bar{k} \,. \tag{A11}$$

Take derivatives of (A10) with respect to time

$$\dot{\bar{k}} = \frac{\partial \Psi}{\partial R} \dot{R} + \frac{\partial \Psi}{\partial t}. \tag{A12}$$

From (A11) and (A12), we solve the differential equations for determining the land rent as follows

$$\dot{R} = \overline{\Lambda}(R,\, t) \equiv \left(\Lambda - \frac{\partial \Psi}{\partial t} \right)\left(\frac{\partial \Psi}{\partial R} \right)^{-1}. \tag{A13}$$

Summarizing the analytical results, we confirmed the Lemma.

INFORMATION SOURCES SUPPORTING INNOVATION IN THE PUBLIC SECTOR: THE CASE OF KOSOVO

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Abstract: *This research looks at the main information sources supporting innovation in the public sector of Kosovo. This study is exploratory and a mixed methodology is used, while the findings are compared and contrasted with the current literature in the field of public sector innovation. Findings clearly indicate that visits to conferences, followed by ideas from management and examples of best practices by other governments were fundamental information sources supporting innovation in the public sector of Kosovo. Another important information source supporting innovation is the use of domestic sources of information and rarely information sources supporting innovation from events or organizations in European Union countries. Although, authors point out that gaining experience from public sector institutions in developed countries contributes in driving or supporting public sector innovation. In spite of that, public sector managers in Kosovo have failed to engage citizens or service users as information sources supporting innovation. The most recent literature provides evidence that citizens or service users knowledge and creativity is of paramount importance in enriching innovation. Henceforth, it is a prerequisite for public sector managers in Kosovo to be aware of the importance of co-creating and co-innovating with its service users. Conclusively, this study is a unique contribution to Kosovo's academics, administration practitioners and public policy makers.*

Keywords: Public sector innovation, information sources supporting innovation, innovation culture, Kosovo.

JEL classification: H11, M14, O31.

1. Introduction

Innovation is crucial in today's environment. It is not of importance to organizations only, rather, it is of great importance to economies at large (Kallio et al., 2013). Moreover, innovation not only increases the capabilities of private organizations to remain competitive in the global market, nevertheless, it is of prime importance to today's public sector excessively (Goyal and Pitt, 2007; Bason, 2013).

European governments are acknowledging the prerequisite for innovation within the public sector, they require more productivity with fewer resources and continuously promote to foster creation of more public values and better response to new challenges. Governments worldwide are under pressure to reduce costs and become more efficient due to lack of resources, while demand for public services is increasing.

In the sphere of public sector innovation, open innovation and networked governance have gained the interest of both, academics and practitioners. According to the idea of open innovation, the innovation process should not be narrowly organized rather it should be facilitated in open settings with external actors (Lee et al., 2012). When firms focus internally, they have a tendency to miss a number of opportunities that we find outside the firm (Chesbrough, 2003). Open innovation is to go beyond the technocratic e-government

paradigm. Open innovation focuses on external collaboration and innovation between citizens and public administration by offering new ways of citizen integration and participation in innovation (Munksgaard et al., 2012). Open innovation in the public sector realm tends to integrate the knowledge and experience of customers, users and external performers into the innovation and value creation process. Open innovation uses internal and external sources for collecting information (Munksgaard et al., 2012; Ghezzi et al., 2014).

In networked governance, the role of innovation is diversified and flexible. It is rather a bottom-up and user-driven way of incorporating innovation through social participation and by combining local resources for offering better services (Hasu et al., 2011). Co-innovation and user-driven services have been acknowledged to impact positively the innovativeness of organizations (Alam and Perry, 2002; Blazevic and Lieven, 2008). In networked governances, the users are the innovators themselves (Sundbo and Toivonen 2011; Brand, 2005).

Addressing the issue of public sector innovation is imperative, especially in transitional countries like Kosovo. Supporting innovation in the public sector enables achieving economic advantages, poverty reduction, harmony and institutional stability (Batalli, 2011). In Kosovo, the problem of poverty is evident, institutional stability is only an idea and economic growth is stagnant. The importance of addressing this problem is mandatory. Since this research is part of a larger study, the focus of this research is on identifying the information sources supporting innovation in the public sector of Kosovo.

The research objectives for analyzing the query are:

- O1. Discover the main information sources supporting innovation in the public sector of Kosovo.
- O2. Compare and contrast the information sources supporting innovation in the public sector of Kosovo, with the existing literature.

2. Literature review
2.1. Public sector innovation

Public sector organizations around the globe are becoming aware of the importance that innovation has in reaching effectiveness and efficiency in their daily activities. The importance of being innovative is occurring due to the rapid changes that are happening in the environment they perform, which is becoming complex and unified. Population in western economies is aging, economic growth is declining, service needs are growing due to shifts in population etc. (Kallio, 2013; Steen, 2009). These factors have reasoned the need of the public sector to innovate, to go outside its boundaries through collaborating with internal partners and external service-users for developing a more effective and efficient administration and to offer better service delivery (Bloch and Bugge, 2013).

To understand public sector innovation, in particular, we have to consider previous attempts that have been made to reinvent the public sector. New Public Management (NPM) is one of the initiatives, which emphasized the need of using private sector tools for achieving better outcomes. NPM is about transforming the public sector into result-oriented and transparent entity (Noordhoek and Saner, 2005; Hartley, 2005). Although NPM and public sector innovation have similarities, innovation initiatives do not highlight using private sector techniques. Innovation considers any idea, from any of the internal or external users that aim to improve the public sector in general. NPM was oriented in giving public sector managers the room and space to achieve their objectives but neglected employees and independent parties such as service-users. The innovation movement is oriented in giving all employee's as well as external parties the freedom to be critical and express new ideas but for this to

happen, the culture and structure of the public sector must adapt to this new initiative (O'Byrne et al., 2014).

Networked government is another public sector initiative, which is aimed to reform the public sector. The idea of networked government is about improving performance by engaging multiple governmental organizations to work together on addressing particular problems and finding solutions to these problems (Yusoff, 2005). Networked government is associated with recognizing complex issues, which the public sector may face. Issues may be such as terrorism and globalization, and networked government faces these issues through coordinating activities and use of expertise from multiple governments. There is a link between networked government and public sector innovation whereby both indicate that the actual methods for managing the public sector are not satisfactory (Steen, 2009; Scott, 2010).

With the notion of public sector innovation, continuous improvement is also perceived as a driver of innovation in the public sector. The difference is that continuous improvement is about identifying areas where improvement can be made, while leaving behind the consequences of decisions derived (Liu, 2008). Continuous innovation is about reducing waste, reducing costs, improving performance and customer satisfaction (Fryer et al., 2007). Whereas innovation goes beyond: it is about developing a complete new product, service or process, by emphasizing that everyone needs to be innovative and that all have the responsibility and freedom to explore and criticize (Moore, 2005; Hartley, 2005; Borins, 2001).

2.2. Open innovation and networked governance

Open innovation has gained growing importance in the field of management (Ghezzi et al., 2014). The notion open innovation has been first used by Chesbrough (2003) and has since gained tremendous attention from both practitioners and researchers. The intense changes in dynamic markets characterized by outsourcing, networking and specialized technical knowledge have led to growing interest in open innovation (Durst and Stahle, 2014). However, open innovation only recently has received interest in the public sector domain and is also considered as a foster of innovation (Lakomaa and Kallberg, 2013; Fuglsang, 2008; Feller et al., 2008).

The idea of open innovation is to structure a business model by which innovation potential is converted into economic value. The innovation process should not be narrowly organized, rather it should be facilitated in open settings with external actors (Munksgard et al., 2012; Lee et al., 2012). When firms focus internally, they have a tendency to miss a number of opportunities that we find outside the firm (Chesbrough, 2003). As for the public sector, they are encouraged to capture the benefits of open innovation (such as getting involved, identifying demand, exploring incentive, co-creating, and encouraging entrepreneurship). Open innovation in the public sector realm tends to integrate the knowledge and experience of customers, users, and external performers into the innovation and value creation process. Open innovation uses internal and external sources for collecting information (Munksgaard et al., 2012; Ghezzi et al., 2014).

Hilgers and Ihl (2010) have derived to three dimensions by applying the concept of open innovation in the public sector realm:

1. *Citizen Ideation and Innovation:* This first tier focuses on engaging citizens in public sector innovation and ideation processes. It focuses on the knowledge and creativity within the citizenry for enhancing the quality of the common good.
2. *Collaborative Administration*: The second tier addresses the integration of citizens in advancing public administration processes. The objectives are to enhance the speed and responsiveness on issues of concern to the citizens and to reduce cost and increase quality.

3. *Collaborative Democracy*: This level contemplates ways of improving public participation in improving policy processes.

Open innovation is often linked to the notion of citizen sourcing, which describes the design and configuration of a new relationship between the government and its people based on practices known to the private sector (Terwiesch and Xu, 2008). However, until now, innovation activities in the public sector have long relied on stiff sector specific, top-down mechanisms, rather than flexible and empowered bottom-up practices (Carstensen and Bason, 2012). Gradually, both citizens and employees have become active in public sector innovation (Hasu et al., 2011; Bessant and Maher, 2009; Hartley, 2005).

Regarding networked governance, a shift from a 'bureaucratic' model of governance to 'networked governance' has happened (Hartley, 2005). Botero et al. (2012) have stated that there are changes taking place in how the role of citizens in society is experienced – in terms of how they feel responsible for things happening – and also in what is expected from them. In networked governance, the role of innovation is diversified and flexible. It is rather a bottom-up and user-driven way of incorporating innovation through social participation and by combining local resources for offering better services (Hasu et al., 2011). Co-innovation and user-driven services have been acknowledged to impact positively on the innovativeness of organizations (Alam and Perry, 2002; Blazevic and Lieven, 2008). In networked governances, the users are the innovators themselves (Sundbo and Toivonen 2011; Brand, 2005). Therefore, networks are considered a natural source of innovation. The proliferation of interactive form of governance through networks is important in enhancing public innovation (Sorensen and Torfing, 2011).

3. Methodology

For this study, a mixed methodology is utilized. Mixed methods are a convergence of quantitative and qualitative methods (Driscoll et al., 2007). To achieve the objectives set in this paper, two methods of collecting primary data are used. In principle, there is a structured survey questionnaire, the "Innobarometer 2010" developed by "The Gallup Organization", and an open-ended questionnaire for the interviewing part, which is derived from the "Innobarometer 2010". The Innobarmeter brings the attention of the public on a regular basis, by a series of publications regarding innovation (Onisor, 2012). The Innobarometer questionnaire was the most applicable one since it is related directly with the research objectives. Some minor changes have been made in order to adapt it to the specific objectives of the study.

The structure of the sample includes the central government, local governments and public corporations. The questionnaire was distributed to 52 public sector managers ranging from middle and top-level managerial positions and 8 interviews with public sector managers were successfully completed in accordance with the criteria set to achieve a balance between the methods and to achieve a more comprehensive view of the findings. The study is piloted in Kosovo.

Table 1: Participation of public institutions, according to activities

Activities	Distribution
General government activities or finance	15.40%
Education	15.40%
Social services	25%
Health	5.80%
Other	34.60%
[Refusal]	3.80%
TOTAL	100%

Author's calculations based on data extracted from the distribution of questionnaires

Regarding the sampling procedure and data collection, this study is based on convenient factors (contact details) and snowball sampling strategy (networks).

Due to the area of research, the analysis is mainly descriptive which relates to other studies in this area. Based on the methodological approach, data is analysed through comparison between both types of measurement tools, whereby the quantitative analysis offers a statistical view while the qualitative analysis provides a more exploratory understanding of the topic under research.

4. Data Analysis and Findings

The major sources of information that played an important role in developing innovation in the public sector domain were: Examples of best practices by other governments (23%), ideas from management (35%), and visits to conferences (42%). Examples from other professional organizations also played an important role in fostering innovation (33%).
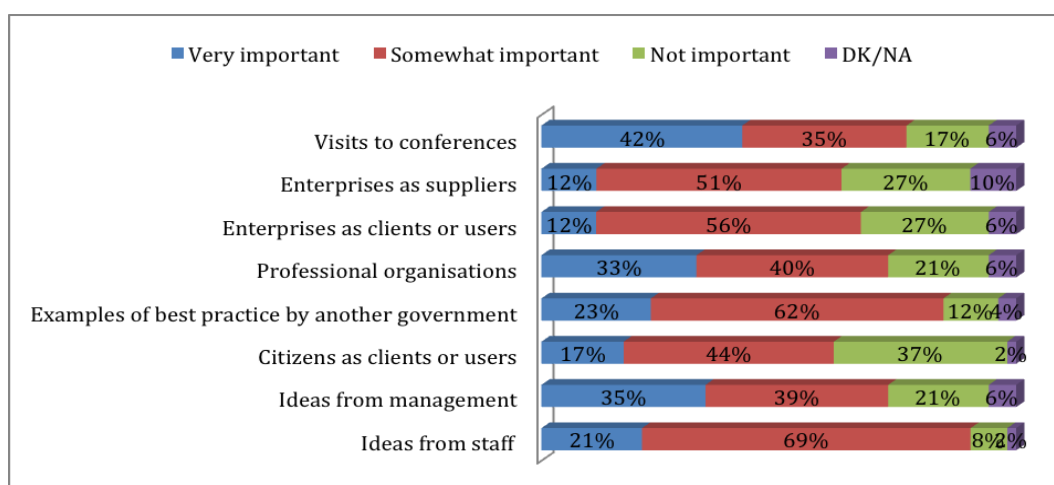
Figure 1: Importance of information sources for development of innovation
Source: Author's calculations based on data extracted from the distribution of questionnaires

Citizens as clients or users were significantly less likely to have had an important role as a source of information for developing innovation (whereby 37% said that it was not important as a source of developing innovation). Enterprises as clients or users were also among the least often noted sources of information for innovation development (27% did not obtain any relevant information related to innovation from this source). Concerning the average importance in developing innovations, ideas from staff were more important than ideas coming from management (staff: 69%, management: 39%).

Regarding the qualitative data analysis, public sector managers in general have stated that *"visits to conferences, examples of best practices by other governments and support from external experts or professional organizations"* have been essential in supporting innovation. Interviewee P6 states*: "The best way to originate to new solutions for solving specific problems is to gain experience from European Union countries or from countries in the region, by organizing specific conferences, by training our employees to become more innovative in their working environment after their return",* whereas interviewee P4 supports the statement above by saying that *"they continuously compare their current condition of innovation with examples of best practices by other governments in the region and governments in European Union countries, and thus evaluate their current condition of*

innovation and derive to specific solutions for specific problems." Another important source of information for supporting innovation is *"ideas from management".* All interviewees have stated that they have regular meetings where they discuss about specific problems and share ideas on how to approach the problems identified. Nevertheless, they also indicate that their employees have the dedicated space and time to share ideas in supporting innovation, however they point out that their employees are not motivated and not used to this culture of co-creating and co-innovating. In addition to that, although employees have the space and time, the management in most of the cases does not take their ideas seriously. Therefore, it can be concluded that all eight interviewees consider *"visits to conferences"* and *"benchmarking with other organizations"* as main sources of information supporting innovation. The qualitative and quantitative findings regarding sources of information are in line.

While considering the scope of activities: local, regional and national level public sector institutions tend to draw information from visits to conferences (which was the most predominant source of information for innovation, with 35% in the local scope, 47% in the regional level and 67% in the national level).

Table 2: Very important sources of information supporting innovation, % by organizational background

	Ideas from management	Ideas from staff	Examples of best practices...	Professional organizations	Visits to conferences	Enterprises as suppliers	Citizens as clients or users	Enterprises as clients or users
Size (employees)								
Less than 10	40	0	20	0	60	0	0	0
10-49	40.9	28.6	23.8	47.6	42.9	4.8	33.3	14.3
50-99	37.5	25	25	25	50	12.5	12.5	12.5
100-249	11.1	11.1	33.3	22.2	33.3	22.2	0	11.1
250-499	16.7	16.7	16.7	50	50	16.7	16.7	16.7
500-999	50	50	0	0	0	50	0	0
1000 or more	100	0	0	0	0	0	0	0
Geographic areas								
Local	34.5	24.1	24.1	37.9	34.5	10.3	20.7	13.8
Regional	17.6	17.6	17.6	29.4	47.1	17.6	17.6	11.8
National	83.3	16.7	33.3	16.7	66.7	0	0	0
Sector								
General gov't activities	12.5	25	37.5	50	50	25	25	25
Education	37.5	25	25	50	75	0	12.5	12.5
Health	33.3	33.3	33.3	33.3	33.3	66.7	15.4	33.3
Social services	38.5	23.1	7.7	23.1	15.4	0	33.3	0
Other	38.9	5.6	22.2	22.2	44.4	11.1	16.7	11.1

Source: Author's calculations based on data extracted from the distribution of questionnaires

Regarding the use of international sources to obtain information for innovation purposes we see that innovators predominantly used domestic sources of information (50%), which is

also indicated from interviewee P5, who states: *"The most dominant source of information for developing innovations are trainings and conferences organized in Kosovo, and rarely outside of Kosovo".* The next source of information was events organized in European Union countries (19%), while only (10%) of respondents indicated that they have obtained information essential to innovations from organizations or events organized outside the European Union.
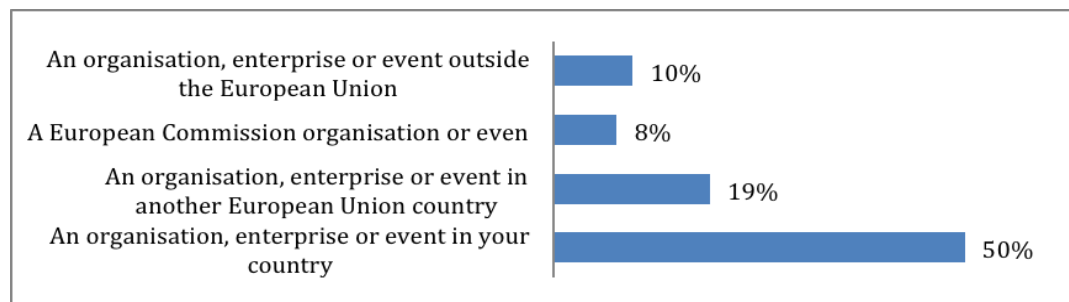
Figure 2: Source of information to innovations
Source: Author's calculations based on data extracted from the distribution of questionnaires

5. Discussion and Conclusions

Data analysis indicates that visits to conferences, followed by ideas from management and examples of best practices by other governments were the fundamental sources that supported innovation. These information sources supporting innovation are strongly supported by the literature. Borins (2011) indicates that employees have to be actively engaged in innovation by continuously learning from external events regarding public sector innovation. In addition, ideas from management and benchmarking are very important in supporting innovation. Fernanderz and Rainey (2006) state that top-management has a crucial role in achieving a successful alternation from a risk averse culture to an inclusive culture, which accepts novel ideas from everyone. Public sector managers influence the outcomes of an organization (Damanpour and Schneider, 2006). As for the comparison of performance against benchmarks, it is of paramount position in gaining useful information concerning the weaknesses and strengths of an organization (Garvin et al., 2008). Therefore, these information sources are acknowledged from the literature and from the findings as important in supporting innovation.

However, the public sector of Kosovo has failed in engaging citizens as information sources for supporting innovation. The most recent literature provides evidence that citizens or service users knowledge and creativity is of great importance in enhancing innovation. According to the literature, the public sector has to incorporate the knowledge and experience of customers, users and external performers into the innovation and value creation process (Munksgaard et al., 2012; Ghezzi et al., 2014; Hilgers and Ihl, 2010). Therefore, it is a prerequisite for public sector managers in Kosovo to be aware of the importance of co-creating and co-innovating with its service users.

Regarding the use of international sources of information for supporting innovation, the public sector of Kosovo in general uses domestic sources of information supporting innovation and rarely obtains information from events or organizations in European Union countries. Although, the literature considers international sources of information as important in driving innovation in the public sector.

