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An Investigation into The Effect of Innovation & Entrepreneurship on the Economic Development of the Countries

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Abstract: This study is concerned with exploring the relationship between innovation and entrepreneurship or economic development. Todays, entrepreneurship is an actuator motor for competition, job creation and economic development. Having collected data from 145 international organizations and institutes, this study examined its hypotheses. This research enjoys structural-path modeling approach as well as secondary data analysis method to analyze the collected data cross-nationally. The results indicate that there is a significant relationship between entrepreneurship and economic development. Likewise, a significant relationship between entrepreneurship and innovation was also found. This proves that an increase in entrepreneurship may improve innovation. The analysis of the data also detected a significant relationship between innovation and economic development. Stimulating the innovative activities, these variables increase the production level and economic development and growth directly while entrepreneurship promotes the production level and economic development and growth indirectly.
Keywords: innovation, entrepreneurship, economic development, structural-path modeling

1. Introduction

The past decade has experienced many changes in the world economy. Today's economic development is based on innovation, creativity and knowledge. This type of economy is referred to as knowledge-based economy (Azkia et al, 2013). Literature has highlighted the role of entrepreneurship in economic growth (Hermana and Suzana, 2012). Also, entrepreneurship acts as an actuator motor for innovation, competition, job creation and economic growth (Muyka et al, 2011).

In the past decades, there has been a growing interest regarding the concepts of economic development and entrepreneurship. On the one hand, there are several studies in the literature related to these two important notions (Ácset al., 2013; Szirmai et al., 2011; Naudé, 2011; Braunerhjelm, 2010; Caree and Thurik, 2010; Walzer, 2009; Wennekers et al., 2009; Audretsch et al. 2006; van Stel et al., 2005; Harper, 2003; Dejardin, 2000). Researchers have concluded that although "economic development theory can still be argued to lack a 'general theory' of entrepreneurship, one that could encompass a variety of development outcomes, progress has been made in extending the notion and understanding of entrepreneurship in economic development" (Naudé, 2008).

Several dynamic forces, such as technological disruption, fluctuating economies or demographical changes, have brought new opportunities and threats for organizations, and transformed societies from all over the world. In order to cope with these shifting forces, governments, public and private organizations, and the public are more and more aware of the importance of entrepreneurship.

Entrepreneurship is a multifaceted phenomenon, being analyzed as a process, a resource or a state-of-being (Tama et al, 2014). According to the Schumpeterian view, the entrepreneurial process constitutes one of the key factors in the economic development of a country/region. However, researchers have expressed different views about the relationship between the stages of economic development and entrepreneurship during the time. More than ever in the history, economic development and entrepreneurship have become strongly interconnected (Tama et al, 2014).

Economists have for a long time been interested in the role of innovation in economic development or growth. In the neoclassical framework, the impact of innovation is treated as part of the Solow residual and hence a key contributing factor to economic progress and long-term convergence (Solow 1957, Fagerberg 1994 as cited in Wu, 2010). In recent decades, due to the popularity of endogenous growth theories, economists are increasingly of the view that differences in innovation capacity and potential are largely responsible for persistent variations in economic performance and hence wealth among the nations in the world (Grossman and Helpman 1991). It is also argued that the effects of innovation on economic growth cannot be fully understood without considering the social and institutional conditions in an economy.

Achieving high and persistent economic development requires answering the questions such as, "Which factors do determine the rate of economic growth or, in other words, what are the most significant resources of economic growth and development? The aim of this study is to study the effect of innovation and entrepreneurship on the economic development of the societies. Therefore, the most important question raised here is how much innovation and entrepreneurship do affect the rate of economic development of the countries throughout the world.

To answer such questions, economists have allocated much of their work on the theories of economic growth. In the late 1980s, many studies are conducted on the economic development, leading to the development of Endogenous Growth Patterns theories. These theories suggest that the internal mechanisms of the economy such as education, an appropriate level of knowledge and skill, research and innovation, etc. play a major role in economic growth (Nasiriaghdam et al, 2011).