6. Recommendations

Based on the analysis, the following recommendations are directed to Kosovar policy makers, public sector managers and administration practitioners. Based on the literature, co-creating and co-innovating with service users is found to be very important in driving innovation (Kallio et al., 2013). However, Kosovo's public sector has not provided any particular result in this area. Therefore, it is recommended to acknowledge the importance of service-users in the process of developing and implementing public sector innovations. Another mutable recommendation is to pursue international events, which would enrich and extend their current knowledge and expertise concerning public sector innovation. Domestic sources of information were found to be the most widespread information source supporting innovation. Moreover, ideas from staff aren't taken seriously, therefore, it is recommended for public sector managers and public policy analysts to work on creating a culture of innovation that emphasizes co-creating and co-innovation with internal and external sources of information for supporting innovation. Nonetheless, these recommendations should be tackled strategically, since developing a culture of innovation is a lifetime process, which requires continuous commitment. Finally, researchers and public policy analysts from developing countries should identify alternative ways to gain experience from developed countries regarding public sector innovation.

7. Limitation of the study

Access to information was one of the limitations faced under the topic of research. In addition, the concept of public sector innovation posed a new definition to some of the interviewees, thus the concept had to be explained thoroughly. A significant limitation to the study was the use of mixed methods. Public sector managers in Kosovo hesitated to participate in the study and deliver information regarding their experience with innovation, especially during the interview process, which had to be recorded. However, clarifying to participants the purpose of the study solved this drawback and by providing them with a consent form, which strictly acknowledged their right that the information provided would remain confidential and only used for study purposes. Moreover, utilizing mixed methods was time consuming and costly.

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YORUBA CULTURE AND LEADERSHIP STYLE IN NIGERIAN ORGANISATION

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Abstract: *Culture and leadership research in the last decade witnessed a general upsurge. Empirical studies that determined the scores of the subgroup cultures and examined leadership styles and preferences in Nigeria, have not been exhaustively carried out. This study therefore examined subgroup cultures and leadership styles in Nigerian organizations. Due to the structure of most Nigerian public organizations which are characterized by multi-ethnic groups with heterogeneous cultural beliefs, this study examined the differences in the Hofstede's culture dimensions' scores, leadership styles and preferences among Yoruba subgroup in Nigeria with focus on Power Distance and Individualism/Collectivism. Survey research design was adopted, making use of questionnaire for data collection. The study made use of 345 members of staff purposively selected from among the Yoruba subgroups in the Central Bank of Nigeria Headquarters in Abuja. The data generated from the structured questionnaire were analyzed using Statistical Package for Social Science (SPSS) for descriptive statistics. Hofstede's culture dimensions of power distance and individualism/collectivism were computed using the Value Survey Module (VSM) developed by Hofstede. This study found that there is a high power distance among the Yoruba subgroup, and the leadership style preferred by the Yoruba's is the democratic style of leadership and that the Yoruba subgroup is a collectivistic society.*

Keywords: Leadership Styles, Subgroup, Power Distance, Individualism, Collectivism.

JEL classification: M12, M14, M50, M54**.**

1. Introduction
Culture plays a vital role in an organization and has impact on techniques of motivation, performance management, workplace leadership styles and other management practices in organization.
According to Iguisi (1994), culture influences management practices mainly through motivation, respect, reward system, promotion, and authority. To explain the consequences of culture for management, Hofstede (1980, 1991, 1997 and 2010) developed an empirical model labeled 6-dimensions of cultures namely **power distance**, which is the degree of inequality that exists in a society (Power are not distributed evenly); **individualism/collectivism**, *Individualism* refers to a loosely knit social framework in a society in which people are supposed to take care of themselves and their immediate families only. *Collectivism* occurs when there is a tight social framework in which people distinguish between in-groups and out-groups - they expect their in-groups (relatives, organizations) to look after them in exchange for absolute loyalty; **Uncertainty Avoidance**- This is the extent to which a society feels threatened by uncertain or ambiguous situations; **Masculinity/Femininity**, Masculinity here, is the extent to which the dominant values are

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assertiveness, money, heroism and other things (achievement and Success). In this society women are more emphatic and competitive. The other end of the spectrum is the femininity (relationship) which represents a preference for cooperation, modesty, caring for the weak and quality of life*: Long-term versus Short-term Orientation* formerly called Confucian Dynamism which describes society time horizon; *and Indulgence versus Restraint* which is the extent to which members of a society try to control their desires and impulses. These dimensions provide a framework for understanding cultural variations in managerial context.

1.1 Research Questions
1. What are the scores of Yoruba subgroup in Hofstede's dimension of power distance?
2. What are the scores of Yoruba subgroup in Hofstede's dimension of Individualism/Collectivism?
3. Which leadership style is perceived to be the most dominant among they Yoruba sub- group within the studied Nigerian organization?
4. Which leadership style would the Yoruba subgroup prefer and highly reject in their organization?

1.2 Objectives of the Study
1. To determine the scores of the Yoruba subgroup of in Hofstede dimension of power distance;
2. To determine the scores of the Yoruba subgroup in Hofstede dimension of individualism/collectivism;
3. To ascertain the leadership styles perceived to be the most dominant among the Yoruba subgroup within the studied Nigerian organization; and
4. Examine the leadership styles that the Yoruba subgroup cultures prefer and has highly rejected in their organizations.

2. Review Of Related Literature
Iguisi (2009) defined culture as the pool of rules, beliefs, and values by which individual or group members conceptually order the objects and events in their lives in order to operate in a manner that is acceptable to people identifying with them and people that are negotiating with them in the course of their interaction. Geert Hofstede (1980, 2010) categorizes culture into two namely: "culture one and two". He defines "culture one" as manifested in music, painting, dances, art, folklore, and literature. Hofstede defines "culture two" as the "software of the mind", a collective phenomenon, shared with the people who live in the same social environment. It is the collective programming of the mind, which distinguishes the members of one social group or category of people from another (Hofstede, 1991:p.5). Culture consists of the patterns of thinking of leaders to their followers, and followers to their leaders (Hofstede, 1984).

A subgroup is a collection of people who identify themselves as members of a group that is also part of a larger social system to which they belong (Makama, 2013). It is a small group of people who form part of a larger group. Subgroups exist within a dominant culture and are dependent on that culture. One important subgroup category is occupation, Where most people dress alike, share a common vocabulary and similar values, and are in frequent communication.

Yoruba people live mostly in South-western Nigeria. They have developed a variety of different artistic forms including pottery, weaving, beadwork, metalwork, and mask making (Makama, 2013). The Yoruba's originated from Ile-Ife, arose and became quite popular by their trading with the Portuguese. In the late 1800s, the Yoruba's formed a treaty with the Fulani (after the Fulani invasion) and in 1901 they were colonized by the British (Aluko,

2003). The Yoruba constitute approximately 21 percent of Nigeria's total population. The acceptance of both Christianity and Islam in great proportion could be evidence that the Yoruba's are open minded and ready for adventure. Hence, Yoruba's are largely collective (Aluko, 2003).

Culturally, the Yoruba subordinate shows high respect and regards to his superior. The leadership pattern in this subgroup has low power distance as the organization is characterized with consultative and participative leadership styles.

2.1 Likert's Leadership Theory

Likert's leadership styles are leadership styles developed by Rensis Likert in the 1960s. He outlined four systems of management to describe the relationship, involvement, and roles of managers and subordinates in industrial settings. Rensis Likert (1967) leadership styles includes:

Style I: Exploitative-authoritative (Autocratic)- In this system, managers tend to use threats, fear, and punishment to motivate their workers. Managers at the top of the hierarchy make all of the decisions and are usually unaware of the problems faced by those in the lower levels of the organization. Decisions are imposed on subordinates, and motivation is characterized by threats. The orders issued from the top make up the goals for the organization. As a result, workers tend to be hostile toward organizational goals and may engage in behavior that is counter to those goals. This style has no confidence and trust in subordinates. It relies on centralized decision making from the top of the organization. Subordinates are not involved in any important decision making. Downward communication is the main means of transmitting information within the organization in this style.

Style II: Paternalistic-Authoritative- Less controlling than the exploitative authoritative system, under this system motivation is based on the potential for punishment and partially on rewards. The decision making area is expanded by allowing lower-level employees to be involved in policy-making but is limited by the framework given to them from upper-level management. Major policy decisions are still left to those at the top, who have some awareness of the problems that occur at lower levels. This creates mainly downward communication from supervisors to employees with little upward communication, causing subordinates to be somewhat suspicious of communication coming from the top. The managers at the top feel more responsibility towards organizational goals than those employees at the bottom, who feel very little responsibility. The relationship between superior and subordinate in this style resembles that of master-servant.

Style III: Consultative- Here, Motivation of workers is gained through rewards, occasional punishments, and very little involvement in making decisions and goals. Lower-level employees, in this system, have the freedom to make specific decisions that will affect their work. Upper-management still has control over policies and general decisions that affect an organization. Managers will talk to their subordinates about problems and action plans before they set organizational goals. Communication in this system flows both downward and upward, though upward is more limited. This promotes a more positive effect on employee relationships and allows them to be more cooperative. Lower-level employees are seen as consultants to decisions that were made and are more willing to accept them because of their involvement.

Style IV: Participative (Democratic)- Likert argued that the participative system was the most effective form of management. This system coincides with human-resources theory. This system promotes genuine participation in making decisions and setting goals through free-flowing horizontal communication and tapping into the creativity and skills of workers. Managers are fully aware of the problems that go on in the lower-levels of the organization. All organizational goals are accepted by everyone because they were set through group

participation. There is a high level of responsibility and accountability of the organizational goals in all of the employees.

3. Methodology
3.1 Research Design
The study utilized the survey research design. Specifically, the cross sectional survey research design was adopted. A cross-sectional survey collects data to make inferences about a population of interest at one point in time. The relevant information on the relationship between work-related values of subgroups in Nigeria and leadership style was elicited from the sampled respondents.

3.2 Population of the Study
This study focused on the Yoruba subgroup cultures in Nigeria as they affect management. To this end, the population of the study comprises of all the staff of Central Bank of Nigeria. From the data obtained from Head of Human Resources Department of the bank on the 1st of July, 2013, there was 2,515 staff of Central Bank of Nigeria at the Headquarters.

3.3. The Sample Size and Sampling Technique
Since the population is known (2,515), sample size for the study was determined using Yameni's formula as stated below:

$$n = \frac{N}{1+N(0.05)^2}$$

Where: n=Sample size, I=Constant Value, N= Population Size= Coefficient of Confidence or error terms (0.05).
Therefore, a sample size of 345 was used. Purposive sampling method was used in selecting employees of Central Bank of Nigeria from three geo-political zones of Nigeria.

3.4. Method of Data Analysis
The data that were generated from the use of structured questionnaire were analyzed using descriptive statistics such as simple percentage and frequency table. In line with the objectives of the study, power distance index (PDI), and individualism/collectivism index (IDV) were computed using the formulae developed by Hofstede.
The formula that was used to compute PD1= 135-a+b-25c
Where: a = *the percentage 'Manager 3' in question 40*, b= *the percentage 'Manager 1' plus 'manager 2' in question 41* **and** c= *the mean score on question 43*.
The formula that was used to calculate IDV = 76m4-43m1=30m8-27m13-29
1 = mean score of question 24_1,   4 = mean score of question 24_4.
8 = mean score of question 24_8, 13 = mean score of question 24_13
Pearson Correlation was employed to examine the relationship between leadership styles and subgroup cultures. All the analysis was conducted with the aid of statistical Package for Social Science (SPSS).

4. Data Presentation, Analysis and Interpretation
The demographic information of the respondents sampled for this study is presented in Table 4.1 below, as follows:
Length of working experience: From Table 4.1, it can be deduced that majority of the respondents (58.92%) have spent substantial years (5-20) in the CBN.
Respondents' age: A critical look at the Table 4.1. It can be deduced that majority of the staff of the CBN (56.93%) are still within their youthful and vibrant age (Less than 40years).

Year of formal school education: A close look at Table 4.1 reveals that the respondents have above 13 years of formal school education as shown by 67.54% for the Yoruba's.
Academic/Professional Qualifications: 68.42% have first degree qualifications, 11.40% have master's degree qualification. 20.18% have doctorate qualification. Summarily, it can be deduced that majority of the sampled respondents are individuals with high level of formal educations which is critical to the financial sector such as the CBN.
Respondents' religion: A summary from the table reveals, 73.58% of the respondents are Christian while 20.44% are Muslim and 5.98% practice African traditional worship and other religions.

Table 1: Demographics of Respondents

Sample Size	YORUBA		NATIONAL	
	Freq	**%**	**Freq**	**%**
Length of Working Experience				
Less than five years	28	25	110	33.33
Five years to twenty years	66	58.92	163	49.39
More than twenty years	18	16.07	57	17.27
Total	112	100	330	100
Respondents' Age				
Less than forty years	70	61.95	193	56.93
More than forty years	43	38.05	146	43.09
Total	113	100	339	100
Year of Formal School Education				
Less than 13 years	37	32.46	81	23.97
13 years and above	77	67.54	257	76.04
Total	114	100	338	100
Academic/Professional Qualifications of Respondents				
First Degree	78	68.42	101	29.89
Master Degree	13	11.4	47	13.91
Doctorate Degree	23	20.18	190	56.21
Total	114	100	338	100
Respondents' Religion				
Islam	26	23.64	65	20.44
Christianity	71	64.55	234	73.58
African traditional worship	8	7.27	11	3.46
Others	5	4.55	8	2.52
Total	110	100	318	100

Source: Researcher's Field Work (2015)

4.1 Power Distance

One of the objectives of this study was to determine the scores of the Nigerian subgroups in Hofstede's culture dimension of power distance. Power distance as a characteristic of a culture measures the extent to which individuals accept that power in an organization is

unequally distributed. In calculating the power distance index for the subgroups (Yoruba) in Nigeria, the formula developed by Hofstede (1980) and used by Iguisi (2012, p.161) was adopted. Calculation of power distance index uses the following formula:

PDI = 135 – a + b – 25c

Where a = *the percentage 'Manager 3' in question 40*, b = *the percentage 'Manager 1' plus 'Manager 2' in question 41* and c = *the mean score on question 43*

Power Distance Indices (PDI) for Yoruba Subgroups are shown below;

PDI for Yoruba is: 135 – 25.7 + (34.5+21.8) - 25(3.351) = 82

PDI for National is: 135 – 29.1 + (35.4+27.7) - 25(3.277) = 87

4.2 Individualism/Collectivism

The objective of determining the scores of Nigerian subgroups in Hofstede's dimension of Individualism/collectivism was addressed here. Individualism/collectivism dimension revolves around the relative closeness of the relationship between individuals in a society. Using the data collected, and formula developed by Hofstede in calculating the individualism index (IDV), the IDV scores for the Yoruba subgroup was identified as follows:

IDV = 76m4 – 43m1 + 30m8 – 27m13 – 29

1 = mean score of question 24_1. "Have sufficient time left for your personal or family life"
4 = mean score of question 24_4. "Have good physical working condition"
8 = mean score of question 24_8. "Work with people who cooperate well with each other"
13 = mean score of question 24_13. "Live in an area desirable to you and your family"

Individualism Indices (IDVs) for Yoruba Subgroups are shown as follows:

IDV for Yoruba is: 76(2.117) – 43(2.066) + 30(2.183) – 27(2.308) - 29 = 46

IDV for National is: 76(1.914) – 43(2.009) + 30(1.939) – 27(2.093) - 29 = 32

Table2: Yoruba Subgroup Scores in Hofstede's Dimensions of Culture

Subgroup	Power Distance Index (PDI)	Individualism Index (IDV)
Yoruba	82	46

Source: Researcher's Fieldwork (2015)

The above computation shows that the Yoruba exhibited high power distance (82) Table 2 shows that Yoruba (46) is rated in the individualism score.

Table 3: Comparison of Nigerian Scores with Hofstede's Dimensions of Culture

Subgroups	Power Distance Index (PDI)	Individualism Index (IDV)
Nigeria-Present Study	87	32
Nigeria-Iguisi (2012)	100	46
Hofstede (WAF Region-1991)	77	20
Difference (Present Study &Iguisi)	-13	-14
Difference (Present Study &Hofstede)	+10	+12

Source: Researcher's Fieldwork (2015)

Table3, shows the scores obtained by Hofstede, Iguisi and the present study. The power distance score in this study for Nigeria nationally is 87. This score lies between the scores obtained by Hofstede, 77 and Iguisi 100. According to Iguisi (2012) the difference between Hofstedes score and his score was due to modernization. The difference in the scores obtained in Iguisi's study and the present study is -13 while that of Hofstede's study and the

present study is +10. One of the likely reasons for the difference (-13) in power distance score between this present study and the study conducted by Iguisi (2012) may be due to the monumental growth in information and communication technology. These days, the availability of different social media platforms such as Facebook, Instagram, Twitter, WhatsApp, among others have greatly closed the communication gap between boss and subordinates. These platforms provide for a friendlier interaction among organizational members. Also the literacy level shown in demographic respondents table 4.1 reveals that 78.4% of the total respondents have at least 13 years of formal school education. Education has further improved and enhanced the modernization process thus reducing power distance. Furthermore, the organization used for this study between the present and Iguisi's own have different organizational culture. Iguisi studied a cement industry which is a private sector organization where high power distance score might be recorded higher than that of the central bank of Nigeria used in the present study which is a public sector organization. The factor responsible for this high power distance is expressed in the relationship between the Boss and subordinates which appears more formal in private organization than in public organization.

The National score as presented in Table 4.3, 32 for IDV is greater than that of Hofstede – (WAF Region) but less than that of Iguisi (2012) score of 46. The difference in the score obtained in Iguisi's study and the current study is -14 while that of Hofstede study and the current study is +12. In spite of the variation in scores, the studies indicate that Nigeria is a collective society as it scored 32 in the individualism scale which is low. Having a collectivist culture, Personal opinions hardly exist as people constantly seek the ideas and opinions of the group to which they belong.

From the Table 4.3, the value of PDI for the different subgroup cultures have a number of implications on management practices. Firstly, workforces in high power distance societies are accustomed to, depending on their supervisors for direction and decision-making.

Finally, subordinates in low power distance cultures expect superiors to consult them and approach superiors to express their point of view on matters of relevance to the job or employee. They therefore have opportunities to develop closer relationships with superiors compared to employees in cultures high in power distance.

Leadership styles among the Yoruba Subgroups.

"The success or failure of an organization depends to a large extent on the quality of the leader and the leadership style the leader adopts in managing the organization, and on the acceptance of this leadership style by the followers" (Iguisi, 2012; p.173). In establishing the preferred leadership style of employees, four types of leaders were named. The results of the analysis are presented in Table 4 below:

Table 4: Types of Leaders (Preferred, perceived and Rejected)

Leadership styles	Preferred (%)	Perceived (%)	Rejected (%)
Autocratic	14.7	34.5	46.4
Paternalistic	16.5	21.8	26.4
Consultative	25.7	30.9	16.4
Democratic	43.1	12.7	10.9

Source: Researcher's Fieldwork (2015)

Tables 4 reveals that Yoruba subgroups, democratic leadership style (43.1%) is the most preferred; followed by consultative leadership style (25.7%) the autocratic leadership style is perceived to be the most dominant and autocratic leadership style (46.4%) is the most often rejected.

4.3. Leadership Style and Yoruba Subgroup Cultures

Pearson Correlation was conducted to establish the relationship between the scores of the subgroups (Yoruba) in the Hofstede dimension of cultures (Power distance and individualism/collectivism) and leadership styles preferred, perceived and rejected. The summary of the results is presented in Table 5 below:

Table 5: Pearson correlation result.

Correlations		Power Distance	Individ ualism	Preferred Leadership Style	Perceived Leadership Style	Rejected Leadership Style
Power Distance	Pearson Correlation	1	.206[*]	-.007	-.092	-.205[*]
	Sig. (2-tailed)		.033	.944	.340	.032
	N	325	108	108	109	109
Individualism	Pearson Correlation	.206[*]	1	.009	.093	-.066
	Sig. (2-tailed)	.033		.929	.340	.499
	N	108	109	108	107	107
Preferred Leadership Style	Pearson Correlation	-.007	.009	1	.393[**]	.015
	Sig. (2-tailed)	.944	.929		.000	.875
	N	108	108	109	108	108
Perceived Leadership Style	Pearson Correlation	-.092	.093	.393[**]	1	.272[**]
	Sig. (2-tailed)	.340	.340	.000		.004
	N	109	107	108	110	109
Rejected Leadership Style	Pearson Correlation	-.205[*]	-.066	.015	.272[**]	1
	Sig. (2-tailed)	.032	.499	.875	.004	
	N	109	107	108	109	110
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

The correlation results depicted in Table 5 showed that there is no positive and significant relationship between the scores of Yoruba subgroup in the Hofstede dimension of individualism/collectivism, and the leadership styles preferred and perceived.

5. Discussion of Findings

Firstly, this study found that there is a high power distance among the subgroup (Yoruba) in Nigeria. The power distance scores obtained from the analysis of data from the responses of the organizational members used for this study revealed that the Yoruba which constitute

the subgroups for analysis in Nigeria have a high power distance. This implies that there is great inequality in power distribution among the Yoruba's, matching it against the case study (Central Bank of Nigeria), the answer still remains the same, the Yoruba's have high respect for their Superiors even at work, but using the framework of leadership, the Yoruba preferred the democratic style of leadership. It is the belief of the Yoruba respondents that having a manager or boss or direct superior one can respect is important but such manager must use democratic approach in his decision making process concerning the subordinates' work.

High power distance scores has a number of implications. It leads to dependent on the power holder. This could result in subordinates not taking own initiative, but rather wait for the boss to give instructions. There is also relatively little real empowerment. Iguisi (2004) has earlier indicated that ethnic affiliation often leads to discriminatory work allocation in Nigerian workplace, the collectivistic nature of the Yoruba displays collectivism especially when they meet outside their immediate community. They believe in rallying around one another most especially on social occasion.

The low individualism score reported in this study is not a surprising result as the influence of tribe, ethnicity and family in African culture, is in indeed very strong and overwhelming (Iguisi, 2012). A large part of African motivation is to serve his or her immediate and extended family financially; hence they see the organization as functional rather than existential. As the Nigerian managers achieve more seniority, they feel more "involved" with the organization, that is, they do not treat it as instrumental in providing their material needs. Based on this study data, the democratic leadership style is the most strongly preferred and the autocratic style the most strongly rejected at the National level analysis. The implication is that the leaders from these subgroup cultures would be more effective if they exhibit the attributes of democratic leadership style. This finding collaborates Awujo's (1988) study that showed that leaders need to provide guidance without pressure as most workers or subordinates enjoy frequent and supportive communication from their leaders.

With respect to one the findings of the study that showed that there is positive and significant relationship between the scores of Yoruba in the Hofstede dimension of power distance and the leadership styles preferred, Pascale (1978) argued that participative decision making is more prevalent in low power distance culture compared to non-participative approach being more prominent within high power distance culture. Similarly, Hofstede (2001) found that in low power distance culture, managers consider their subordinates' suggestions before taking any final decisions whilst in high power distance culture, only managers are involved in that process. Iguisi (2004) asserted that African society generally is very paternalistic and hierarchical. Little prone to individualism, it tends to be egalitarian within the same age group but hierarchical in group-to-group relations, with marked subordination of the younger members, which are expected to give absolute loyalty as children are assumed to give their father. The paternalistic component confers on management the right to give orders and exact obedience and impose sanctions (Iguisi, 2004).

Comparing these findings to other relevant African culture, the authors noticed that the Fulani/Hausa's in similar studies has high power distance as they give utmost respect to their superiors in organizations, and also there is high collectivism, as they tend to behave as one. However, despite the high respect for their boss, they prefer the consultative leadership style. So superiors in these types of organization settings ought to consult with their employees. The Igbo's has high power distance, but low on collectivism and high on individualism, that's why the Igbo when found in an organization don't rally among themselves, and when it comes to leadership styles they also prefer the Consultative leadership style just like the Hausa/Fulani's. These comparisons are based upon the works of Iguisi (2004)

6. Conclusion

The findings of this study are evident from the responses obtained which revealed that Yoruba that constitutes a subgroup culture in Nigeria have high power distance. The Yoruba respondent share the opinion of having a boss or direct superior one can respect is pertinent but the leader must consult his subordinate in his decision making. The analysis of the leadership preference also show that the Yoruba's preferred the democratic leadership style. Nationally, it appears that democratic and consultative leadership styles are dominantly preferred by the Yoruba subgroup cultures.

Also these findings have contributed to existing knowledge which are outlined below,

i. Iguisi (1994) study on culture dimension in Nigeria was on the cement industry. This study extended knowledge on cultural dimension in Nigeria to the financial sector;

ii. Awujo (1988) study found that managers from the West are more democratic than managers from the North and managers from the East are less Democratic. Our study support this findings being that Yoruba sub-culture preferred democratic leadership style.

iii. The study has added to knowledge by showing that high power distance societies are characterized by autonomy as subordinates depend heavily on their supervisors for direction and decision-making. Employees are not encouraged to make suggestions and do not expect to be consulted or empowered; they expect to be told what to do and avoid disagreement.

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THE EFFECT OF CREDIT RISK MANAGEMENT ON PROFITABILITY: AN EMPIRICAL STUDY OF PRIVATE BANKS IN SYRIA

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Abstract: *The objective of this study is to investigate the effect of credit risk management on profitability in private banks in Syria. Two main criteria have been adopted for the management of credit risk in banks: capital adequacy ratio and non-performing loans. In order to achieve the objectives of the research and to test the hypotheses, an appropriate non-probability sample numbering 6 private banks was selected from those private banks in Syria for which financial reports and risk management reports were available sequentially from 2007 until 2011, because the researchers wanted to investigate the relationship between variables within normal conditions not in the light of instability in Syria. Credit risk was measured by the capital adequacy ratio (CAR), and non-performing loans (NPL), whereas profitability was measured by the ROE indicator by calculating the data and financial reports of sampled banks and showing them in a quantitative manner and identifying the relationship between the variables by using the SPSS program to study the correlation and build the regression equation. The study concluded that there is a statistically significant relationship between capital adequacy and profitability, the capital adequacy ratio affects profitability negatively. Non-performing loans do not effect profitability (ROE). In general, credit risk management accounts for 19% of the profitability of banks.*

Key words: Credit risk management, Capital adequacy ratio (CAR), Non-performing loans (NPL), profitability, Returns on equity (ROE), Private banks in Syria.

JEL classification: G32, G21.

1. Introduction

Credit activity is considered to be very important for the success of financial and banking institutions because the results of their business depend mainly on the quality and size of their credit portfolio and therefore these institutions must direct most of their resources to manage and monitor their credit portfolio. As a result of the extensive expansion of banking activity at the international level, the need has emerged for standards which can be used in banking and finance internationally, to ensure a degree high level of international financial stability in a competitive environment. This is what flagged the way for the emergence of Basel Committee on Banking Supervision (BCBS) working under the Bank of International Settlements in Basel, Switzerland. The committee is named the ''Basel Committee'' (BIS) and makes its recommendations to the Basel Committee on Banking Supervision. According to Zou and Li (2014) in commercial banks credit risk management has positive effects on profitability. Olokoyo (2011) reported that lending represented the main activity of the

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banking industry. Often, bank managers encounter the problem of trying to increase credit volumes while decreasing the possibility of default (Huang et al, 2007). Credit risk management is regarded as an approach which controls and manages uncertainties through risk assessment and improves strategies to reduce risks by using managerial resources (Afiriyie and Akotey, 2013). Achou and Tengue (2008) clarified the idea that good credit risk management will lead to good banking performance. They reasoned that "it is very important for banks to apply wise credit risk management to protect both the assets of the bank and protect investor's interest".

The banking sector is one of the strategic pivotal sectors in the economic development process in Syria, and banking services are provided by the public and private banks. Moreover, the Central Bank of Syria manages the entire financial process of the country. Prior to 2000, the banking system was a government monopoly in which, commercial banks were all government owned. After 2000, however, Syria witnessed a shift towards an open economy and allowed the private sector to invest in the banking sector and financial institutions; as a result, the first commercial private bank (IBTF) started operating in 2003. Private banks in Syria, despite their limited experience, started to grow naturally at a much faster pace than the government banks that had completely controlled the market before 2000. The share of private banks in the total assets of the financial sector in Syria increased from 13% at the end of 2007 and reached 30.4% by the end of 2011.

Despite that, there are many questions and doubts about the standards which are applied by these banks to manage their credit risks and reduce the ratio of non-performing loans, in order to avoid the problem which has previously faced governmental banks. We can summarize the research problem through the following questions: firstly, how does capital adequacy affect profitability? Secondly, how do non-performing loans affect profitability?

2. Literature review

2.1 Credit risk management
Basel I and II are regarded as significant reform which has been carried out in the banking sector following banking crises; they refer to the banking supervision accords issued by the Basel Committee on Banking Supervision (BCBS). Basel (I) is also known as the 1988 Basel Accord, which implemented a framework for a minimum capital standard of 8% for banks (Hosna et al, 2009). The aim of the Basel II standards was to avoid the weakness of Basel I by creating a strong foundation for prudent capital regulation, supervision, and market control, and enhancing risk management and financial stability (BCBS, 2004).

Basel I is considered a tool to measure the capital to risk weighted-asset ratio (CRAR). It defines a bank's capital as two types: core (or Tier I), and supplementary (or Tier II). According to Basel I, at least 50 percent of a bank's capital base should consist of core capital. Basel II is more than a comprehensive framework of banking supervision, since it also includes got provisions for supervisory review and market control.

Basel II includes three basic criteria: firstly, minimum regulatory capital (Pillar 1) where CRAR is calculated by incorporating credit, market and operational risks. Secondly, supervisory review (Pillar 2) provides key principles for supervisory review, risk management guidance and supervisory transparency and accountability. Thirdly, market control (Pillar 3) encourages market control by improving a group of exposure requirements that will enable market participants to evaluate information on risk exposure, risk assessment processes and the capital adequacy of a bank.

2.1.1 Capital Adequacy ratio
According to Alfon et al, (2004) there are three categories for determining the CAR (Capital Adequacy Ratio): firstly, banks' internal policies and considerations. Secondly, market

forces, and thirdly, regulatory requirements. Bokhari et al (2012) clarified the concept that in the banking system alternative capital cost is regarded as major component of Capital Adequacy Ratio (CAR). In addition, Return on Equity (ROE) is a more suitable tool for the analysis of the alternative cost of capital when the cost of capital is low. As the rate of the alternative cost of capital increases, there is a willingness to reduce the holdings of extra capital. As indicated by Sinkey (1992), regulators utilize the CAR as an important measure both ''safety and soundness'' of depository institutions because they regard as capital a safety margin capable of absorbing possible losses. There are two proposed types of capital ratios. The first relates to Tier 1 capital, which must absorb the losses of the bank without leading to a cessation of activities. The second is Tier 2 capital, usually subordinated debt, which is aimed at ingesting losses in the event of liquidation and thus provides a small degree of depositors. In this study, we use the CAR formula based on both Tier 1 and Tier 2 capital. According to Anbar and Alper (2011) capital adequacy (like other factors such as asset size, asset quality, liquidity, deposit and income-expenditure structure) is considered a bank- specific determinant as internal factors are determined by the bank's management decisions and policy objectives. Anbar and Alper (2011) reported that capital adequacy as a ratio of equity to total assets (CA) is considered one of the basic ratios for capital strength. It is expected that the increase in this ratio will lead to decrease in the need for external funding and an increase in the profitability of the bank. It clarifies the bank's ability to ingest losses and handle risk exposure with shareholders. According to Lin et al (2005) capital adequacy is one of the common indicators in the warning system used by financial officials and has slowly been given more weight in many countries throughout the world. Currently, 8% capital adequacy represents the lowest standard with regard to the risk of failure. As the rate increases, a bank's stability and security increase. It is only after a bank has reached the standard for security and has begun to turn profits, that the capital adequacy figure has any meaning.

2.1.2 Non-performing loans

In a context of rapid economic progress, financial stability is considered a cornerstone of general economic well-being. Banks' non-performing loans as an indicator of financial stability are very important because they reflect the asset quality, the credit risk and the efficiency of the allocation of resources to productive sectors (Rajan and Dhal, 2003). According to the literature, there are two groups of factors to explain the evolution of non-performing loans (NPLs) over time. The first group dealing with the overall macroeconomic conditions focuses on external events which affect the borrowers' capacity to repay their loans, whereas, the second group takes in consideration the variability of NPLs across banks, and ascribes the level of non-performing loans to bank-level factors (Klein , 2013). There are strong correlations between NPLs and numerous macroeconomic (public debt, unemployment, annual percentage growth rate of gross domestic product) and bank-specific factors (capital adequacy ratio, rate of nonperforming loans of the previous year and return on equity) (Makri et al, 2014). The ratio of (NPLs) considered one of the most important pointers used to identify credit risk (Makri et al, 2014). Many researchers consider NPLs as "financial pollution", with harmful effects for both economic development and social welfare (Gonzales, 1999; Barseghyan, 2010; Zeng, 2012). According to Bercoff et al (2002), the NPLs rate is influenced equally by bank-specific factors including asset growth, operating costs to asset ratio, institutional characteristics relating to private and foreign banking, and macroeconomic factors, such as credit growth, foreign interest rates, and monetary expansion etc. According to Louzis et al (2012), the determinants of NPLs, are either macroeconomic or bank-specific determinants (but not both) and are used as illustrative variables.

3. Profitability

There are many measurements of a bank's performance, and profitability is considered one of the most important criteria (Anbar and Alper, 2011). In addition to this, profitability as a measurement of performance includes both accounting and operations-based measures: (1) return on assets (ROA), (2) return on equity (ROE), (3) return on sales (ROS), and (4) sales growth (SG) (Qian and Li, 2003). (Colquitt, 2007) clarified the purpose of ROE as the measurement of the amount of profit generated by the equity in the firm; the (ROE) "return on equity ratio" shows the return which owners receive in return for investing their funds in the bank, and is considered one of the most important profitability ratios, influencing the decisions of the owners to continue their investment in the bank or transfering their investments to other activities with suitable yields. Anbar and Alper (2011) show that cleared that ROE is net profit divided by shareholders' equity and is expressed as a percentage. It explains the extent to which the bank was successful and efficient in investing its funds, as the increase in the bank's profits will maximize bank share values at (ASE), which will affect the bank's financial security. In addition to this, Molyneux and Thornton (1992) noted that there is a direct relationship between return on equity and capital adequacy.

4. Methodology

The aim of this paper is to investigate the relationship between credit risk management (capital adequacy and non-performing loans) and profitability (ROE) in commercial private banks in Syria.

Secondary data: annual reports issued by private banks and certified by the Syrian financial market are used to obtain the required financial ratios. Many researchers have investigated the relationship between credit risk management and profitability, including (Gizaw et al, 2015; Hosna et al, 2009; Zou and Li, 2014).

The target population is private banks in Syria, and the sample consists of commercial private banks only (non-Islamic banks), because of the differences in standards and regulations which affect the operational policies of Islamic banks. Islamic banking system and commercial banking system are different as the Islamic banking system pursues Profit and Loss (PLS) paradigm. Because of PLS paradigm, the bank and depositors/borrowers share profit (Mudarabah) and loss (Musyarakah) with each other (Zulfiqar, 2016 ; Chong and Liu, 2009).

The sample is consisted of six commercial banks (Bank of Syria and Overseas **BSO**, International Bank for Trade and Finance **IBTF**, Banque Bemo Saudi Fransi **BBSF**, Bank Audi, Byblos Bank and Arab Bank).The study covered a past five years which is started from 2007 to 2011, before the war in Syria, The study shows the normal situation for the country with peace, Moreover because it aimed to investigate the relationship between variables in normal conditions in order to achieve more accurate results.

5. Descriptive analysis:

According to Appendix (A):

Table 1: Mean and Standard deviation of the variables

Variable	Mean	SD
CAR	15.09%	0.04
NPL	3.1%	0.035
ROE	10.54%	0.046

Source: Author's own calculations

The mean value of CAR = (15.09%) for the six banks, this ratio exceeds the average of the minimum determined by the Basle Committee, which approved by the Central Bank of Syria, we can consider that as an indicates of commitment of banking sector for this standard. The value of standard deviation was (0.04) and this indicates that there is no significant dispersion of the capital adequacy rate values. The mean value of NPLR is (0.031) with a stander deviation (0.035). This is indicative of the convergence of the ratio of non-performing loans in the six banks.The mean value of (ROE) = 10.54% and the standard deviation = 0.046

6. Statistical analysis

Table 2: Correlation matrix between variables

Variables	Correlation	CAR	ROE	NPL
CAR	Pearson Correlation	1	-.443(*)	.475(**)
	Sig. (2-tailed)		.014	.008
ROE	Pearson Correlation	-.443(*)	1	-.211
	Sig. (2-tailed)	.014		.262
NPL	Pearson Correlation	.475(**)	-.211	1
	Sig. (2-tailed)	.008	.262	
** Correlation is significant at the 0.01 level (2-tailed).				
* Correlation is significant at the 0.05 level (2-tailed).				

Source: Author's own calculations

The Person correlation is used to find the degree of correlation between variables. According to the correlation matrix, there is a moderate negative correlation (-44%) between profitability (ROE) and (CAR), at a significant level (95%). There is a weak negative correlation (-21%) between profitability (ROE) and (CAR). There is a moderate correlation between independent variables (CAR & NPLR) (correlation value = 47%) at a significant level (95%).

Hypotheses test:

Research hypotheses
H1: There is a statistically significant relationship between Non-performed loans and profitability (ROE) at a ≤0.05.
H2: There is a statistically relationship between CAR effects on profitability (ROE) at a ≤0.05.

Table 3 Anova test (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.443(a)	.196	.137	.043520010883897

a Predictors: (Constant), NPLR, CAR
b Dependent Variable: ROE
Source: Author's own calculations

According to the previous table, we can note that independent variable credit risk management (CAR & NPL) correlates to the dependent variable (ROE), and credit risk management explains 13.7% of the change in ROE.

Table 4 Liner regression test (Coefficients)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
1	.180	.031	-	5.822	.000
CAR	-.491	.217	-.442	-2.257	.032
NPL	-.002	.261	-.001	-.008	.994

a Dependent Variable: ROE

Source: Author's own calculations

From the previous table we can arrive at the regression equation:

ROE= α1+β1NPLR+ β2CAR

ROE= 0.180-0.002NPLR-0.491CAR

Firstly: effects of non-performing loans on profitability

The NPLs ratio negatively effects ROE, (B for NPL = 0.002), which means every increase in NPLs is accompanied by a decrease in profitability (ROE) (= 0.002), with a constant of CAR. It is a negative relationship which, we can state is related to the lack of experience in credit risk management of these banks, either because of its novelty in Syrian markets or because they gave loans without sufficient guarantees.   The Sig. is (0.994)>0.05, so there is no significant relation between NPLs and ROE, and consequently we refuse H.1: there is a statistical relationship between Non-performed and profitability (ROE).

Secondly: CAR negatively effects profitability (ROE). B for CAR= (- 0.491), which means every increase in CAR meet is accompanied by a decrease in ROE of (0.491). The Sig. is (0.032)<0.05 which means there is a significant relationship between (CAR and ROE) at a confidence level of 95%, and we accept H2: There is a statistical relationship between CAR effects on profitability (ROE). We can note that the relationship has negative effects, which means an increase in the CAR ratio gives the best protection for depositors, and meets central bank regulations which agree with Basel standards. However, at the same time it leads to reduction ROE and this effects shareholder negatively, it was clear that private banks sought to increase CAR, but this procedure had negative effects on ROE.

7. Results

There is a statistically significant relationship between capital adequacy and profitability (ROE).The capital adequacy ratio affects profitability negatively. Credit risk management accounts for 13.7% of the profitability of banks. Non-performing loans do not effect profitability (ROE). The mean of the capital adequacy ratio for all banks reached 15.09% with a standard deviation of 0.04 and thus exceeded the minimum rate set by the Basel Committee; the minimum value was 8.42% at BIMO Bank in 2007, while it reached 25.24% in the Arab Bank in 2011.Banks in the study sample recorded a profit of 10.54% with a standard deviation of 0.046. The highest value of ROE was 19.43% in 2007 at Banque Bemo Saudi Fransi (BBFS) and the minimum was 1.38% at Byblos Bank in 2007.

The minimum value for CAR was (8.42%) In 2007 at Banque Bemo Saudi Fransi, while some value of CAR ratio reached (25.24%) at Arab Bank in 2011.

The highest value of (NPLR) = 0.14 at Banque Bemo Saudi Fransi in 2011, that is indicating for a weak credit risk management at that bank comparing than other banks in the sample. We can note there is a similarity in ROE for all the banks (six banks) during period of the study. Except Banque Bemo Saudi Frans (ROE = 19.34%) in 2007, but that average started to decrease till (9%) in 2011, with increase of NPLR till 14% in 2011.