2. Review of literature

In response to the problems of neoclassic school, two entries were created for endogenous development of technology in the economic system. First, Nelson and Winter (1980) developed the microeconomic evolutionary theory of economic change and founded Schumpeterian entrepreneurship models. The second entry founded within macroeconomic…….

The endogenous growth model assumes simply that the aggregate output of an economy depends not only on the amount of inputs employed by firms (labor, human capital, capital and R&D inputs) but also on the stock of results from research and development undertaken by all firms in the economy. These "spillovers" of new knowledge and technology are assumed to be freely available (scientific discoveries, and information in general are nonrival goods; many peoples and/or firms can use them at the same time). The endogenous growth theory is concerned with a formal structure of relationships determining the long term growth of the whole economy. The endogenous character of innovation means that the process is rooted within each country or region. Firms are the important actors in generating new technologies and their behavior is determined on the one hand by the national environment and on the other hand by the increasingly global competition.

According to evolutionary economists, technical changes can be classified as gradual innovations, radical innovations, innovations of new technological systems and innovations causing changes in techno-economic paradigm. Changes in the 'techno-economic paradigm' are far-reaching and affect the entire economy (Schmitt et al, 1993).

Over the past decades, role of knowledge and innovation in the global economic activities has greatly increased since innovation is the most important aspect of knowledge creation (Klinson, 2000).

Innovation is the process of translating knowledge into economic growth and social improvement, and involves a complexity of scientific, technological, organizational, financial and commercial activities. Innovation appears in societies in the form of introducing and commercializing new products/services or substantial improvement in the applications of existing products and services; introducing new production processes or substantial improvement in existing ones; opening new markets; developing new supplying resources such as raw materials, equipment, and other inputs; and bringing substantial changes in organizational and industrial structures, playing a major role in economic development (Puga and Trefler, 2010).

The most important determinants of innovation are internal R&D activities since these activities increases competitiveness power and economic growth and development through introducing new technology and products as well as new production methods. It is also noteworthy that human capital and R&D activities of a country determine its absorptive capacity for developing technology. Therefore, human capital determines the country's absorptive capacity in developing appropriate production techniques and plays a major role in innovative activities, and absorbing and conforming external R&D activities (Mansfield and Zachariadis, 2002).

Most of the innovations occurring in developing countries are incremental innovations. Incremental innovation is most intense during the early stages of the production of new goods, when product bugs are fixed and production processes optimized. Innovation is not only the actuator motor of economy, but a factor changing the trend of international trade in developing countries (Puga and Trefler, 2010). Mansfield, one of the pioneers in research on the relationship between economy and technological changes, maintains that innovative activities and economic growth are affected by R&D activities. Scherer (2005) also investigated the relationship between innovation and R&D activities, and pointed to a meaningful relationship between innovation and R&D activities. Kirchhoff (1994) and Groski (1994) believe that R&D activities are important factors in production and patent is the indicator of innovation, increasing the productivity. Crepon et al (1998), Zachariadis (2002), Pakes et al (1984) and Mairess and Mohnen (2004) have also examined the ways R&D influences innovation and productivity growth. Their findings indicate a meaningful relationship between R&D activities and innovation.

Nasiri Aghdam et al (2011) have studied the effect of innovation on the economic growth of the countries in the organization of the Islamic conference. To do so, they employed panel data analysis method and examined the relationship between innovation and economic growth of the twenty members of the organization of the Islamic conference during 1995-2005. This method is introduced by Rumer (1990). Patent index is also used to consider the effect of innovation on economic growth. Moreover, the research has separately examined the relationship between economic growth and the degree of the openness of the economy, foreign direct investment, worker' per capita income, rate of human development and work force. The results indicated that innovation has a significant effect on the economic growth. It is also found that there is no relationship between work force and economic growth. The degree of openness of the economy, foreign direct investment and workers' per capita income have no effect on the economic growth. Human development has a negative effect on the economic growth.

Musavimashhadi (2003) investigated the role of entrepreneurship in economic and industrial development. This study discusses the characteristics of a knowledge-based economy and calls an entrepreneur the major actuator motor. In such an economic system, innovators hold the idea and are the major assets of a firm and main causes of sustainable development.

Wu (2010) investigated the effect of innovation on the economic development of China. Employing regional data, this study explored the effect of R&D activities on innovation development and consequently, economic growth of China in the last decade. The results of this study revealed that innovation had significant effect on the economic growth of China, and a meaningful relationship was also found between intensity of R&D activities and regional innovations.

Suzata and Herman (2012) suggested that there is a significant relationship between GDP per capita and innovation. They also pointed to the low level of innovation index in central, eastern and southern Asian countries, European Union and transition economies.

Muyka et al (2012) have concluded that the innovation model of economic development is an actuator motor either in individual or social level. The major innovation processes are formed in three phases including assimilating and applying, transferring and creating knowledge. Also, an innovation support system is necessary for facilitating and promoting innovation processes.

Kardos (2015) investigated the relationship between entrepreneurship, innovation and sustainable development in the European Union. He believes that every society looking for the solutions leading to sustainable development is interested in examining the relationship among these three variables. The results of his study showed that sustainable entrepreneurship can be achieved through small to middle innovative perspectives. As can be seen, entrepreneurial companies, actuator motors for innovation, competition and sustainable development, constitute a large part of the system, supporting sustainable development.

Galindoa and Mendeb (2014) have also examined the relationship among entrepreneurship, innovation and economic growth. They aimed to analyze the relationship among entrepreneurship, innovation and economic growth to reveal the feedback effects of this relationship. The results of their study indicated that such factors as monetary policies and social space have positive effect on innovation and entrepreneurship. Additionally, the feedback effect can be seen and economic activities promote innovative and entrepreneurial activities, which in turn increase the economic activities.

3. Objectives

The present study aims to achieve the following goals:

Primary goal

This study is mainly concerned with exploring the effect of innovation and entrepreneurship on the economic development.

Secondary goals

- Identifying the effect of innovation on economic development
- Examining and detecting the effect of entrepreneurship on economic development
- Examining and estimating the impact of entrepreneurship on economic development

4. Research Hypotheses

Regarding the theoretical framework of the study and the literature reviewed, three hypotheses are formulated as follow:

- There is a relationship between entrepreneurship and sustainable development
- There is a relationship between entrepreneurship and innovation
- There is a relationship between the rate of innovation and economic development.

5. Data analysis procedure

This study enjoys a secondary analysis method, according to which information collected from different institutions and organizations are analyzed in different levels. As a cross national research, this study examines the data collected from national and international organizations in 2013.

6. Population and sampling method

The population is composed of 198 countries all over the world, out of which 145 countries are sampled. A number of nine variables are also included in the study.

7. Data collection procedure

Surfing different websites, the researchers looked for necessary information in the global databases. To collect the data, three global resources are used and to measure the economic development index, three indices including Gross National Income Purchasing Power Parity (GNI PPP), Life Expectancy index and Human Development index. In the operational mode, economic development fosters many components including GDP per capita, per capita income, products of high tech, electric energy consumption, industrial exports and other indices. The resource used for collecting data is the Human Development Report of United Nations in 2013.

Three variables are also used to measure the innovation of the countries. The data of this part is gathered from Global Innovation Index (GII) in 2013. These variables are as follow:

- Global Innovation Index
- Number of Patents Granted Per capita
- Receipt of Loyalty and License Fees

To measure the rate of innovation in the sampled countries, three indices are employed. These indices are adopted from Global Entrepreneurship Monitor as follow:

- Entrepreneurial attitudes
- Entrepreneurial abilities
- Entrepreneurial aspirations

Finally, SPSS and Smart-pls Software are used to analyze the collected data.