8. Conclusion

We recognize the importance of balancing attempts to raise the capital adequacy rate and maintaining the profitability of the bank. The increase in the capital adequacy ratio means achieving better protection for depositors and meeting the Central Bank's requirements in order to comply with the Basel's requirements. However, this leads to a decrease in the rate of return on equity, thereby harming shareholders. Establishing sound credit criteria includes carrying out continuous evaluation, selecting customers, inquiring about their financial quality, granting them the appropriate credit for their activity and diversifying the selection of customers from different sectors, in order to maintain a low level of non-performing loans and keep them within acceptable limits in order to minimize their impact on profitability.

Keeping abreast of international banking developments in terms of capital adequacy standards, liquidity ratios, credit worthiness and the principle of financial transparency, and issuing a new package of laws commensurate with modern banking will give greater flexibility to banks and ensure banking expertise, thus significantly enhancing the competitiveness of Syrian banks as well as increasing confidence of foreign investors.

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Appendix (A):

Table 5 Financial Ratios

Bank	Year	CAR	NPLR	ROE
IBTF	2007	0.1662	0.001081189	0.112280366
IBTF	2008	0.1567	0.000808062	0.138579351
IBTF	2009	0.1161	0.004220009	0.177953582
IBTF	2010	0.1738	0.008761139	0.124940191
IBTF	2011	0.2274	0.046355915	0.128893317
Arab Bank	2007	0.2101	0.003110928	0.087946626
Arab Bank	2008	0.2022	0.018038232	0.081883843
Arab Bank	2009	0.1927	0.043823946	0.055071014
Arab Bank	2010	0.1612	0.064317424	0.110512623
Arab Bank	2011	0.2524	0.108274408	0.077476441
Byblos Bank	2007	0.1574	0.006149709	0.013829408
Byblos Bank	2008	0.1116	0.009866201	0.092661661
Byblos Bank	2009	0.0844	0.007605057	0.076818809
Byblos Bank	2010	0.1326	0.013003947	0.052664939
Byblos Bank	2011	0.1796	0.043262762	0.025809689
BBFS	2007	0.0842	0.023668413	0.194369449
BBFS	2008	0.124	0.021207262	0.189489706
BBFS	2009	0.1146	0.058420096	0.150041865
BBFS	2010	0.1227	0.068858265	0.131618056
BBFS	2011	0.185	0.140884486	0.093934394
BSO	2007	0.1232	0.016062386	0.068593268
BSO	2008	0.1163	0.009354071	0.163791066
BSO	2009	0.1311	0.017578661	0.144690498
BSO	2010	0.1193	0.009563389	0.139271503
BSO	2011	0.1448	0.05609434	0.10103972
Bank Audi	2007	0.124	0.017068436	0.092069894
Bank Audi	2008	0.0958	0.033654725	0.119215768
Bank Audi	2009	0.1534	0.023759829	0.101889586
Bank Audi	2010	0.1648	0.033548695	0.0993094
Bank Audi	2011	0.2018	0.094175337	0.016418396

Source Author's own calculations depending on Damascus Securities Exchange reports

IBTF: International Bank for Trade & Finance
BBFS: Banque Bemo Saudi Fransi
BSO: Bank of Syria and Overseas

EMPLOYERS' ASSESSMENT OF MANAGEMENT SCIENCE GRADUATES FROM NIGERIAN UNIVERSITIES

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Abstract: *In view of deteriorating quality of graduates from Nigerian tertiary institutions, this study sought to determine employers' assessment of management science graduates on key employability skills. The study involves the administration of questionnaires by means of convenience sampling on 680 employers of management science graduates in public and private sectors in Edo/Delta States. T-test and ANOVA were used to analyse data. Notwithstanding the age difference, the result obtained shows that employers rated the graduates of management sciences as slightly 'fair'. Notably, employers in the private sector rated management graduates higher and more positively than their counterparts in the public sector. Additionally, the employers in the present study described management science graduates as reliable, employable and hardworking. It was recommended that the quality of management science graduates can be improved by placing emphasis on increased funding, infrastructural development, and educator-employer based curriculum which focuses on practical skills, as well as the reactivation of industrial attachment in the Nigerian universities. On the side of the employers, investment in the orientation and training of new entrants into work organization should not be neglected.*

Keywords: Employers' assessment, Management science graduates, Public/Private universities, Nigerian universities, University generations.

JEL classification: I210.

1. Introduction

Education as one of the fundamental human right has been noted as the source and bedrock of any nation's economic, political, social and technological development. Judging from the Japanese experience, Adefuye (1999) argued that labour is the pivot and catalyst for national development. In the words of Ofulue and Nwakwushue (2008:166), "no nation would make any meaningful socio-economic stride without viable educational institutions." In corroboration, Odunaike, Ijaduola and Epetimehin (2012) acknowledged that a nation's education system forms the bedrock of its economic, political and technological development and a major determinant of its GDP.

The perennial and deteriorating quality of education in Nigeria impacts negatively on the welfare of individual citizens and the nation at large (Adewuya, 2002; Alumode, 2006; Ezenwafor, 2006). Today, a number of challenges face our tertiary institutions especially that of quality control, both in content and environment. It has been observed that Nigerian educational system has continued to witness huge and colossal quantitative growth at the expense of its qualitative development. Painfully, Akpa (2006) noted that over 60% graduates from tertiary institutions are classified as unskilled and untrained. In

corroboration, Obanya (2002), Pitan and Adedeji (2012), Pitan (2016); and Rufai, Bakar and Rashid (2015) observed that Nigerian graduates have variously been described as half-baked, ill -equipped, ill-trained, of poor quality, of poor standard and unemployable.
Ibrahim and Dandago (2013) observed that at the national and global economic levels, employers are now focusing on the demand of graduates with high soft (ICT) skills, technical skills and competencies than academic excellence. This changing pattern in the labour market increases the complexity of skills needed by graduates to secure gainful employment (Ibrahim and Dandago, 2013). In addition, Aluko (2014:549) noted that "employers want workers who are already made to perform, because markets are becoming more competitive and cost of on-the-job training is becoming prohibitive. In Nigeria, an overall skill mismatch of 60.6 percent among employed university graduates has been recorded (Pitan and Adedeji, 2012). In a related manner, Rufai *et al.* (2015) remarked that the training received by graduates from higher education institution has little or no relevance to the social and economic needs of their countries.
According to the National Bureau of Statistics (NBS), the unemployment rate in Nigeria in 2010 was 21%, it increased to 23.9% in 2011 and 54% in 2012 (Abiola, 2014). Emeh, Nwanguma and Abaroh (2012) and Pitan (2015) observed that the high rate of unemployment experienced by university graduates in Nigeria, is not necessarily due to unavailability of jobs, but partially cause by a dearth of candidates with employable skills demanded by employers. In a related manner, Akanmu (2011) noted that many employers of graduates are raising serious concerns about their skills and fit for the job.

Significance of the Study
The higher the level of mismatch between graduate turnout and graduate employable skills, the greater the level of crime, unfulfilled dreams, suicide, and impaired financial positions (Akinyemi, Ofem, and Ikuenomore, 2012). This unpleasant condition emanating from the nation's education/labour market disconnect is unhealthy for graduates, educators and national human capita development in general and particularly for management science graduates. This is critically so because the survival of any organization, small or large scale, is dependent on the managerial skills possess by their managers. The question of interest is the employers' perception of management science graduates different from the negative assessment of the other graduates. Against this background, the need to determine employers' assessment of graduates of management sciences from Nigerian universities is timely and cannot be overemphasized as Nigeria's formal education system has been keenly noted to be contributing to high unemployment rate, crime and poverty (Akhuemokhan, Raimu and Sodoluwe, 2013).

Objective of the Study
The following are the objectives of this study.
1. To determine employers' perception of Nigerian management science graduates from Nigerian universities.
2. To investigate if employers' demographics influence their image of the Nigerian management graduates.
3. To ascertain if significant variation exist in the employers' perceptions of management graduates from public and private universities
4. To ascertain if significant variation exist in the employers' perceptions of management science graduates from the different generational universities
5. To determine if employers' assessment of the female management graduates differ from those of their male counterparts.

2. Literature Review

2.1. Determinants of Graduate Employability

Irrespective of organization's size or type, Branine (2008) discovered that employers are employing cost-effective recruitment strategies that focus more on personal attributes like the attitudes, personality and transferable skills than job-centred skills relating to the type or level of applicant qualification. Hodges and Burchell's (2003) assessment of business graduates' workplace preparedness revealed that soft skills are very important. In line with Hodges and Burchell (2003), the study of McCabe (2010) acknowledged that hard skills such as knowledge and personal attributes are no longer sufficient to guarantee job retention except graduates possess soft skills. In an investigation on skills and competences required by applicants to secure gainful employment, Graham (2001) found besides verbal expression, presentation skills, listening, and understanding instructions, that employers also give critical attention to teamwork spirit, leadership skills, dedication, and initiative skills. In the exploration of UK, Austrian, Slovenian and Romanian business graduate employability, Andrews and Higson (2008) classifies the core components of employment to include work-experience, hard business-related knowledge and skills and soft business-related skills and competencies. Regarding graduate employability, Saunders and Zuzel (2010) noted that employers ranked personal qualities and core skills more highly than technical and subject–specific skills. In line with other pioneering works, Blom and Saeki (2011) identify soft skills and communication skills as core employability skills. Singh and Singh (2008) also observed that employers rated graduates with information communication technology (ICT) and communication skills more favorably than other groups.

The study of Ting and Ying (2012) showed no significant difference between the practitioners and academicians on business graduates' competencies on resourcefulness, research skills, written skills, oral skills, knowledge-acquiring skills, honesty, diligence, value-improving, teamwork ability, innovative skills and computer skills. However, Imeokparia and Kennedy (2012) observe that business graduates thinking skills are not as high as personal quality skill. They concluded that the current level of skills possessed by business graduates is satisfactory to secure placement in the workplace.

In the opinion of MdSaad, Robani, Jano and Ab. Majid (2013), problem-solving, tool handling competency and presentation skills are employable skills highly sought by employers. Balaceanu, Zaharia, Tilea, Predonu, Apostol and Dogaru (2013) in the evaluation of employers' satisfaction with graduate employee skills concluded that their employees' knowledge is adequate and consistent with their requirements. However, they noted that their main area of weakness was lack of practical experience. They thereafter recommend that school curricula be adjusted to accommodate more practical training especially with business practitioners.

Hettige (2000) on students' counseling and welfare services, in Sri Lanka, identified determinants of graduates employability to be team spirit, ability to achieve results in a short period and to prioritize/organise time productivity, openness, positive thinking, practical mind set, wide interest, personal character and business ethics. Ariyawansa (2008) found that English language proficiency is a key factor in graduate employability in addition to competence in IT skills, leadership qualities, analytical ability, team work, interpersonal relations and a degree certificate. In conclusion, Ariyawansa (2008) recommends that basic IT skills and English proficiency should be entry requirements for applicants seeking university admission.

Obanya (2002) suggests that university education should develop in the beneficiary analytical power relating logical reasoning, verbal skills, quantitative, graphic, documentary, audio- virtual, and sensory- perceptions skills; oral and written communication;

problem-solving; team spirit; creativity; versatility; IT (Information Technology) ; life-long learning skills such as perseverance, risk-taking, a spirit of enquiry, reading as a habit, self-directed learning efforts, the ability to face challenges. The study of Adeyemo, Ogunleye, Oke and Adenle (2010) examined the quality of university graduates on the following parameters: oral communication skill, subject specific knowledge skills, basic skills of reading and writing, entrepreneurship skills, technical/technological skills, problem solving/decision making skills, IT skills, self-directed learning skills and analytical/critical thinking skills.

2.2. University Ownership/Management and Graduate Employability
On the relationship between education and employment opportunities among 93 employers in a state, semi-state and private sectors in Sri Lanka, Gunawardena (1997) findings showed that the largest number of response (34%) opined that communication skills is a major criterion for selecting graduates for employment. Among other criteria highlighted are external appearance, manners, ethics, personality, respect to others, ability to work as a team, interpersonal skills and leadership. In the same study, a significant difference was found between the employers in government sector (66.7%) and private sector (89.6%) on the importance of English proficiency.

Singh and Singh (2008) in a study found that graduates from public universities were preferred for employment than those from private universities. They also found that younger employers rated graduate employability skills better than their counterparts. In a comparative study of public and private sector employers' perception on quality and employability of university graduates', Anho (2011) found a significant difference between the two sectors. In conclusion, he noticed that employers in private sector rated the quality of university graduates higher than their public sector counterparts. For the private sector employments, Cole (1993) identifies manual/social/intellectual skills, knowledge, understanding and attitudes as some of the requirements. Additionally, English proficiency, and IT skills, etc. have been noted as critical determinants of graduates' employability in Sri Lankan organizations (Ariyawansa and Perera, 2005).

A survey of newspaper advertisements on job opportunities and telephone conversations with managers from government, non-governmental and private organizations by Ariyawansa (2008) showed that prior work experience is highly demanded by employers in private sector. A significant difference was found between public and private universities on the quality of management education curriculum. Students in private universities rated their academic programme on technical skills, report writing skills, interpersonal skills, and computer skills higher than their counterparts from public universities (Odia and Agbonifoh, 2014). In Ambepitiya's (2016) study, graduates from public university indicated that they were satisfied with the knowledge acquired, more of those from private were dissatisfied Many graduates from both institutes, however, agreed that the acquired knowledge had supported them in their employment

Following the review of the literature, the present study propose to evaluate employers' assessment of management science graduates on writing skills, that is report writing, oral communication skills, report presentation skills leadership skills, decision making skills problem solving skills, interpersonal skills, trainability, and computer knowledge/IT skills.

3. Methods
Research Design
A combination of the descriptive and correlational research design was employed in the present study. Correlation research enables the direction and magnitude of relationship between variables to be established (Fraenkel and Wallen, 2000).

Sample Selection and Technique

A non-probability convenience sampling was used to distribute questionnaires to the respondents. According to Starmass (2007), the benefits of convenience sampling are low cost and time saving; which is most comfortable for study with homogeneous population. The study involved both the public and private employers of labour in Edo/Delta States, Nigeria. For deeper coverage, top managers in large scale organizations who had management science graduates under their supervision were also include in the sample. A sample of 680 respondents was considered to be representative for the present study since Management science graduates in (Accounting, Business Administration, Banking/Finance, Actuarial Science, Insurance, Marketing, Global Management, Human Resource Management etc) from all Nigerian universities of different generations were assessed by their employers. The Nigerian federal universities have been categorized into groups based on their dates of establishment, as follows: 1st Generation (Benin, Ibadan, Ile-Ife, Lagos, Nsukka, Zaria); 2nd Generation (Calabar, Ilorin, Jos, Kano, Maidugari, Port Harcourt, Sokoto); 3rd Generation (Abeokuta, Abuja, Akure, Akwa, Bauchi, Makurdi, Minna, Owerri, Umudike, Uyo, Yola) (Adeyemo, *et al.,* 2010). A total of 650 questionnaires were retrieved, 628 were only usable. Of the 628 usable questionnaires from respondents, 446 were male and 182 were female. While 263 were employers in the public sector and 348 in the private sector.

Method of Data Collection

As an empirical study, primary and secondary sources were employed for data collection. A self-designed questionnaire was used for collection of primary data, while secondary data were sourced from extant literature contained in journal, theses, conference proceedings, and working papers that were relevant to the subject of investigation. Self-administered questionnaires was adopted in this study because, it ensures respondents privacy, which may encourage them to objectively disclose their true feelings and perceptions (Cooper and Schindler, 2011). Additionally, this instrument of data collection is acknowledged to be cost-effective (Struwig and Stead, 2001). The research instrument was designed to capture respondent's demographics including age, sex, educational level and organization type. Section B of the survey questionnaire consisted closed-ended questions and focused on measuring employers' perception of management science graduates from different generational universities. Examples of issues raised in this section bothered on items evaluating graduates' writing skills, that is report writing, oral communication skills, report presentation skills leadership skills, decision making skills problem solving skills, interpersonal skills, trainability, and computer knowledge/ICT skills. These management graduate performance parameters were measured on a five-point Likert scale.

Pilot testing for Validity and Reliability of Research Instrument

A pilot study was conducted to check for vagueness and ambiguities in the questionnaire.
To ensure validity of the instrument, the questionnaire was given to four experts in the Departments of Business Administration and Education, University of Benin, Benin City to validate the instrument. Based on the suggestions of the experts, adjustments were made to improve the final questionnaire. Thereafter, the questionnaire was then piloted to test for reliability. The questionnaire was pre-tested among 20 employers of management graduates. The reliability coefficient of the survey instrument was computed using Cronbach's alpha test. The reliability coefficient for the 16 items exceeded the cut-off α of 0.70 (Girden, 2001). Hence, the measurement instrument was certified as reliable and internal consistent with a coefficient value of 0.840.

Fieldwork/Questionnaire Administration

Given the size of the research area, involving two states, Edo and Delta, data were collected from the respondents directly with the assistance of eight research assistants. In order to ensure representativeness of the samples, the questionnaires were administered to employers and managers in small, medium and large scale organizations who had management science graduates under their employment or supervision.

Data Analysis Method

Both descriptive and inferential statistics including mean, Z-test and ANOVA-test were used in analyzing data.

4. Results

Table 1: Employers' Assessment of Management Science Graduates from Nigerian Universities

S/N	Parameters for Assessing Nigerian Management Science Graduates	Mean	Std Dev
1	Knowledge of the professed area of specialization	3.80	.776
2	Writing skills, that is report writing and minutes of meeting	3.72	1.464
3	Oral communication skills	3.75	.730
4	Report presentation skills	3.60	.816
5	Leadership skills	3.68	.826
6	Ability to work with little or no supervision	3.66	.878
7	Decision making skills	3.62	.820
8	Problem solving skills	3.60	.841
9	Interpersonal skills (relationship with others)	3.80	.789
10	Observance of ethical standards	3.55	.865
11	Trainability (whether employee is trainable)	3.80	.827
12	Familiarity with current developments in area studied and the job	3.77	2.170
13	Computer knowledge/IT skills	3.59	.881
14	How would you rate Nigerian educational system when you compare this employee with his/her counterparts from foreign universities	3.38	.846
15	Overall quality of employee's outputs	3.54	.716
16	If you were to make future important recruitment, to what extent would you consider Nigerian graduates in management studies before their foreign universities	3.48	.985
	Overall Average	**3.65**	**.124**

Source: Authors' Fieldwork

The mean value of 3.65 indicates that employers' overall assessment of management graduates from Nigerian universities is fairly above average. The management graduates were rated equal with the highest mean index of 3.80 on three dimensions: knowledge of professed area of specialization, interpersonal skills and trainability. In comparison with their foreign counterparts, management science graduates from Nigerian universities were rated poorly as they were perceived to be of lower standard.

Table 2: Employers' Rating of Management Graduates Performance on the Basis of Sex

Parameter	Employers' Sex	N	Mean	Std. Deviation	Std. Error Mean
Rating of Management Graduates	Male	446	3.64	.623	.029
	Female	182	3.62	.581	.043

Levene F = 1.050 P = .306 t = .481 P = .630
Source: Authors' Fieldwork

Given the t value of .481 and p-value of .0630, it could be seen that employers' sex was not relevant in their evaluation of management graduates' performance. In other words, both the male and female employers rated performance of management graduates as fairly positive.

Table 3: Age and Education Influences on Employers' Rating of Management Science Graduates

Demographic Variables	B Coefficients	t	Sig.
(Constant)	3.575		
Employers' Age	.001	28.695	.000
Employers' Education	.018	.293	.770

R Squared = .001; F = .157; P = .854
Source: Authors' Fieldwork

The multiple regression results relating to age and educational influences on employers' rating of management graduates revealed that only employers' age factor had significant impact at t(28.695) and p(0.00). On the other hand, the F-value of 0.157 and p(0.854) indicate an insignificant joint impact of the two variables with R square of 0.1%.

Table 4: Rating of Management Graduates by Employers in Public/Private Sectors

Parameter	Employers' Organization type	N	Mean	Std. Dev.	Std. Error Mean
Rating of Management Graduates	Public	263	3.57	.613	.038
	Private	348	3.67	.604	.032

Levene F = 1.848 P = .175 t = -2.055 P = .040
Source: Authors' Fieldwork

A t-value of -2.055 and a p-vales of 0.04 revealed that a significant difference exist between the employers in private and public organizations in their rating of management graduates' performance. Evidence in Table 3 suggests that employers in private sectors with mean index of 3.67 were more satisfied with the performance of management graduates than those in the public sector whose mean evaluation stood at 3.57.

Table 5: Gender Influence on the Performance of Management Science Graduates from Nigerian Universities

Parameter	Employee Sex	N	Mean	Std. Dev.	Std. Error Mean
Performance of Management Graduates	Male	374	3.64	.613	.032
	Female	243	3.61	.603	.039

F =.066 p = .797 t = .597 p = .550
Source: Authors' Fieldwork

The figures arrayed in Table 4 reveal employers' equal perception of both the male and female management graduate employees by their employers. Refer to the t-value of 0.597 and p-value of 0.550 in Table 4 for confirmation.

Table 6: Employers' Rating of Management Graduates from Public/Private Universities

Parameter	Employees' Organisation type	N	Mean	Std. Dev.	Std. Error Mean
Rating of Management Graduates	Public	460	3.63	.618	.029
	Private	168	3.64	.592	.046

F = .494 P = .482 t = -.226 P = .822
Source: Authors' Fieldwork

The t-value of 0.226 and p-value of 0.822 are clear indications that management graduates from private universities are not significantly different from those in public universities in terms of their performance.

Table7: Comparative Analysis of Management Graduate Performance from the Different University Generations

University Generation	N	Mean Rating	F	Sig.
Third Generation	192	3.59	.765	.466
First Generation	250	3.63		
Second Generation	177	3.67		

Source: Authors' Fieldwork

The F-value of 0.765 and p-value of 0.466 shows that there is no significant difference in the rating of the various generational management graduates from Nigerian universities. In other words, employers rated management graduates from First, Second and Third Generational Universities as same. Judging from the mean rating of the various generational universities, it can be observed that the Second Generation Universities were rated best with mean 3.67 followed by First Generation Universities (3.63) and Third Generational Universities in the second and third positions respectively.

Table 8: Attributes of Management Science Graduates from Nigerian University

S/N	Management Science Graduates Attributes	Observations	Ranking
1	Reliable	491	1
2	Employable	462	2
3	Hardworking	448	3
4	Skillful innovative	345	4
5	Honest	333	5
6	Unskillful	55	6
7	Unreliable	52	7
8	Dishonest	40	8
9	Lazy	36	9
10	Unemployed	21	10

Source: Authors' Fieldwork

Of the ten key attributes presented to the employers for rating the quality of management graduate from Nigerian universities, 491 selected reliable, followed by employable 462, hardworking 448, skillful 345, honest 333, unskillful 55, unreliable 52, dishonest 40, lazy 36 and lastly, unemployable 21. By implication, the employers feel that Nigerian graduates are reliable, employable and hardworking, as these were three most popular positive attributes used to qualify management graduate.

Table 9: Approaches to Improving Quality of Management Graduates from Nigerian Universities

S/N	Suggested approaches to improving qualities of graduates	Observation	Ranking
1	Infrastructure	87	1
2	Emphasis on practical training	81	2
3	Improvement in research and development	77	3
4	Management training and development	74	4
5	Funding	60	5
6	Conducive learning environment	47	6
7	IT training	24	7
8	Restructuring of curriculum	15	8
9	Employment of qualified teachers	13	9.5
10	Coworkers' commitment	13	9.5
11	Developing hardworking and positive attitudes	12	11
12	Proper record keeping/information management	11	12
13	Effective government supervision/Quality control	10	13
14	Elimination of corruption/Enhanced integrity	9	14
15	Monitoring students' progress	8	15
16	Less strike	6	16
17	Effective leadership in university administration	4	17
18	Inculcating educational values in students	3	20.2
19	Responsiveness to students' needs	3	20.2
20	Enhanced library	3	20.2
21	Subsidized school fees/scholarship	3	20.2
22	Improved reward system	3	20.2
23	Collaboration with foreign counterparts	2	23
24	Building good/solid foundation from basic education	2	24
25	Enforcement of disciplines	1	25

Source: Authors' Fieldwork

The analysis of the employers' suggestions on how to improve graduates' quality identify the following five areas as critical: infrastructure, emphasis on practical training, improvement in research and development, management training and development and funding.

5. Discussions of Findings

The employers' average assessment of management science graduates is not unexpected, given the general outcry of stakeholders about the poor level of infrastructure, incessant/protracted strikes, and poor ranking of Nigerian universities regionally and globally. Employers' evaluations in this study appears to be reminiscent of Odia's (2012) finding on the poor (7th position) ranking of Nigeria's education among six other countries.

A clear distinction was observed between the employers in the public and private universities in their evaluation of Nigerian management graduates. The more positive rating by employers in the private may be ascribed to their commitment to new employees' orientation training.

The lower rating of Nigerian management graduates by employers in the public sector may not be unconnected to the observation of Dabalen, Oni, and Adekola (2000) on the decline in the share of graduates going into the public universities because of the falling standard. This result however supports that of Gunawardena (1997).

The findings of this study partially agree with the results obtained in the study carried out by Dabalen *et al.* (2000) that Nigerian Universities graduates employees are particularly deficient in technical skills and oral and written communication. In the present study, statistics showed that Nigerian management graduates were highly and positively perceived as good in oral and writing skills. Nevertheless, this result fully supports the finding of Adeyemo *et al.* (2010) in which graduates were rated first in oral and writing skills. While problem solving,/ICT were rated poorly in the 7th and 8th positions out of ten (10) factors.

In the present study, the Nigerian management graduates were rated poorest in the area of computer/ICT skills. The poor performance of Nigerian management graduates in computer skills is line with Ibrahim and Dandago's (2013) study in which the business education graduates acknowledged that their inadequacy in modern technical skills limited their employability in the Nigerian labour market. The major reason for poor computer literacy may be linked to ill equipped computer laboratories in many universities. This is closely linked to the poor funding noted by Chiedu (2013) and others.

On a positive note, our result show cased that the Nigerian management graduates were better perceived on interpersonal skill than problems solving skills. The findings in this regard supports Imeokparia and Ediagbonya's (2012) study on the employability of Business education graduates in Nigeria in which they found that the thinking skills of Business Education graduates were not as good as their personal quality skills. One plausible conclusion is that too much emphasis is still been placed on theoretical approach rather than the problem solving and practical skills that would equip graduates with on-the-job skills.

The comparative result on the quality of graduates from public and private universities does not support the findings of Anho (2011) and Singh and Singh (2008). On the influence of age, this study tends to support Singh and Singh's (2008) work. The employers' equal rating of Nigerian Management Graduates from both the private and public universities is an indication that educational standard has generally deteriorated in Nigeria. The findings from this study show that variations exist in the opinions of employers the private and public organizations. This observation is related to the discoveries of Agbonna, Yusuf, Ajidagba and Olumorin (2009) on the employability of Nigerian graduates, in which they found that variations exist between the opinions of employers in the educational sector and those in the business sector.

Just as revealed in the study of Agbonna *et al.* (2009), our finding supports employers' opinion that the graduates were fairly employable, productive and trainable. On the observance of ethical standard, not much difference was noted between the present study and that of Adeyemo *et al.* (2010) who found that the surveyed graduates were negligent, careless and hostile at work.

6. Conclusions

A review of the extant literature was conducted on the state of mandate delivery in Nigerian universities. In the process, the review unearth funding, inadequate modern facilities, incessant strikes, low entrepreneurial and technical skills, ICT training, brain drain, politicization of education, indiscipline, and insufficient and low quality lecturers as the major reasons for poor quality graduates.

Findings from the empirical analysis indicate that employers in the private sector are more of the opinion that Nigerian management science graduates are fairly employable. Secondly, no distinction was recorded between the male and female graduates in terms of their employability. In a similar manner, no image differential was noticed of the three generational graduates.

7. Recommendations

On the basis of the research findings, the following recommendations were made: Nigerian management students should be equipped with computer knowledge and skills needed for employment in the 21st century labour market. To this end, NUC and other related agencies should develop a benchmark curriculum of management studies to include relevant skills and competencies such as ICT and problem solving skills. Emphasis should be placed on understanding ethical standard bothering on their profession. The students' leadership skill could be enhanced by various teaching method such as role play, team work/group work etc For the employers of labour, new graduates employees should be given proper orientation and training where they are trainable not minding the cost evolved in the training as this will in the long run increase the much needed productivity. There should be collaboration between employers of labour and the university curricula developers to close the gap between what is required in the industry and what the curriculum is offering students. On this note, greater (industry), the private sector involvement in curriculum consultation, faculty industrial attachment, student work-study placement within the institution and research funding would be helpful in enhancing graduate employability.

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IS HUMAN CAPITAL ACCUMULATION A GROWTH DRIVER IN NIGERIA? AN EMPIRICAL INVESTIGATION

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Abstract
Accumulation of human capital is critical to sustained economic growth in the long run, since it facilitates the efficient absorption of new capital developments, improves the speed of adaptation of entrepreneurs and generates innovation necessary for sustained economic growth. It is against this premise this study investigate the human-capital accumulation growth-nexus in Nigeria. Employing a dynamic approach, involving test for unit roots, and cointegration, and finally, the Generalized Method of Moments (GMM) estimation techniques on annual time series data, covering the period 1981 to 2016, sourced from the World Bank Development Indicators (WDI) and Central Bank of Nigeria (CBN) Statistical Bulletin, the empirical findings reveal that human and physical capital accumulation significantly induce rapid and sustained economic growth in the long-run. The other variables- infrastructural development (measured by ICT infrastructure) and industrial output (a measure of industrialization) have positive but weak impacts on economic growth, on account of the weak infrastructural development, and low level of industrialization in Nigeria. Inflation rate (a measure of macroeconomic policy environment) on the other hand, is found to have a militating effect on economic growth. We recommend amongst others; sustained investments in human and physical capital accumulation, stable and coherent macroeconomic policies, particularly with respect to taming of domestic inflationary pressures, supportive institutional structures and aggressive industrialization-enhancing policies, in order to enhance sustained economic growth in Nigeria.

1. Introduction
The growth-driving effect of human capital accumulation has long been established in the development literature. Following the celebrated works of Romer (1986) and Lucas (1988), which accorded human capital accumulation a critical ingredient in the explanation of growth process, increased studies have spawn the empirical literature seeking to examine the human capital accumulation-growth nexus. The increased empirical interest has partly been spurred by increased availability of data on human capital (school enrolment ratio), allowing researchers examined the link in a coherent, intuitive and more rigorous analytical framework. While Romer (1986, 1990) shows that human capital accumulation favours the generation and absorption of technology, permitting innovation, and thereby stimulating growth, Lucas (1988) emphasized that the accumulation of human capital is responsible for sustained growth, and that education is the main channel through which the accumulation of human capital is made possible. In the same vein, the contribution of Mankiw et al (1992) which incorporates human capital into the Solow's model, as an additional growth explaining

factor in the long term, further motivated interests in the way human capital explains growth (Bouznit, et al., 2015).

A number of other studies have considered the effects of total factor productivity, technological innovation, knowledge creation and diffusion, in explaining growth empirics in different countries (Benhabib and Spiegel, 1991, 1994; Maw-Lin, et al.1994; Hanushek, 2013). These studies have consistently shown that sustained physical and human capital accumulation are highly growth-inducing. Other studies have provided empirical evidence that human capital development will accelerate the pace of physical capital accumulation through learning by doing. Rodrick (1996) for instance, argues that the growth success story in South-Korea could be explained by a well-educated labor force that enhanced productivity of private investment, brought about by considerable investments in research and higher education.

Nigeria is an oil-dependent nation, with a growing population of about 3.2% annually. Its GDP is put at $422 billion at constant purchasing power (World Bank, 2016). Its school enrolment ratio (a measure of human capital) is currently put at below 50%. Since capital accumulation is believed to be the engine of growth, there is need to increase her human capital accumulation to accelerate economic growth, and in particular, to diversify the productive base of the economy from oil, given that the acquisition of knowledge, skills, innovation and technology, accompanied by institutional and economic reforms are capable of generating sustained economic growth than dependence on natural resources (Ozekhome, 2017). In fact, the capacity of an economy to exploits its natural resources and to initiate and sustain long-term economic growth is dependent on, among other things, the ingenuity and the managerial and technical expertise of its people (Todaro and Smith, 2011: 72, cited in Ozekhome, 2017).

In recent years, the Nigeria government recognizing that human capital is a principal growth-driver, has given attention to various human capital development programme through increased educational funding, and various school initiatives and strategies aimed at increasing school enrolment ratio. These include tuition free primary (elementary) education, free distribution of primary school educational materials, various school feeding programme, e.t.c and tuition free secondary education in some states of the federation (Lagos and Edo). Others include; establishment of various skill acquisition training schools and centers, foreign educational scholarships and trainings, increased funding to the education and health sectors, and other institutional set-ups to monitor and combat the proliferation of diseases in order to enhance human capital development and its efficiency. However, these efforts have not produced the desired effect due to poor prioritization, weak implementation, corruption and other restraining factors.

There is dearth of empirical evidence on the role of human capital accumulation on growth in Nigeria, as most of the studies have used a rather too-aggregative approach; by investigating the impact of government expenditure on education as a proxy for human capital on growth. By this approach, these studies (see Ighodaro and Oriakhi, 2010; Adesoye, et al. 2010) only examined the public expenditure aspect of educational expenditure on growth, neglecting the critical aspect of school enrolment ratio as a better proxy for human capital. Increased educational funding if not efficiently channeled with result-oriented strategies may not increase the school enrolment ratio and educational attainment. This study attempts to bridge this perceived gap, by using an appropriate measure for human capital accumulation on growth in Nigeria.

In particular, given the fact that the accumulation of human capital is critical to achieving the matchless drive to accelerated and sustained economic growth in Nigeria, via the enhancement of the productive work force capacity, and, the explicit recognition that significant growth and development cannot be achieved, without a well-trained, educated, productive and managerially-inclined labour force, there is greater need to reinvestigate the

human-capital accumulation-growth nexus in Nigeria. It is this reason that has made this study imperative.

In the light of this, the following research questions are raised in this study:

    (i)   What is the link between human capital accumulation and economic growth in Nigeria?

    (ii) Does the accumulation of human capital significantly drive economic growth in Nigeria in the long run?

2. Review of Literature
2.1. Theoretical Issues

Romer (1990) through endogenous growth model has demonstrated that sustained human capital accumulation induces marginal returns to investments, with positive spillovers, permitting increasing returns to scale in aggregate production, and through technological diffusion, enhances growth. According to Romer (1986, 1990), investments in human capital (education), infrastructure, research, and development (R&D) stimulates growth. The model gives an explicit recognition to sustained investment in human capital accumulation, which permits diffusion of knowledge or knowledge spillovers, technology efficiency and productivity growth, which have the capacity to stimulate growth. Through 'learning by doing', the model further demonstrates the high growth-generating capacity of human capital accumulation. In general, the model demonstrates that capital accumulation encompassing investments in physical and human capital is critical to rapid and sustained growth path. In the endogenous growth model, the possibility thus, exist that sustained investments in physical and human capital can generate external economies , positive growth-enhancing spillovers and productivity improvements that exceed private gains by an amount sufficient to offset diminishing returns (Ozekhome, 2016).

Lucas (1988) further argued that increased investment and improvements in innovations and technical progress arising from human capital development can lead to increase productivity and competitiveness, which trigger a further growth. The contributions of Mankiw et al (1992), which incorporate human capital into the original Solow's model as an additional factor to explain economic growth in the long term, further expanded the human capital-growth nexus. By this, the model endogenized human capital as a' growth explaining factor. Rodrick (1996) relying on the endogenous growth framework, further emphasized that better educated workforce and combination of learning-by doing, have the capacity to enhance the productivity of private investment, which in turn triggers growth. In general, the endogenous growth model accorded prime role to deliberate or intentional investment in physical and human capital in the growth process of countries. Romer (1986) using this growth model, further demonstrates that not only that sustained investments in human and physical capital stimulates growth, but that through knowledge spillovers, (positive externalities), a firm's increase in investment in human and physical capital, will, enable the firm move to a higher production function, as well as that of the production functions of neighboring firms, thereby permitting economies of scale in research, development and innovation, which leads to higher growth path.

2.2. Empirical Review

A number of empirical studies have examined the impact of human capital on economic growth. These studies are briefly examined.

Lucas (1988) and Mankiw et al. (1992) using copious empirical evidences argue that human capital accumulation promotes sustained economic growth. Benhabib and Spegiel (1994) investigate the role of human capital in economic development, using aggregate cross-country evidence. The findings show that human capital is positively and significantly

related to growth. The authors argue that human capital increases the capacity of a country to develop its own innovations and its ability to develop other technologies critical to rapid and sustained economic growth. Romer (1986, 1990) using the endogenous growth model concludes that human capital generates innovation and through technology spillovers, stimulates growth. This finding is corroborated by the findings of Maw- Lin et al. (1994) and Rodrik (1996).

Kwack and Lee (2006) investigate the role of research and development (R&D) fostered by human capital accumulation in the analysis of the Korean's growth experience. Employing human capita- based growth models, with demography, the findings show that human capital development and R&D positively and significantly influenced the spectacular growth performance recorded. The authors conclude that the differential rates of growth across countries can be explained by varying degrees of human capital stock.

Harvie and Pahlavani (2007) examine the sources of economic growth in South-Korea. Employing the technique of Auto Regressive Distributed Lag (ARDL), in the presence of structural breaks, the empirical results show that human capital, via higher education is a critical explanatory factor to the growth miracle of South-Korea. The study also emphasized the critical role of human capital in efficiently absorbing new capital development, which induces rapid growth in South-Korea.

Maksymenko and Rabbani (2011) investigate the relationship between economic reforms, human capital and economic growth in India and South-Korea. Employing cointegration analysis, the empirical results reveal that human capital accumulation stimulates economic growth. They concluded that higher education contributed significantly in no small measure to South- Korea's growth, particularly in the in the efficient absorption of new capital developments. Barro and Lee (2013) find evidence, that, an abundance of well-educated people is positively associated with higher level of labour productivity and growth.

Awad, Halid and Yussof (2013) investigate the impact of human capital on economic growth, using evidence from selected Arab countries. The empirical findings reveal that human capital has a positive and significant effect on the growth of Arab countries.

Mehrara and Musai (2015) investigate the causality between education and economic GDP growth in Asian countries. Employing various econometric techniques, including the causality tests, the findings show that education leads to higher economic growth. According to the authors, education allows to spillovers effects, improves the speed of adaptation of entrepreneurs to imbalance and boosts research productivity. They conclude that increased investment in human capital is necessary to move any economy to higher growth path.

On research studies relating to Africa, Gyimah-Brempong (2011), Mijiyiwa (2013) and Ayanwu (2014) find evidence that human capital is an important factor affecting growth. These studies show evidences of the critical role of the human capital in the growth process of African countries.

Some studies however report evidence of weak correlation between education and growth or weak causality from education to growth. Levine and Renalt (1992) and Benhabib and Spiegel (1994), are notable in this direction. Other studies (see De La Fuente and Domenech, 2006 and Cohen and Soto, cited in Bouznit et al., 2015) have shown evidence of no correlation between education and growth. The lack of significance of these relationships was however due, according to some authors, on poor quality of data, measure of human capital used and incongruent data series.

From the fairly large volume of literature, it appears that the findings of empirical studies on the effects of human capital on growth are rather mixed and non-conclusive for the developing countries. In addition, the relationship between growth and human capital is rarely investigated at country-case level, particularly, Nigeria, hence, warranting further empirical investigations.

3. Empirical Methodology
3.1 Theoretical Framework and Model Specification

This study is based on the endogenous growth model. The motivation for the endogenous growth model stems from its explicit ability to explain the intrinsic characteristics of economies that cause them to grow over extended period of time. The most interesting aspect of endogenous growth models is that it helps to explain the disparities in growth rate across countries, arising from differential rates of capital accumulation. The potentially high rates of growth are, according to the model, due to sustained investments in human capital (education), infrastructure, research, and development (R&D).

The general endogenous production function is

$$GDP = AK_i^{\propto} L_i^{1-\propto} K^B \qquad (1)$$

Where:

GDP = GDP per capita at time (a measure of economic growth).

A = Total factor productivity- a measure of efficiency of factor inputs

K = Capital stock (which is decomposed to into human and physical capital)

L = Labour.

α and β, represents the elasticity of output with respect to capital and labour, respectively.