8. Data analysis

Descriptive and inferential statistics are used to analyze the data. The descriptive statistics such as mean and standard deviation are used for classifying and describing data. Correlation coefficient is employed to test the hypotheses $\alpha = 0/05$ and structural equation modeling and Smart-pls software are also used to analyze data. Since the number of samples in this study is fewer than the number required for Structural Equation modeling based on Generalized Least Squares, this research enjoys Partial Least Squares (PLS). This method has the following advantages:

- It includes a set of consecutive OLS regressions, and normal distribution of observations is not necessary.
- Using OLS points to its conformation with small number of samples while in CBSEM based on ML or GLS at least 200 samples are required.
- Given that PLS deals with the blocks which are linear combinations of their representatives, common problems such as impure solutions and unknown factors, mostly seen in CBSEM techniques, do not emerge.

9. Findings

Based on the income level of the countries, Table 1-3 presents the mean and standard deviation of the variables. According to their per capita income, countries are classified into three groups, namely low, middle and high income countries. Central and distribution statistics are shown based on this classification.

As can be seen, the average of HDI for low-income countries is 0.56. The average of life expectancy for these countries is 64.83 and the average of per capita income in these countries equals 3407.5. The average of these indices for middle-income countries is 0.78 for HDI, 73.85 for life expectancy index and 14952 dollars for per capita income. The same calculations are conducted for high-

income countries and the results show 0.90 for HDI, 80.56 for life expectancy index and 38153.6 for per capita income. As can be seen, these indices change as the income level of the countries change.

Moreover, the average of innovation index for low-income countries is 29.27, number of patents granted per capita is 10.31 and receipt of loyalty and license fees index is 2.03. These indices in middle-income countries are 38.97 for innovation index, 48.08 for number of patents granted per capita and 7.93 for receipt of loyalty and license fees index. In high-income countries, they are 54.11, 374.69 and 192.22, respectively. Accordingly, these three indices have increased from low-income towards high-income countries. Generally speaking, the innovation index for high-income countries is 1.8 times greater than that of low-income countries. Number of patents granted per capita in high-income countries is 37 times more than that of low-income countries. The receipt of loyalty and license fees index in high-income countries is 94 times more than that of low-income countries.

Table 3 presents mean and standard deviation of the entrepreneurship index for countries with different income levels. As can be seen, the average of entrepreneurial attitudes index for low-income countries is 0.19, the average of entrepreneurial abilities index is 0.18 and the average of entrepreneurial aspiration index is 0.12. These indices in middle-income countries are 0.35, 0.31 and 0.25, respectively. High-income countries have indices of 0.52, 0.52 and 0.43, respectively. To sum up, the values of indices in high –income countries are greater than those in middle-and low-income countries.

Table 1- Descriptive statistics of the economic development variables based on the income levels of the countries

GNIPPP		*LIFECXPECTENCY*		*HDI*			
sd	*Mean ($)*	*sd*	*Mean (year)*	*sd*	*Mean*		
2280.3	*3407.5*	*8.88*	*64.83*	*0.13*	*0.56*	*Low income*	*Classification of the countries based on their income level*
4608.4	*14952.0*	*5.60*	*73.85*	*0.06*	*0.78*	*Middle income*	
12492.3	*38153.6*	*1.87*	*80.56*	*0.04*	*0.90*	*High income*	

Table 2- descriptive statistics of the innovation variables based on the income levels of the countries

Royalty		*Patents*		*INNOVATIONSCOR*			
sd	*Mean*	*sd*	*Mean*	*sd*	*Mean*		
9.05	*2.03*	*22.40*	*10.31*	*4.98*	*29.27*	*Low income*	*Classification of the countries based on their income level*
19.81	*7.93*	*70.51*	*48.08*	*6.00*	*38.97*	*Middle income*	
227.25	*192.22*	*442.73*	*374.69*	*7.17*	*54.11*	*High income*	

Table 3- descriptive statistics of entrepreneurship variables based on the income levels of the countries

ASPINDEX		*ABTINDEX*		*ATTINDEX*			
sd	*Mean*	*sd*	*Mean*	*sd*	*Mean*		
0.06	*0.12*	*0.05*	*0.18*	*0.08*	*0.19*	*Low income*	*Classification of the countries based on their income level*
0.11	*0.25*	*0.08*	*0.31*	*0.07*	*0.35*	*Middle income*	
0.10	*0.43*	*0.14*	*0.52*	*0.13*	*0.52*	*High income*	

10. Research model

Table 4 presents the quality criteria of the model. Internal consistency reliability is the first criterion controlled in the measurement models. The traditional way to control it is Cronbach Alpha, showing the reliability of the variables based on their internal consistency. Since the value of the index in all variables is higher than 0.7, the block of the variables is found one-dimensional, proving the internal consistency of the studied variables. Likewise, since composite reliability extracted index is higher than 0.7, it points to internal consistency of the observed variables in measuring latent variables.

The average variances extracted (AVE) shows convergent validity. Fortel and Locker (1981) suggest this criterion for measuring convergent validity (Azar et al, 2012). The minimum average variance extracted is 0.5, pointing to the convergent validity, i.e. latent variable explains more than half of its representatives on average. As a result, convergent validity is proven to exist.

Table 4- Quality Criteria Of The Model

	The average variance extracted	Composite reliability	R square	Cronbach alpha
Economic development	*0.84*	*0.9408*	*0.68*	*0.9053*
innovation	*0.64*	*0.8418*	*0.53*	*0.7254*
Entrepreneurship	*0.89*	*0.9614*		*0.9398*

The factor loading of the observed variables on the latent variables is higher than 0.7 and since the t value of the factor loading is greater than the t value at 0.01 level of significance, it points to the reliability of the manifest variables in explaining latent variables.

Manifest variables	Latent variables					
	Economic development		innovation		Entrepreneurship	
	t	Factor loading	t	Factor loading	t	Factor loading
ABTINDEX					95.25	0.95
ASPINDEX					71.62	0.94
ATTINDEX					73.72	0.94
INNOVATION			81.11	0.93		
Patents			11.22	0.70		
Royalty			12.75	0.76		
GNIPPP	30.27	0.88				
HDI	154.91	0.96				
Lifexpect	68.34	0.91				

The results of testing model indicate that all the research hypotheses are accepted. Table 6 presents the results of testing research hypotheses.

Table 6- Standard Path Coefficient Between Variables

(Multiple items per construct)				
	Paths	*t*	standard path coefficient	R^2
First equation	*Entrepreneurship and economic development*	4.54	0.44*	0.68
	Innovation and economic development	4.44	0.45*	
Second equation	*Innovation and entrepreneurship*	14.27	0.73*	0.53

First hypothesis: there is a relationship between entrepreneurship and economic development

The results of the model indicate that there is a significant relationship between entrepreneurship and economic development. The path coefficient between these two variables, meaningful at 0.01 significant level, is 0.44, with a t-statistic equal to 4.54. Thus, the positive correlation found between these two variables suggests that an improvement and increase in the entrepreneurship level of the countries may pave the ground for their economic development.

Second hypothesis: there is a relationship between entrepreneurship and innovation.

The results of the model indicate that there is a strong significant relationship between entrepreneurship and innovation. The path coefficient between these two variables, meaningful at 0.01 significant level, is 0.725, with a t-statistic equal to 14.27. Thus, the positive correlation seen between these two variables suggests that an increase in the entrepreneurship level of the countries may consequently increase their innovation.

Third hypothesis: there is a relationship between innovation and economic development.

The results of testing data reveal that there is a significant relationship between innovation and economic development. The path coefficient between these two variables, meaningful at 0.01 significant level, is 0.448, with a t-statistic equal to 4.44. Thus, a positive correlation, observed between these two variables suggests that an improvement and increase in the innovation level of the countries may improve their economic development. Figure 1 depicts the path coefficient between variables and the factor loading between latent and manifest variables.