For simplicity, we assume symmetry across industries, so that each industry uses the same level of capital and labour. Then, the aggregate production function becomes:

$$GDP = AK^{\propto} L^B \qquad (2)$$

The model in equation (1) and (2) are endogenous growth models, since the residual component, A, which is a measure of technological progress and human capital accumulation is endogenized; thus implying that technological knowledge and the accumulation of human capital are incorporated not as exogenous growth- generating factors but explaining the growth process itself (Udah, 2010, cited in Ozekhome, 2016). In empirical applications, the endogenous growth model takes account the role of investments in human and physical capital, and other policy variables such as inflation, as critical ingredients of growth. Incorporating these relevant variables and adding industrial output to the augmented model, yields the following specification for the determinants of economic growth in Nigeria.

$$GRGDP = f(INV, SCHL, INFR, INF, INDP)..(3)$$

Equation (3) shows that potentially, growth of real GDP (GRGDP) is determined by, INV, SCHL, INFR, INF and INDP, which form a plausible relationship in order to estimate the above equation.

In empirical specification, the model (1) above is re-specified as:

$$GRGDP = \alpha_0 + \alpha_1 INV + \alpha_2 SCH + \alpha_3 INFR + \alpha_4 INF + \alpha_5 INDP + \mu..... \qquad (4)$$

Where:

GRGDPG = Growth Rate of Real Gross Domestic Product (a measure of real economic growth);

INV= real gross fixed capital formation as percentage of GDP (a measure of growth rate of physical capital stock)

SCHL= enrolment in secondary institutions as a measure of human capital accumulation

INFR= Infrastructure (i.e ICT infrastructure- measured as the number of telephone main lines and mobile subscribers per 1000 persons)

INF= inflation rate- measured as the growth rate (in percent) of the consumer price index- (used to capture the macroeconomic policy environment).

The apriori expectations are $(\alpha_1, \alpha_2, \alpha_3 \alpha_5) > 0$; and $(\alpha_4) < 0$. $\alpha_0 - \alpha_5$ are parameters to be estimated, and ε_t is the error term.

From apriori expectation, gross capital formation, human capital, infrastructure and industrial production are expected to have positive impacts on economic growth, while the coefficient of inflation is expected to have a negative relationship with economic growth. The higher the level of domestic investment, the more rapid will be the rate of economic growth, since investment increases the capital stock, and stimulate aggregate demand. An improvement in human capital (reflected in human capital accumulation) enhances growth, through the channels of increased productivity of the work force, technical and managerial enterprise and innovation which it induces. Thus, the higher the quality of human capital, the higher the rate of economic growth. The higher the level of infrastructural development, the higher the growth rate, since infrastructure (proxied by Information communication technology) facilitates technological and industrial development, and hence, growth. Increased industrial production stimulates economic growth. Hence, the higher the level of industrial production, the faster the rate of economic growth. Inflation is theoretically posited to have an inverse relationship with economic growth. This is because evidence suggests that macroeconomic stability is crucial for long-term growth, as no country has achieved sustained high growth in a persistently high inflation environment (i.e macroeconomic instability). Accelerating rates of inflation has a destabilizing effect on economic growth through its dampening impact on savings, investment and its increasing uncertainty syndrome (Ozekhome, 2016).

3.2. Data Sources and Estimation Technique
The data used for the study are annual time series data covering the period 1981-2016 and were obtained from various sources to include, World Bank World Development Indicators and Central Bank of Nigeria Statistical Bulletin. The period is specifically chosen due to the increased policy attention to human capital accumulation, in recent times by the Nigerian government from an era of less policy focus and attention. A sequential empirical analytical approach is adopted in this study, in order to make the study, robust and dynamic. First, a preliminary statistical examination using summary (descriptive) statistics of the variables is done in order to understand their initial characterization. Next the unit root test of stationarity is conducted to examine the stationarity status of the time series variable. Next, the test of cointegration is carried out to examine the existence of long-run relationship between human capital accumulation and economic growth in Nigeria. Finally, the fact that human and physical capital are often determined jointly, analyzing the accumulation of one factor often requires the inclusion of the other in the system. This may results to potential endogeneity problem in the system, making the OLS estimates biased and inconsistent. To avoid these problems, an instrumental variable technique- the Generalized Method of Moments (GMM) is adopted for the econometric estimation. The estimation technique is important to control for the biases resulting from simultaneous or reverse causation and omission bias. All data in this study are in log form. The summary (descriptive statistics) is presented in table 1.

4. Empirical Results and Analysis
4.1. Descriptive Statistics
Table 1 presents the summary statistics of the sample data on the variables used for the analysis. The descriptive statistics shows that the average growth rate of real GDP over the period is 4.7 percent, with a median value of 4.9 percent. The maximum and minimum values are 8.5 percent and -1.5 percent respectively- an indication that growth rate in real GDP over the period has been characterized by marked disparity, implying that the rate of growth was high in some of the years, while it was abysmally lower than the observed average in other years. This wide dispersion is confirmed by the relatively high standard deviation value of 4.7 percent. Apparently, real GDP growth has been generally unstable in the country. Gross capital formation (a measure of domestic investment/physical capital)

has a mean value of 39.4 percent, and a median value of 38.7 percent. Its corresponding maximum and minimum values are 62.3 percent and 2.5 percent, respectively. Secondary school enrolment ratio (a measure of human capital) has a mean value of 49.5 percent, and a median value of 48.9 percent. Its maximum and minimum values are 72.1 percent and 13.2 percent, respectively. Infrastructure (proxied by information communication technology) has a mean value of 54.2, median value of 49.4 percent, and a standard deviation value of 4.70 percent. Its maximum and minimum values are 80.3 percent and 4.8 percent, respectively. Inflation has a mean value of 20.2 percent growth rate, with maximum and minimum values of 72.8 percent and 4.7 percent respectively. Its standard deviation of 5.2 percent combine with a kurtosis value of -1.45 is a clear indication of inflation variability over the period of study. Invariably, inflation growth rate has not only been rising, but generally unstable, deviating from the mean observed value or equilibrium value over time. Industrial production has a mean value of 8.2 percent, with a median value of 7.9 percent. Its maximum and minimum values are 25.3 percent and -1.7 percent, respectively. Overall, the skewness value for growth rate of real GDP of 0.22, is low suggesting that the growth series were centered on the mean value. The Jarque-Bera value of 12.7 is significant at the 1 percent level, indicating that the hypothesis of normality in the distribution cannot be accepted. This implies that the data series may have endogeneity issues. This therefore necessitates adoption of a dynamic GMM estimator which is capable of controlling the joint endogeneity effect of most of the explanatory variables with economic growth, and, thus to control for the biases resulting from simultaneous or reverse causation.

Table 1: Descriptive Statistics

	Mean	Median	Max.	Min.	Std. Dev.	Skew	Kurt.	J-B
RGDP	4.7	4.9	8.5	-1.5	4.4	0.72	2.2	12.7
INV	39.4	39.4	62.3	2.5	3.7	2.8	3.4	10.2
SCHL	49.5	48.9	72.1	13.2	3.7	1.8	2.2	9.5
INFR	54.2	49.98	80.3	6.2	4.8	1.7	2.6	7.1
INF	20.2	19.8	72.8	4.7	5.2	-1.3	-1.5	8.2
INDP	8.2	7.9	25.3	-1.7	3.7	-1.5	4.5	6.2

Source: Author's computation (2017)

4.2. Unit Root Test

In order to examine the stationarity of the time series properties used in this study, the unit root test is conducted, using the Augmented Dickey Fuller (ADF) test. The rationale for stationarity test borders on the fact that a non-stationary time series is not possible to generalize to other time periods apart from the present. This makes forecasting based on such time series to be of little practical value. Moreover, regression of a non-stationary time series on another non-stationary time series may produce spurious and inconsistent estimates. The results of the unit root test are given in levels and first difference in table 2:

Table 2: Unit Root Test

Variable	ADF Statistic (in Levels)	ADF Test Statistic (in First Difference)	Order of Integration	Remark
GRGDP	-1.9902	-5.3352**	I(1)	Stationary
INV	-1.4674	-5.9642***	I(1)	"
SCH	-1.8012	-6.4051***	I(1)	"
INFR	-0.9984	-5.4424**	I(1)	"
NF	-1.6652	-4.8872**	I(1)	"
NDP	-1.3052	-5.1154**	I(1)	"

(**) denotes significance at 5% (1%) level

A cursory examination of the unit root test results using the ADF test statistic indicate for all the variables, the null hypothesis of no unit root could not be rejected, implying that the variables were non-stationary at levels. However, after first differences, the variables became stationary. This implies that the variables are difference-stationary, attaining stationary after first difference. They are thus integrated of order one I (1).

4.2. Test of Cointegration

Having established that the series in the analysis are integrated of order I(1), we move on to determine if they are cointegrated. Co-integrationof a vector variable implies that the number of unit roots in the system is less than the number of units in the corresponding univariate series (Engle and Granger, 1987).Cointegration is a test of long-run equilibrium relationship between a given dependent variable and its explanatory variables. The Johansen Cointegration method is used for this analysis because the study involves the use of multivariate estimations. The results from the multivariate cointegration test are presented in Table 3 below. As can be seen from the table, both the λ-max and the trace test statistics indicate that there is at least four significant cointegrating vectors among the variables, since the hypothesis of no cointegrating vector (r=0) is to be rejected. Apparently, the number of cointegrating relations or vectors (indicated by r) is at least four. The implication of this is that a long run equilibrium relationship exists between economic growth and human capital accumulation in Nigeria.

Table 3: Johansen Multivariate Cointegration Tests Results.

Trace Test			Maximum Eigenvalue Test			
Null Hypothesis	Test Statistic	Critical Value	Null Hypothesis	Test Statistic	Critical Value	Hypothesized No of CE(s)
r = 0*	99.8	76.4	**r = 0***	62.6	42.65	None**
r ≤ 1 *	60.3	45.2	**r = 1***	34.4	27.83	At most 1**
r ≤ 2*	37.1	15.3	**r = 2***	14.2	13.13	At most 2**
r ≤ 3*	15.3	4.7	**r = 3***	3.8	3.26	At most 3**
r ≤ 4*	2.9	0.85	**r = 4***	1.7	0.75	At most 4**
r≤ 5*	0.017	0.019	**r = 5***	0.017	0.019	At most 5

(**) denotes rejection of the hypothesis at 5% (1%) significance level.

4.2. Analysis of Generalized Method of Moments (GMM) results

The result of the Generalized Method of Moment (GMM) is presented in table 4 below, and subsequently analyzed. Economic growth rate is instrumented by its first lag (lagged growth rate) to capture previous growth levels on current economic growth rate (i.e. growth persistence).

Table 4: Results from GMM. Dependent Variable: GRGDP

Variables	Estimated Coefficient	t-statistics	Prob
C	0.1106	1.4015	0.14
Lagged GRGDP	0.0422	1.9342*	0.06
LnINV	0.3253	3.3320***	0.001
LnSCH	0.2272	2.7781***	0.01
INFR	0.1722	1.8740*	0.06
LnINF	-0.0920	-2.1731**	0.03
LnINDP	0.1814	1.5304	0.13

Variables	Estimated Coefficient	t-statistics	Prob
R^2=0.921			
DW= 1.87; J-stat= 1.73			

*** *Statistical significance at the 1%leve;*
** *Statistical significance at the 5 % level;*
* *Statistical significance at the 10% level*

An examination of the results reported in Table 4 show good diagnostic statistics. The R-squared value of 0.921 is impressive and shows that over 92 percent of the systematic variations in economic growth is explained by the independent variables. The D.W. statistic of 1.87 is reasonably close to 2, an indication of the absence of serial correlation in the estimates. The J-statistic fails the significance test at the 5 percent level, indicating that we cannot reject the null hypothesis that the over-identifying restrictions are equal zero. Apparently the growth equation along with the selected instruments passes the identification tests. Consequently, we cannot reject the specification of model, since it is well specified and the instruments seem to be appropriate; an implication that the model can be used for structural and robust policy analysis.

All the explanatory all variables have the correct signs. Since all the data are in log form, the coefficients are elasticities. All variables have the correct signs. Lagged growth rate of real GDP has the correct positive sign and is significant at the 10 percent level. This implies some level of growth persistence in Nigeria- an indication that previous growth rate could serve a s as a spring board for attaining future higher growth, particularly in terms of macroeconomic policy direction. In line with the estimates, a 10 percent increase in previous economic growth, will stimulate future economic in the succeeding year by 0.4 percent. The coefficient of domestic investment (real gross domestic capital formation) has the expected positive sign and is significant at the 1 percent. Thus, increase domestic investment will inevitably spur economic growth in Nigeria through aggregate demand effect, and increased productivity of capital stock. The finding is in line with the findings of Benhabib and Spiegel (1991) and Ozekhome (2016). Its elasticity coefficient shows that a 10 percent rise in physical capital accumulation will induce economic growth in Nigeria by 3.3 percent.

The coefficient of human capital has the expected positive sign and passes the significance test at the 1 percent level. This implies that, increase human capital accumulation has the capacity to promote and sustain economic growth in the long-run, particularly through the channels of productivity growth, innovation, absorption of advanced technology, and adaptation of entrepreneurial and managerial efficiency, exemplified in the endogenous growth model. The result corroborates the finding of Maksymenko and Rabbani (2011), Bouznit et al (2015) and Ozekhome (2016). Its elasticity coefficient indicates that that a 10 percent increase in human capital accumulation will on the average induce economic growth in Nigeria by 2.3 percent. Infrastructure (proxied by information technology- ICT) has the expected positive sign but is not statistically significant at the 5 percent level. This could be due to the low level of infrastructural development in Nigeria. Since the t-value of its coefficient is greater than unity, we may infer that infrastructure development facilitates economic growth, but its effect is rather weak in Nigeria. This finding is corroborated by the findings of Ozekhome (2016). Its elasticity coefficient shows that a 10 percent increase in infrastructural development will spur economic growth by 1.7 percent in Nigeria. Inflation is significant at the 5 percent level, and has the expected negative sign. Thus, high inflation rates militate against rapid economic growth. This destabilizing effect of inflation on growth is also buttressed by the findings of Park (2012) and Ozekhome (2016). Its elasticity coefficient indicates that a 10 percent rise in the rate of inflation will dampen economic growth in Nigeria by 0.9 percent.

The level of industrialization (as measured by industrial output) has the expected positive sign, but it is not statistically significant at the 5 percent level. This could be due to the low level of industrialization and industrial technology needed to propel rapid industrialization in Nigeria. Since the t-value of its coefficient is greater than unity, we may infer that industrial output facilitates rapid economic growth, but its effect is rather weak. Its elasticity coefficient of implies that 10 percent increase in industrial development will induce economic growth in the Nigeria by approximately 1.8 percent.

5. Conclusion

Human capital accumulation is a significant growth driver, as it generates critical knowledge, capabilities, skills and innovation that are relevant for rapid and sustained economic growth in the long run. It facilitates the absorption of technology, improves the speed of adaptation of managerial enterprise, boosts research productivity and thus, stimulates growth. This study has examined the impact of human capital accumulation on economic growth in Nigeria, over the period 1981-2016.The choice of the estimation period was based on the increased policy attention of the Nigerian government to human capital as a significant growth-driver, via increased educational funding, and various policies and strategies aimed at increasing school enrolment ratio and other institutional set-ups to increase human capital stock during the period, making it worth studying.

Employing sequential analyses, involving preliminary statistical examination of the sample data using descriptive statistics, unit root test of stationarity, and cointegration (to investigate the existence of long-run-relationship between human capital accumulation and economic growth) in Nigeria, and finally the GMM estimation approach, the empirical findings revealed a long run relationship between human capital accumulation and economic growth in Nigeria. Estimates from the GMM show that gross domestic capital formation (a measure of physical capital stock), human capital, and inflation (a proxy for macroeconomic environment) are significant variables influencing economic growth in Nigeria. In particular, human capital accumulation is found to have be significant in sustaining economic growth in the long run in Nigeria. The impact of infrastructural development (proxied by ICT infrastructure) and industrial production on economic growth are positive but weak, perceivably due to the weak infrastructural development, low level of industrialization, and poor technological development and innovation in Nigeria. Based on the empirical findings of this study, there is greater need for increased and sustained investments in human and physical capital accumulation, in order to increase the capacity to adopt and absorb technology, generate innovation and propel efficient managerial enterprise necessary for rapid and sustained economic growth in Nigeria in the long-run. This is because sustained investments in human and physical capital have the capacity to generate massive positive spillover effects, increase the aggregate stock of capital, and through increased productivity, generate rapid and sustained economic growth in the long run. In addition, greater level of investments in R&D should be encouraged. Importantly, government should increase her investments in the provision of sustainable public infrastructure that are critical to growth. Very importantly, sound and stable macroeconomic policies, particularly with respect to low level of inflation, supporting institutional structures, and aggressive industrialization-promoting policies are imperative for driving economic growth to sustained levels.

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PRO AND AGAINST INFORMAL ECONOMY[*]

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Abstract: *The informal economy is a reality that influences the lives of people directly at the planetary level.The term "informal economy" is used to include all workers and businesses in rural or urban areas working in the informal environment. It is emphasized that informal employees are not able to be recognized and defended by the legal regulations in force.The global changes in the field of information and communication technologies have generated increased labor market competitiveness. Under these circumstances, there has been a more flexible relationship between employees and employers. The main purpose of the article is to examine the pros and cons of the informal economy. Knowing these arguments can be a source of effective measures aimed at counteracting the negative effects that such activities may have.Simultaneously encompasses a theoretical approach to the informal economy, describing areas where it is highlighted, the factors that generate it, its dimensions, the theories put forward by the various economically-specific schools describing this concept, research methods.*

1. Introduction

Over time, there have been various attempts to define the concept of informal economy. However, a unanimously accepted definition has not yet been formulated. Smith (1994: 18) defines the informal economy as "market-based production of goods and services, whether legal or illegal, that escapes detection in the official estimates of GDP". Other definitions given to the informal economy argue that "informal economy includes unreported income from the production of legal goods and services, either from monetary or barter transactions - all economic activities which would generally be taxable were they reported to the state tax authorities" (Schneider, 2002: 3), "the informal economy comprises legal economic activities undertaken by small units (individual or family) both in the production of goods and in trade, transport, the provision of services that generate a production provided in the System of National Accounts and which are practiced at the limit of socio-fiscal systems and regulations imposed by the state" (Craiu, 2004: 48). Thus there is a gap between the different definitions assigned to the informal economy. We consider beneficial the emergence of the distinction that can be made between the underground economy and the informal economy, the latter being a subsector of the underground economy. Generally speaking, activities specific to the informal economy are those that involve the production of legal goods and services, but are not registered or regulated of the state.

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The periods of economic crisis or transition have the effect of increasing the workforce in the informal sector due to the closure of certain businesses, generating massive layoffs. Most of the time, those who do not have the opportunity to engage in formal business or set up their own business, choose to work in the informal field (Chen, 2012).

Although the risks to which they are subject are far more prominent, than if they were working in the formal field: precarious work, violation of labor rights, lack of legal and social protection, have no opportunity to be represented in relations with officials, have no access to infrastructure public, low wages, most live below the poverty line. However, employment growth in the informal economy appears in developing countries, and in times of economic development.

The informal economy is found in various areas of activity: agriculture, commerce, industry, tourism, various services, other areas where micro-enterprises operate, where homeworking is viable etc. The socio-professional categories specific to the informal economy are: street vendors, garbage collectors, housekeeping workers, houseworkers, factory workers, micro-enterprise owners, self-employed or employers family, apprentices.

Chen (2012) points out that there are notable differences in gains in the informal economy.Thus, informal employers benefit from the highest earnings, while industrial and home workers have the lowest income.Young people between the ages of 15 and 24, as well as the elderly over 55, are more likely to work in the informal field compared to the average age. Young people choose to emigrate most of the time, but elderly people are more stable in opting for jobs in the informal economy (Voinea et al, 2011).