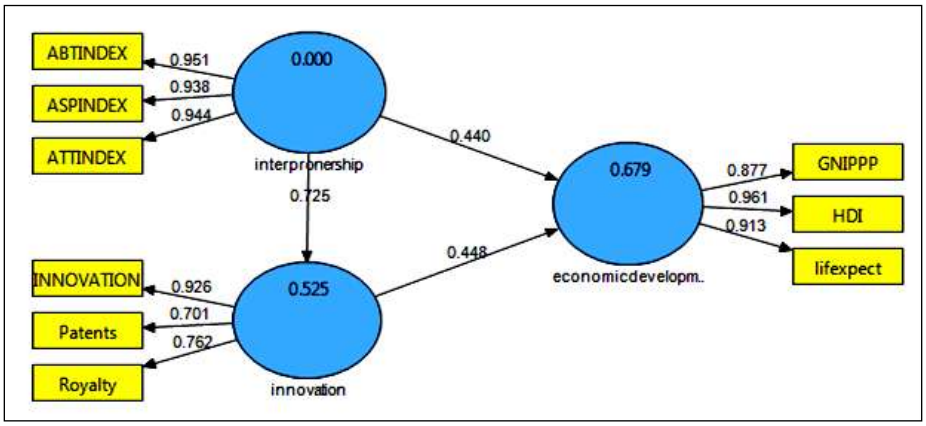

Figure 1- The relationship between latent and manifest variables within structural-path modeling

11. Conclusion

Achieving a high and sustainable economic development requires answering the question such as, "what factors do determine the rate of economic development and growth?" The present study is concerned with exploring the effects of innovation and entrepreneurship on the economic development of the society. Reviewing literature indicated that scholars have conducted a lot of research on economic growth to answer such questions. They finally came up with new patterns, namely Endogenous Growth Patterns. These patterns show that internal mechanisms of the economy such as education, appropriate level of knowledge and skill, research, innovation, etc. play a major role in the economic growth (Nasiriaghdam et al, 2011). Previous studies revealed that entrepreneurship plays a major role in development of economic indices (Hermata and Suzata, 2012). According to Muyka et al (2012), entrepreneurship is an actuator motor for innovation, competition, job creation and economic growth. Tama et al (2014) believe that entrepreneurship is an internal force paving the ground for economic growth and development.

Besides entrepreneurship, innovation has an important effect on the economic development and growth. According to Glinson (2000), knowledge and innovation have played important role in economic

activities all over the world during the past decade since innovation is the most important aspect of knowledge creation. Puga and Teffler (2010) believe that innovation has important effect on economic growth and development. The research shows that innovation has positive effect on the economic growth (Nasiriaghdam et al, 2011).

The present study collected data from 145 countries and tested the hypotheses in 9 variables. Structural-path modeling approach (based on partial least squares) is employed to analyze the relevant data. The results prove all research hypotheses. It is revealed that there is a significant relationship between entrepreneurship and economic development so that improving entrepreneurship in the society can account for its economic development. A significant relationship was also found between entrepreneurship and innovation. This suggests an increase in the innovation index of the countries as their entrepreneurship index increases too. Likewise, other analyses detected a significant relationship between innovation and economic development. It is believed that an increase in innovation may improve economic development. Therefore, internal factors such as innovation and entrepreneurship have major effect on the economic development of the country. These variables, as direct variables, and entrepreneurship, as an indirect variable, may cause economic development and growth through stimulating innovative activities in the community. Stimulating the innovative activities, these variables increase the production level and economic development and growth directly while entrepreneurship promotes the production level and economic development and growth indirectly.