2. Advantages of the informal economy

The informal sector is an opportunity for those who are unable to find a job in the formal sector, being a way of survival for those living below the poverty line. Income earned by informal workers helps them maintain their families. Most of these have dependent children and older people who do not have other sources of income. However, the informal economy is expanding due to important labor forces, contributing to economic growth. Production in the context of low wages, it encourages growth in exports and the development of industries (ILO, 2002). Those working in the informal economy must be recognized as contributing to state revenue and integrated into government regulations. So, the risks to which they are subject are diminished, they will be able to enjoy rights.The work of informal entrepreneurs is dynamic, with innovative strategies implemented in order to remain in the global competition. Entrepreneurs should be encouraged to develop their businesses by applying expansive policies, so that the way to formalize is made easier. The principles that afects the demand for labour are: "changes in the demand for a firm`s product will be reflected in changes in its demand for labour, the structure of the firm plays an important role in determining its demand for labor, a change in other factors of production that a firm uses will change its demand for labour" (Colander, 2006: 394). A positive and open attitude to complying with state laws is an important starting point. Accepting economic diversity is important for the development of a nation. Informal workers have a tremendous capacity to adapt, which should be harnessed and developed by providing access to innovative educational programs.

3. Against the informal economy

The negative consequences of the informal economy are related to the inability of governments to collect taxes due to the fact that informal activities are not declared. Thus, the state's income is influenced. The same social security funds are no longer collected, which could have been invested in various areas such as infrastructure, the purchase of goods and services, in order to improve the living standard of the population. A study done in

121 countries between 1976-2009, shows that "political instability, political polarization, and the authority pattern seem to play a role in determining the incentives of government to develop the tax capacity of the state and the developement of the informal economy" (Elbahnasawy et al. 2016: 39).

The emergence of disagreements between those working in the informal field and those working in the formal field, because the latter have to bear high taxes, given that informal groups ignore taxes established by law, not respecting the rule of law and government."Informal enterprises create unfair competition for formal enterprises by not paying taxes or social security contributions for workers or avoiding other business costs incurred in the formal economy" (ILO, 2002: 4). A research made in Brazil and Mexico reveals that the mobility of informal workers to the formal field implies lower costs if they are carried out in the same industry. While any mobility between industries at the time of informal entry or status change is less expensive in informal sector (Arias et al. 2018).

Another problem that occurs in the informal field is the deficiencies that arise in working conditions and the protection of employees. Most times, they have to work in precarious conditions, without complying with work standards, hours worked, average salary, no holidays or other incentives. Informal workers do not have social insurance or health insurance, which they could benefit from in the event of accidents at work or death. They face discrimination, corruption and lack of transparency of the authorities' regulations. "Because informal activities are on the fringes of the law, public authorities sometimes confuse them with criminal activities and therefore subject them to harassment, including bribery and extortion, and repression" (ILO, 2002: 3).

"Developing nations of Africa, Asia and Latin America are majour source countries for internaţional skilled labour migration into Organization for Economic Cooperation and Developement (OECD) countries. This emplies that such migrants take up jobs at level much lower than what their skill set can offer based on their professional qualifications. This phenomenon leads to brain drain in source countries and to brain waste in destination countries" (Yewande, 2018: 2). If these workers could use their skills, they would benefit from higher wages, better working conditions and a higher standard of living. A study made in Hat-Yai, a city in South of Thailand, on the informal hair and beauty services workers, shows that they only have basic skills in this area, because the budget does not allow them to pay specialty courses or take free days to participate in such courses. In particular, it is highlighted the need for funds of institutions that prepare such trainees (Peter-Cookey and Janyam, 2017). The basic need for informal businesses is that of funding, because few employers have the opportunity to contract a bank credit. Consequently most of them get to borrow money from other unsafe sources (ILO, 2002).

4. Factors that generate the emergence of the informal economy

The factors that drive employment growth in the informal field are: the inadequacy of legal and institutional regulation to the various changes that occur in the labor market, the policies implemented by the governments of the countries, the strategies adopted by some enterprises to use undeclared work force, in order to minimize the costs that it has to bear, the migration phenomenon towards the urban area from less developed rural area, that offers more employment opportunities, the migration to developed countries, the marginalization of those suffering from contagious diseases such as HIV / AIDS, impossibility to join trade unions or other collective associations (ILO, 2002).

5. Dimensions of the informal economy

The process of assessing the dimensions that the informal economy has in the world is a difficult one, because nations have attributed different interpretations to this concept. "The contribution that developing countries make to the world's gross product is low, although the largest share of the world's population is concentrated in these areas, and there are also raw materials that can be used in industry. In terms of GNP per capita, developing countries and territories are mostly in low-income groups" (Florea, 2006: 31).

The most popular methods used to measure the size and mode of development of the informal economy are the following: chestnut method, monetary method, analysis of labor market statistics, households, analysis of national accounts, tax method. Friedrich Schneider (2002) asserts that there are three different methods used at the modal level: direct approaches, indirect approaches, the model approach. Direct approaches are based on the application of surveys and samples, following discussions with volunteers, tax audits and other compliance methods. Another direct method to estimate the informal phenomenon is based on studying the difference between declared earnings and the objectives the state has set at the fiscal level. Indirect approaches use various macroeconomic indicators to get information on developing the informal field. The model approach examines in particular the effects of the informal economy on the labor force, money market and output.

Table 1: The size of informal economy of 15 OECD – European Countries

		Informal Economy in % of GNP 1999/2000	Informal Economy (current USD in billion) 2000	Informal Economy GNP per capita
1	Austria	10,2	189.7	2572.4
2	Belgium	23,2	531.4	5693.3
3	Denmark	18,2	291.4	5875.0
4	Finland	18,3	218.5	4598.8
5	France	15,3	1996.1	3736.3
6	Germany	16,3	3030.6	4094.6
7	Greece	28,6	329.2	3420.6
8	Ireland	15,8	126.7	3580.3
9	Italy	27,0	2880.1	5443.2
10	The Netherlands	13,0	477.8	3246.1
11	Norway	19,1	306.0	6595.2
12	Portugal	22,6	233.3	2513.1
13	Spain	22,6	1248.4	3408.1
14	Sweden	19,1	428.7	5183.7
15	Switzerland	8,8	223.3	3356.3
	Average	18	894	4150

Source: Schneider (2002: 16)

Table 1 shows that countries like Greece 28.6 %, Italy 27%, Spain 22.6%, Belgium 23.2% have a higher percentage of the informal economy of GNP, unlike the other countries with lower percentages, Switzerland 8.8%, Austria 10.2%, Germany 16.3%. The reasons that could explain this difference, relate to high costs to enter the formal field and difficulties

encountered in applying the regulations, the preponderance of seazonal activities carried out in countries with a larger share of the informal economy.

Table 2: The size of informal economy of 23 African Countries

	Informal Economy in % of GNP 1999/2000	Informal Economy (current USD in billion) 2000	Informal Economy GNP per capita
Algeria	34,1	172.6	538.8
Benin	45,2	9.7	167.2
Botswana	33,4	17.6	1102.2
Burkina Faso	38,4	8.3	80.6
Cameroon	32,8	27.2	190.2
Cote d`Ivoire	39,9	34,4	239.4
Egypt, Arab Rep.	35,1	349.8	523.0
Ethiopia	40,3	25.5	40.3
Ghana	38,4	18.5	126.7
Madagascar	39,6	15.1	99.0
Malawi	40,3	6.7	68.5
Mali	41,0	9.3	98.4
Morocco	36,4	118.1	429.5
Mozambique	40,3	14.4	84.6
Niger	41,9	7.6	75.4
Nigeria	57,9	212.6	150.5
Senegal	43,2	18.5	211.7
South Africa	28,4	348.3	857.7
Tanzania	58,3	52.4	157.4
Tunisia	38,4	71.3	806.4
Uganda	43,1	26.5	129.3
Zambia	48,9	13.6	146.7
Zimbabwe	59,4	42.4	273.2
Average	42	70	287

Source: Schneider (2002: 6)

As can be seen, the share of the informal economy of GNP is higher in African countries, such as: Zambia 48.9%, Nigeria 57.9%, Tanzania 58.3%, Zimbabwe with a maximum of 59,4,%, unlike of the European countries with lower percentages of the informal economy in GNP, such as Austria 10.2%, Germany 16.3%, the Netherlands 13.0%, France 15.3%, Switzerland with a minimum of 8,8%.There is a major difference between the United States and African countries in terms of the share of the informal economy of GNP as can be seen in Table 3. In sub-Saharan Africa, the percentage of the informal economy is increased in countries like: Niger 41.9 %, Benin 45.2% Zambia 48.9%, Nigeria 57.9%, Tanzania 58.3%, Zimbabwe 59.4% as can be seen in Table 2. African countries have a share of the informal economy so high because: the vast majority of people in these regions live from informal activities such as selling various products on the market, processing food, carrying out activities across borders, the degree of economic regulation, lack of education, the HIV/AIDS pandemic.

Table 3: The size of the informal economy of 4 OECD Countries

		Informal Economy in % of GNP 1999/2000	Informal Economy (current USD in billion) 2000	Informal Economy GNP per capita
1	Canada	16,4	1101,1	3465,3
2	United States	8,8	8646,3	3000,8
3	Australia	15,3	580,1	3096,7
4	New Zealand	12,7	58,5	1649,7

Source: Schneider (2002: 18)

The United States has one of the lowest weights of the informal economy of 8.8% equal to that of Switzerland. New Zealand, Canada and Australia are highlighted in Table 3, with a low percentage of the informal economy, like the United States of America. These countries have a low level of informal economy, because they have implemented various policies aimed at reducing tax evasion.

6. Theories on the informal economy
Chen (2012) lists four schools of thought who have formulated various theories about the informal economy, describing the specific aspects that define it:
- The Dualist school
- The Structuralist school
- The Legalist school
- The Voluntarist

6.1. The Dualist school
Dualists perceive the informal economy as a way of survival in the times of recession of those who live in very low incomes. They believe that the source of the phenomenon of the informal economy is the discord between the number of those who want to engage and the changes in the industrial, as well as the existence of a shortage of skills, making them difficult to adapt to the modernization of society.

6.2. The Structuralist school
Structuralists believe that capitalist firms manage to resist global competition, thanks to micro-enterprises whose employees are working to reduce costs. Unlike dualists, structuralists support the existence of strong connections between the two economies, both formal and informal. Employers and enterprises in the informal field have the role of providing goods and services at low cost to those in the formal field. Therefore, it is necessary to balance existing links, between micro-enterprises and large-scale firms.

6.3 The Legalist school
Representatives of the Legalist school highlight the decisions made by informal micro-enterprises to reduce costs, avoid time-outs, generated by the recording process. Thus, without property rights, they are unable to turn their assets into capital that could be used for economic purposes. It encourages simplification of registration procedures, in order to facilitate access to the formal economy.

6.4. The Voluntarist
The voluntarists claim that entrepreneurs are discouraged, because they do not see a positive relationship between benefits and costs, when they want to register their

businesses. Representatives of this economic trend consider that the informal economy and the formal economy are separate realities that do not influence each other.

7. Conclusions

In this article, we have shown that there is no unanimity of views on defining the informal economy. It highlights difficulties in measuring the dimensions of the informal economy and the effects it has on the formal economy. Different economic methods can help us estimate its size. Although, there are many difficulties in measuring the dimensions of the informal economy and analyzing the effects this phenomenon has on the formal economy, there is progress. We have identified the causes that generate the phenomenon of economic informality. Knowing the pros and cons of the informal economy is very important. Governments have tried to take various measures to manage the negative effects that such activities may have. Thus, measures can be taken to reduce excessive bureaucracy in order to encourage the registration of informal enterprises, the cost of business transactions, the reduction of social security and health insurance contributions, the creation of programs to facilitate access to education, training those skills needed to find a job in the field of formal economics, and to adapt more easily to social and economic realities. Another goal to be achieved is to remove discrimination against people suffering from HIV-AIDS or other communicable diseases. The majority of such reactions arise from other citizens, because of the lack of information on these issues. It is not only people who suffer, but also family members who are often children or elderly people who fail to sustain themselves. In such a situation prevention programs are also important, preventing the spread of such diseases. Opening up a dialogue between authorities and informal workers is necessary to get to know the realities of the informal field of work and to give them the opportunity to express their needs. The informal economy is different, but not irreconcilable with the formal one, because it responds to the needs of society, to an existing demand on the market. Micro-enterprises in the informal field generate new job creation.

The informal economy seems to have been in various forms, in almost all economic areas. Theories of the informal economy converge to the idea that a more careful analysis of this reality is needed to identify alongside the negative aspects and potential positive aspects.

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DIASPORA NETWORKS AND THE CONSUMPTION OF NOSTALGIC PRODUCTS AMONG ROMANIAN MIGRANTS IN GERMANY

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Abstract: *Statistics show that cross-national immigration represents one of the fastest growing global trends. Researchers have revealed that immigration is a transnational process with immigrants maintaining ties across the sending and receiving locations, and acting as a bridge between their countries of destination and origin. Research has also revealed the economic link created by the diaspora between the countries of origin and destination with two main components: the remittances sent to families and the consumption of home origin goods, also defined by scholars as ethnic products, nostalgic products or nostalgia products. During the period 2010-2015, the Romanian diaspora had the world's second fastest average annual growth rate. In the same period, Germany became one of the premier destinations for Romanian migration. An empirical study was organized in Germany in the period June – August 2017. The study is based on a regional survey of 124 subjects belonging to the Romanian community in Germany in four Bavarian cities. Four hypotheses have been advanced with the purpose of evaluating the level of demand for home origin products among Romanian migrants, the sources of supply, the level of expenditures and the motivational factors. The findings show that Romanian migrants in Germany manifest an important interest in and demand for home origin country goods; they spend 420 EUR yearly on ethnic products and their consumption motivation is strongly related to the products' special tastes and characteristics. Most of the products are obtained through local ethnic stores. The study's results also reveal important similarities between the nostalgic product consumption habits of Romanian migrants in Germany and those of South American migrants in the U.S. The study's findings are relevant for both the literature and for the Romanian companies, especially the ones active in the food and drink sector.*

Keywords: Romanian diaspora, Romanian migrants, ethnic products, nostalgic products.

JEL classification: F22, J15.

1. Introduction

Migration represents one of the fastest growing global trends, reaching 244 million in 2015, up from 222 million in 2010 and 173 million in 2000 (U.N., Department of Economic and Social Affairs, 2016).

According to the 2015 U.N. International Migration Report, the Romanian diaspora had the world's second fastest average annual growth rate, 7.3 percent per annum, during the period 2010-2015 (U.N., 2016: 21). More than 3 million Romanians were residents in EU countries as of January 1, 2017 (EUROSTAT, 2018:13). The main emigration countries for Romanians are Italy, Spain, Germany and England (Sandu 2010; Drăgulin, 2012; Sandu, 2018).

Such a significant number of emigrants have important socio-economic implications for Romania. Apart from the negative impact of migration, the literature also investigates some positive implications of the phenomenon. One is represented by the remittances sent by migrants to their families. The yearly amount of remittances sent home by Romanian

migrants has fluctuated between $3 billion and $4 billion in the last few years with researchers revealing the multiple benefits they have brought to Romanian society and to the economy (Herban, 2015; Anghelache, Nita and Badiu, 2017).

This paper investigates another outcome of migration: the consumption of Romanian products among the Romanian migrants in Germany. The consumption of home products is defined by most of the scholars as consumption of ethnic products (Pires and Stanton 2005; Mehmood, Jamal and Sriram 2015). There are also original definitions such as ''nostalgic products'' used by Orozco (2008a; 2008c; 2015) or ''nostalgia products'' used by Newland and Taylor (2010).

The literature review shows a scarcity in the research of economic implications of diasporas in general and regarding the consumption of ethnic products among migrants in particular. The situation is similar in this respect as it regards the Romanian diaspora.

Under these circumstances, the current study objective has been to fill this gap by investigating the main traits of home country goods consumption among Romanian migrants in Germany.

Statistics indicate that a significant increase of Romanian migration to Germany has occurred in recent years as shown in the table below:

Table 1: Evolution of Romanian residents in Germany

Year	2010	2011	2012	2013	2014	2015	2016	2017
No of residents	126,536	159.222	205,026	267,398	355,343	452,718	533,660	622,780

Source: own data processed based on the data provided by the Federal Statistical Office of Germany (DeStatis - Statistisches Bundesmat).

2. Literature review

The economic implications of migration are generating an increasing interest among scholars. Many researchers are investigating the transnational links generated by the diaspora between countries of destination and countries of origin (Girma and Yu, 2000; Javorcik et al., 2011; Hernandez, 2014; Elo, 2014).

Until recently most of the scholars' attention was concentrated on the effects induced by migration on destination countries. Researchers have since re-conceptualized the immigration process, revealing the fact that immigration is a transnational process with immigrants maintaining ties across the sending and receiving locations and acting as a bridge between their countries of destination and origin, diminishing the cultural, economic and institutional distances and facilitating investment in both directions—to and from their country of origin (Hernandez, 2014).

In her paper, "Diaspora networks in international business and transnational entrepreneurship – A literature review", Maria Elo's emphasis is on the growing importance of diaspora networks nowadays and their impact on multiple aspects of economic activity such as investment, entrepreneurship, innovation, expansion, internationalization and the creation of international businesses (Elo, 2014).

The researchers of the topic are often quoting Hernandez (2014). Using data from a sampling of foreign subsidiaries established in the U.S. between 1998 and 2003 by firms from 27 countries, Hernandez (2014) analysed the relationship between immigrants and the foreign expansion of organizations from their home countries. The results confirmed the assumptions, such as "the probability of locating operations and surviving in a state increases with the concentration of same-nationality immigrants" (Hernandez, 2014). The explanation lies in the fact that common country bonds with immigrants create a channel of knowledge between firms interested in expansion and the co-nationals from that country. It highlights the fact that this mechanism is particularly important for companies on their first

attempt in international markets and which lack experience and information regarding the country targeted for expansion. Such inexperienced firms will target those places with a significant concentration of co-national immigrants. It has also been observed that experienced firms are not as sensitive to these aspects and do not show the same level of interest in using a similar strategy (Hernandez, 2014).

Javorcik et al. (2011) investigates in a similar manner the effect of diaspora networks on foreign direct investment. The premise of the paper is that international transactions are plagued not only by trade barriers but also by informal trade barriers such as difficulties accessing information about the potential markets. The authors show that direct investment generally requires "a long-term focus and interactions with diverse group of economic agents from suppliers, workers to government officials. The investor needs to have a detailed knowledge of the consumer, labour and input markets as well as legal and regulatory regimes in the host country" (Javorcik et al. 2011). The data analysis suggests that the presence of migrants in the U.S. has an effect on increases of foreign direct investment in their country of origin. It is observed to have a stronger effect for skilled migrants having at least a college education. In regards to the economic effect, the results indicate that a one percent increase in the migrant stock is associated with a 0.3 percent increase in the foreign direct investment stock (Javorcik et al. 2011).

Another important research approach is the one investigating the trade effect generated by migration in the country of destination and the country of origin (Dunlevy and Hutchinson, 1999; Genc et al., 2011; Kusum, 2012). Genc et al (2011) shows that immigration boosts trade between sending and receiving countries, respectively, "an increase in the number of immigrants by 10 percent increases the volume of trade by about 1.5 percent" (Genc et al., 2011).

Another approach belongs to Dunlevy and Hutchinson (1999) who analyze the connections the diaspora creates between the country of adoption and the country of origin from the point of view of the knowledge the diasporans hold about the market and the products of the country of origin as well as the acquaintances they acquire regarding the country of adoption. Dunlevy and Hutchinson have identified three main hypotheses by which immigrants become factors of proximity and connection between the home and adoption markets. First, they refer to the fact that immigrants have a good knowledge of the products of the country of origin, such as the taste in the case of foodstuffs or the functionality of specific products. Another proximity offered by migrants is their ability to perceive the opportunities that products in one of the markets have on the other market in terms of price or specific product features. The third characteristic refers to the positive effect induced to trade by ethnic networks. The knowledge of language, culture and customs of the home country gives migrants an important advantage in initiating and developing business relationships with their nationals. Ultimately, the presence of migrants in the country of adoption creates a critical mass of consumers that favors the initiation of imports of products into the country of adoption (Dunlevy and Hutchinson, 1999).

Kumar and Steenkamp (2013a, 2013b) have a similar approach. They consider that the presence of the co-national in a foreign country represents a "beachhead" for the companies from home countries, a very important support for establishing their products and brands in developed markets and also providing opportunities for promotion among the mainstream consumers.

A very important contribution to the literature was brought on by Manuel Orozco in his vast research activity. In his vision, an outcome of continuing migration is the formation of transnational communities (Orozco, 2005b). He defines these communities as "groups or families that maintain relations and connections with both their home and host societies" (Orozco, 2005b: 24). In this context, Orozco talks about the significant impact generated by this linkage on the receiving countries' economies. He identified four typical economic links

of immigrants with their home country: "family remittance transfers, demand of goods and services, such as telecommunication, consumer goods or travel, capital investment and charitable donations to philanthropic organizations raising funds for the home country's community" (Orozco, 2005b: 25).

Orozco concludes that remittances and the consumption of home products have the highest impact on home countries' economies (Orozco 2015).

There is significant literature treating the remittances and their outcomes but few, almost none, address and analyze the home product consumption among immigrants.

The consumption of home country goods is most often defined by scholars as consumption of "ethnic products" (Pires and Stanton 2005; Mehmood, Jamal and Sriram, 2015). Orozco uses an original term, "nostalgic products", while Newland, K. and Taylor, C. (2010), use an adaptation such as "nostalgia products" (Newland and Taylor, 2010).

In 2008 Orozco published one of his most representative papers entitled "Trends in Migrant Demand for Home-Country Goods", a study regarding the demand of nostalgic products among 12 ethnic groups in the U.S. (Orozco, 2008a: 1). According to Newland and Taylor (2010), it was the first research of this kind in the literature.

Orozco (2008a) talks about the long tradition among immigrants of consuming home country goods. At the same time, he considers it a "practice that serves as an affirmation of one's sense of belonging to that which they call homeland". It has been observed that the intensification of the migration process on the global scale stimulates the development of transnational networks and increases the chances for migrants to adapt their life by adopting social and economic practices specific to their countries of origin (Orozco, 2008a: 2). One important objective of Orozco's research is to analyse the level of demand for home country goods. Orozco concludes that a large majority, about 90 percent of migrants in the U.S., consume on a regular basis home country goods, or ethnic goods, especially food products (Orozco, 2008c: 3). However, there are some exceptions, such as the case of the Cuban community, in which U.S. prohibition of imports from Cuba presents an obstacle (Orozco, 2015). In the case of the Albanian community, its limited number of members in the U.S. and trading difficulties with the homeland of Albania reduce the level of consumption of home country goods among community members (Orozco, 2015).

An important finding regards the average annual migrants' expenses on ethnic products of nearly one thousand U.S. dollars or more (Orozco, 2008a: 2). Orozco discusses the significant amounts spent by migrants to buy ethnic products and the positive effects induced to home country economies.

An interesting addressed question concerns the reasons why the migrants buy home country goods or nostalgic goods. The findings show that the majority replied that it is simply because "they like it"; according to another important group, it is because the product "is unique to their country" (Orozco, 2008a: 2).

Orozco's research has also targeted the supply chain of ethnic products, a network of distributors that buys the ethnic products from various countries and supplies them to ethnic retailers, most of them small, minority-owned, neighborhood ethnic stores. The ethnic entrepreneurs play an important role in this respect, being best positioned to understand their co-nationals' needs and to develop collaborations with home country producers and distributors (Jamal and Sriram 2015).

Orozco's research brings an important contribution to the literature. He has published a vast number of reports and research articles about immigrants and the economic manifestations of their linkage with the home countries, offering valuable information on the topic. He has also offered a valuable model and methodology for researchers interested in studying the topic. The current research has used much of Orozco's methodology as a research model.

The literature review has also revealed that the research on Romanian migration is relatively well represented in the field of sociology.

Despite the fact that the literature review suggests that economic-related research articles on Romanian migration are relatively limited, the figures suggest an increasing interest in the subject among scholars.

In this respect, it is worth mentioning Dinu, Grosu and Saseanu (2015), which has investigated the entrepreneurial manifestation potential of Romanian immigrants in Andalusia, Spain. The research identified some obstacles, which block or discourage the entrepreneurial manifestation. It also reveals more oriented manifestations based on gender or age.

Croitoru (2013) analyses in a similar manner the relationship between migration and entrepreneurship. In his research, he analyses how individuals' experience of international migration affects their propensity to entrepreneurial behaviours. He also highlights some of the features of Romanian migration to Austria.

Saseanu, Petrescu and Zgură (2011) contribute to the literature through an investigation on a grocery store specialized in selling Romanian products in Andalusia, Spain.

From a different perspective, Saseanu and Petrescu (2011) investigated the potential connections between migration and food consumption habits of Romanian immigrants in Andalusia, Spain. Their research revealed that the length of residence is positively correlated to the changes in food consumption after migration, while age is negatively correlated.

The complexity of the Romanian migration phenomenon and its profound implications invite further research and investigation.

3. Data and research methodology

In the current study, the empirical method has been used with application of a survey research design combined with the participant observation method.

The survey's subjects have been selected from four German cities, Ingolstadt, Augsburg, Munich and Fürth near Nuremberg in the period June – August 2017.

The survey's questionnaire contained more than thirty questions combining closed and open questions, structured in three parts. In the first part the questions regarded personal, family and demographic attributes. In the second part, the questions referred to the habits of consumption of Romanian origin products among subjects. The questionnaire's third part regarded the subjects' social contacts and their level of integration in the German society.

The survey sample size included 124 subjects who filled out the questionnaires with the support of the interviewer, of which 50 were females. 56 questionnaires were completed in Ingolstadt, 8 in Augsburg, 27 in Munich and 33 in Fürth.

The subjects were selected using the convenient sampling from areas frequented by Romanian migrants, such as Romanian ethnic stores, cultural and religious events held in Ingolstadt, and the proximity of the Romanian consulate in Munich.

The subjects selected from places others than the proximity of Romanian ethnic stores and not directly related with the intent to purchase products having Romanian origin are considered ''independent subjects''.

Many of the questionnaire's questions addressed the study's objective, which is to identify the main traits of home country goods consumption among Romanian migrants in Germany. In addition, a significant number of questions are similar to the ones used in Orozco's research, thus enabling the comparison between the findings.

Orozco's research suggests that the consumption of nostalgic products among the members of analyzed ethnic communities in the U.S. varies between 40% and 90% or more. A low consumption level is associated with small communities, like the Albanians in the U.S., or ethnic communities whose home countries have the disadvantage of facing U.S. import sanctions, such as in the case of Cuba.

Under these circumstances, we can differentiate less developed ethnic markets in the case of ethnic communities with less than 50% of its members buying home origin goods, and mature ethnic markets in the case of ethnic communities whose members consume home origin goods in the proportion of 90% or more.

Therefore, the first hypothesis refers to the percent of Romanian residents in Germany that regularly consume Romanian products:

> H1: At least 50% of Romanian residents in Germany consume Romanian origin products.

Orozco's research indicates that the yearly amount spent on products varies between $400 and $1100. Therefore, the question arises regarding the average amount spent on buying ethnic products by Romanian residents in Germany:

> H2: The average amount spent by Romanian residents in Germany to buy ethnic products is more than $400, the equivalent of approximately €345.
> The literature suggests that most of the ethnic products are available through local ethnic grocery stores. This led to the third aspect to be investigated:
> H3: More than 50% of the nostalgic products purchased by the Romanian consumers in Germany are from local Romanian ethnic grocery stores.

Finally, it is essential to understand the motivations that lie behind the decision to purchase home origin goods:

> H4: The main trigger for nostalgic product consumption among Romanian residents in Germany is related to the products' Romanian origin.

4. Results

Secondary data, such as websites of grocery stores specialized in selling Romanian products and multi-ethnic stores that have Romanian products in their portfolio, as well as details offered by Romanian producers and exporters of food and drink products, suggests the existence of an important demand and offering of Romanian products in Germany. In addition, the observations made on the Romanian community in Ingolstadt sustain this assumption.

Relevant results have been obtained by analysing the data collected through the survey.

For estimating the percent of Romanian residents in Germany that regularly consume Romanian origin products, only the data collected from the independent subjects was selected, processed and analyzed.

Independent subjects have been selected from locations not directly related with Romanian ethnic stores. The results are presented in the table below:

Table 2: Purchase intention concerning home country goods (percentage)

*Subjects sample 1		**Subjects sample 2	
Buy	Not Buy	Buy	Not Buy
84	16	79	21

Source: Field Survey, 2017
*subjects selected during cultural and religious events organized in Ingolstadt June – July 2017, n=51
**subjects selected in the proximity of the Romanian Consulate in Munich in August 2017, n=14

Taking into consideration the data from both independent samples, the overall purchase intention among Romanian residents was calculated as presented in Table number 3.

Table 3: Purchase intention concerning home country goods (percentage)

Buy	Not Buy
81	19

Source: Field Survey, 2017

Secondly, the data regarding average amounts spent by Romanian migrants on buying "nostalgic products" in Germany has been processed and analysed. The findings are presented in the table below:

Table 4: Expenditure of Romanian ethnic products bought in Germany

Number of persons in household	Times bought per month	Monthly expenses / household (€)	Yearly expenses / household (€)	Yearly expenses / household member (€)	Yearly expenses / household member *($)
2.5	2.3	87.9	1054.4	420.4	498.3

Source: Field Survey, 2017
*European Central Bank exchange rate at 31.08.2017: 1 EUR = 1.1825 USD

Another relevant finding revealed by the survey's data refers to the average purchase sessions per month of 2.3, approximately one session at two week intervals.
Thirdly, in regards to the distribution network of Romanian products in Germany, as expected most of the subjects indicated the Romanian ethnic grocery stores as the main source of supply:

Table 5: Sources of supply of ethnic products among Romanian migrants in Germany (percentage)

	Romanian ethnic grocery stores	Multi-ethnic grocery stores	German retailers
	74	13	13

Source: Field Survey, 2017

The observations made at Ingolstadt revealed the fact that a Romanian ethnic grocery store functioned in the area until 2014 when it closed. The discussions with Romanian consumers suggested that the store had uncompetitive prices, which made it unprofitable. Afterwards, the main source of home origin goods for the Romanians in the Ingolstadt area was represented by three multi-ethnic grocery stores offering a range of Russian, Polish, Romanian and other East European products. Some of the Romanians from the area would purchase Romanian products during their travels to neighboring cities Munich or Nuremberg. A traditional Romanian restaurant was also functioning in the city of Ingolstadt. The discussions with members of the Romanian community in Ingolstadt also revealed ethnic entrepreneurial plans for opening a grocery store specialized in selling Romanian products or a second Romanian traditional restaurant in the area.
Finally, one of the key questions addressed to the survey's subjects regarded the reason why they buy Romanian products. It was presented as an open question that offered subjects the opportunity to use their own words to answer. It is notable that there was a big variety of answers and reasons expressed by the subjects regarding the consumption of home country goods. Following the model used by Orozco (2008a) on this topic, the answers offered by subjects have been grouped into five categories:
- Habit. I used to consume them in my home country
- Sense of attachment to the home country

- The products are unique to my home country
- Quality of products is higher than other products
- I like them; I like their taste

Once the subjects' answers were sorted into the five categories, the totals were calculated for each category. The results are presented in the figure below:
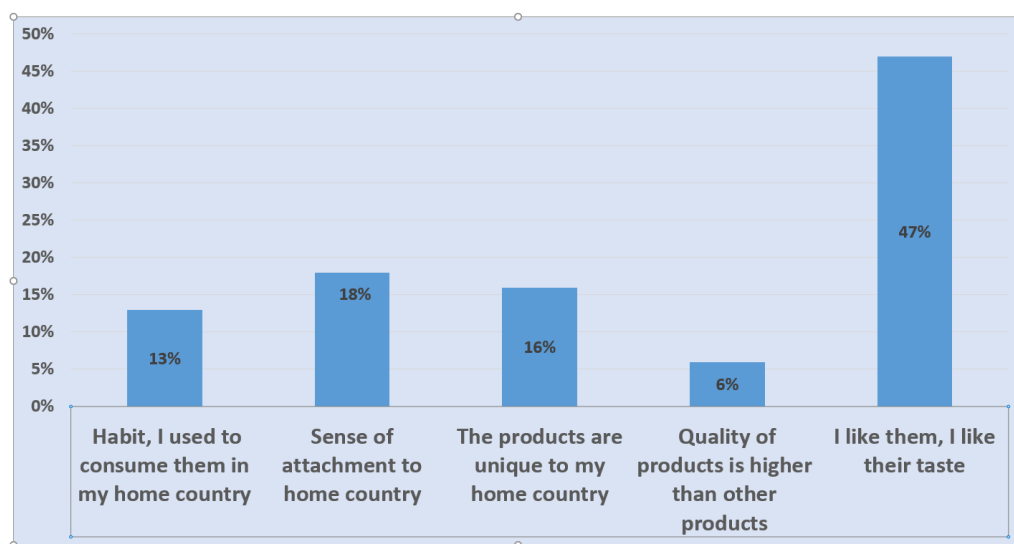

Figure 1: Romanian migrants' motivations to buy ethnic products in Germany
Source: Field Survey, 2017

In the case of subjects that replied negatively to the question regarding the purchasing of Romanian products, it would have been useful to address a supplementary question regarding the reason why they do not buy Romanian products. It would have been important to find out if this fact is motivated by personal reasons or by difficulties in finding and purchasing home country goods. The Orozco (2015) study about the Albanian community in the U.S. is representative in this respect.
Informal discussions revealed that many Romanians complain about the existing Romanian product distribution chain in Germany. They accused the limited number of shops selling Romanian products, as well as the limited range of merchandised products. In this respect, the survey's questionnaire included a question concerning improvements expected by subjects in regards to the distribution of Romanian products in Germany. Their opinions are presented in the figure below:
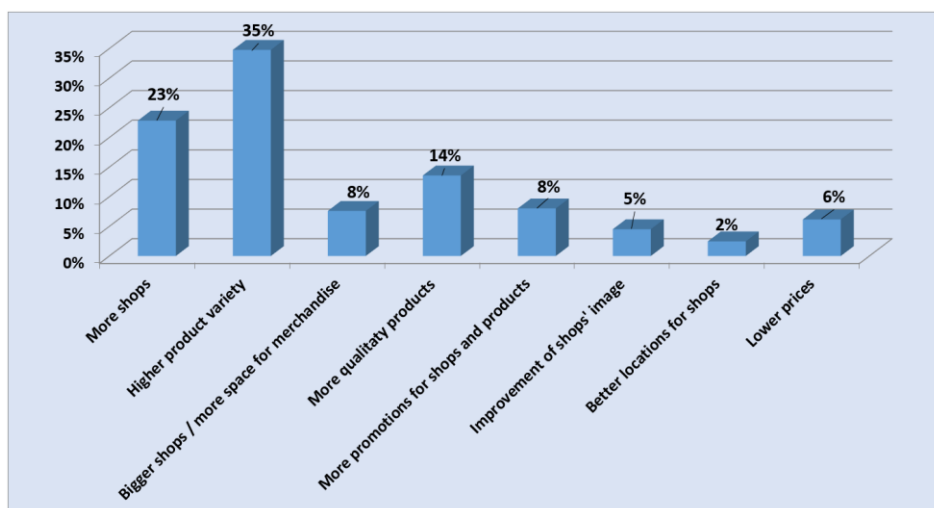
Figure 2: Subjects' expectations regarding the distribution of Romanian ethnic products in Germany
Source: Field Survey, 2017

5. Discussion and conclusion

The study shows that there is a significant percent of Romanian migrants in Germany, 81%, who regularly buy Romanian products. Using as reference the Orozco research, the percent suggests a medium to high percent of nostalgic product consumers among Romanian residents in Germany. It would be relevant to mention that the secondary data suggests the existence of an even higher percent of nostalgic product consumers among the Romanian residents in Italy and Spain. If true, a possible explanation may lie in the fact that the Romanian diaspora in Germany is rather young compared with the Romanian diasporas in Italy and Spain. Statistics show that the number of Romanian residents in Germany significantly increased from 126,536 on December 31, 2010 to 622,780 on December 31, 2017.

We may assume that the development of the Romanian product distribution chain in Germany is on course and will make progress in the next period in order to satisfy the increasing demand. The question regarding the subjects' expectations offers some suggestive clues about an existing gap between the demand and the supply of Romanian products in Germany. The subjects' answers suggest that an important category of consumers are not pleased with the existing number of stores selling Romanian products in their town or region, and they are expecting an increase in the shops' number as well as a more diversified range of products. Based on these answers we may suppose that the underdeveloped distribution of Romanian products may be one of the causes for the important percent of subjects declared as not consuming Romanian products.

Orozco's research offers an important comparison opportunity. The average monthly expense on ethnic products of *498 USD* places the Romanian migrant consumer close to the Bolivian, Salvadoran, Mexican or Colombian consumer in the U.S. (Orozco 2008c: 3).

Table 6: Expenditure of ethnic products bought in the U.S.

Country of origin	Number of products bought	Times bought per month	Price paid per unit ($)	Monthly expense ($)	Total paid per year ($)
Honduras	3	8	4	95	1141
Ethiopia	3	14	3	90	1077
Philippines	3	3	13	99	1020
Ghana	3	7	3	77	919
Paraguay	3	7	3	74	884
Dom. Rep.	3	8	3	66	793
India	4	4	4	58	694
Nigeria	3	6	4	57	683
Colombia	4	5	2	47	564
Mexico	3	3	4	41	494
El Salvador	2	4	4	38	458
Bolivia	2	5	4	34	408

Source: Orozco, M. (2008c: 3). Tasting Identity: Trends in Migrant Demand for Home Country Goods. Summary. U.S. Agency for International Development.

Other similarities in the motivations for buying home origin goods were revealed. For example, the majority of Romanian migrants, 47%, indicate as the main reason for buying "nostalgic products" the fact that they "like them", or they "like their taste". This result is similar to the ones presented by Orozco (2008c) in the cases of the Mexican, Dominican and Nigerian communities in the U.S.

Table 7: Migrant motivations to buy ethnic products in the U.S. (percentage)

Country of origin	Continue my home country diet	Sense of attachment to home country	Product is unique to my home country	Quality of product is higher than other able products	I like it
Nigeria	21	3	12	10	54
Mexico	2	12	24	13	49
Dominican Rep.	1	3	28	24	44
Colombia	1	8	28	26	36
Philippines	6	34	20	2	38
Ghana	13	20	23	15	29
Ethiopia	22	28	16	8	27
Bolivia	31	31	0	19	19
Honduras	16	27	16	22	18
Paraguay	16	14	31	24	15
El Salvador	35	33	0	21	11
India	45	32	18	5	1

Source: Orozco, M. (2008c: 4). Tasting Identity: Trends in Migrant Demand for Home Country Goods. Summary U.S. Agency for International Development.

Comparing the ethnic product consumption habits of Romanian migrants in Germany with those of other ethnic communities represents an important opportunity for a better understanding of the Romanian diaspora and in the same time an opportunity for observing some general features of diasporas. The significant number of similarities between Romanian migrants in Germany and other migrant communities, especially the South

American communities in the U.S., as regards the consumption habits related to home country goods suggests the existence of a pattern in this respect among the members of different diasporas throughout the world. It is a perspective worth being considered by future research.

The research findings are also relevant for the Romanian companies, especially the ones active in the food and beverage sector, as it reveals an important demand for home country goods among the Romanian diaspora.

6. Limitations and implications for further study

The research has a number of evident limitations. It is obvious from the secondary data analysis, the discussions with the subjects and the range of products displayed by the visited stores in Bavaria, Germany that most of the Romanian products purchased by Romanian residents in Germany are food and beverage products. However, the questionnaire used in the survey did not include a question regarding the most frequently purchased Romanian products.Such a question included in future surveys questionnaires should reveal the predominance of the food and beverage products in the range of ethnic products available in the Romanian ethnic stores in Germany. It will also help in identifying the most frequently purchased ethnic products.

During a two-month time period a significant number of subjects, 124, were selected and agreed to complete the questionnaire, assisted by the interviewer. However, for various reasons, there were subjects who could not answer all of the questions, resulting in gaps of data which affected the overall results of the research. Despite the fact that the survey includes a significant number of subjects, 124, selected from four different cities, another disadvantage is represented by the fact that all of the cities are located in one region of Germany, Bavaria. It would be preferable for future surveys addressing this topic to include subjects residing in different German regions.

The purpose of the current study has been to identify the main traits regarding the consumption of home origin goods among Romanian migrants in Germany. The research methodology has been adapted for this purpose. In many aspects, the current study has the traits of an exploratory research. Under these circumstances, these findings can represent a useful base for further research, which should investigate more deeply the phenomenon. A socio-demographic profile of Romanian migrants in Germany or correlations between the number of years of residence in Germany and ethnic product consumption could represent some directions for future research.

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