References

1. Azar, Adel; Ghloamzade, R &Ghanavati, M. (2012) structural-path modeling in management, Application of Smartpls software. Nehgahedanesh publication
2. Azkia, M; Sefolahi, S &Tosifian, A (2013) Role of entrepreneurship in the economic and social development *saramadan1404.ir/showT.aspx?Lang=F&ID*
3. Musavimshhadi, S. M (2003) role of entrepreneurship in the economic and industrial development. Rahyaft, 13. 29
4. Nasiriaghdam, A; Dehghantarzjani, A.R; Rezaei, A &Beikmohamadlu, H (2011) the effect of innovation on the economic growth. A case study in Islamic countries. Journal of educational management studies, Vol 9, p159-182.
5. Schmitt, H &Khozeh, K (1993) hi tech for industrial development; Lessons from the experience of Brazil in electronics and automation.
6. Arrow, K. J،1962، "The economic implications of learning by doing", Review of Economic Studies, vol 29, p. 385-406.
7. Crepon, B., E. Duguet and J. Mairess ,1998, "Research, innovation and productivity: An Econometric analysis at the firm level", NBER working papers, No. 6696
8. Galindoa, Miguel-Ángel; Méndezb, María Teresa, 2014, Entrepreneurship, economic growth, and innovation: Are feedback effects at work? Journal of Business ResearchVolume 67, Issue 5, May 2014, Pages 825–829
9. Geroski, P. ,1994, Market structure, corporate performance and innovative activity, OxfordUniversity, Clarendon Press
10. Global Entrepreneurship Monitor, 2013 .GEM 2013 Global Report, accessible in this site http://www.gemconsortium.org/docs/download/3106
11. Global Innovation Index rankings,http://www.globalinnovationindex.org/content.aspx?page=gii-full-report-2013
12. Grossman, G. and E. Helpman, 1991, Innovation and Growth in the Global Economy, Cambridge: MIT Press.
13. Human Development Indicators and Thematic Tables Statistical Tables from the 2013 Human Development Report : http://hdr.undp.org/en/data

14. Kardos, Mihaela, 2012, the Relationship between Entrepreneurship, Innovation and Sustainable, Development. Research on European Union Countries , Procedia Economics and Finance, Volume 3, 2012, Pages 1030–1035
15. Kirchohoff, B. ,1994, "Entrepreneurship and dynamic capitalism", Westport Connecticut, Praeger publishers
16. Lucas R. E, 1998,"On the mechanics of economic development", Journal of Monetary Economics 2, p 3-42.
17. Mairess, J. and P. Mohnen ,2004, "The importance of R&D for innovation: A reassessment using French survey data", Maastricht Economic Research Institute on Innovation and Technology, http://www.merit.unimaas.nl
18. Moica, Sorina; Socaciua, Teodor and radulescu, Elena ,2012, Model innovation system for economical development using entrepreneurship education, Procedia Economics and Finance 3 , 521 – 526
19. Naudé, W, 2008, Entrepreneurship in Economic Development, UNU-WIDER, Research Paper No. 2008/20, p. 47.
20. Nelson R., Winter S, 1982,"An evolutionary theory of economic change", Harvard University Press, Cambridge MA.
21. Pakes, A. and Z. Griliches ,1984, Patents and R&D at Firm Level: A First Look in R&D, Patents and Productivity, ZviGriliches,ed, The university of Chicago Press, 55-72
22. Puga, D. and D. Trefler, 2010, "Wake up and smell the ginseng: Innovation trade and the rise of incremental innovation in low-wage countries", Journal of Development Economics, 91,1); 64-76.
23. Romer, P, 1986,"Increasing returns and long-run growth", Journal of Political Economy, vol 94 nr 5, p.1002-1037.
24. Romer, P, 1987,"Growth based on increasing returns due to specialisation", American Economic Review, vol 77 nr 2.
25. Romer, P, 1990,"Are non-convexities important for understanding growth?" American Economic Review.
26. Romer, P, 1990,"Endogenous technological change", Journal of Political Economy, vol 98, nr 5, p. s71-s102.
27. Romer, Paul M., 1994, "The origins of Endogenous Growth," Jour. of Econ. Perspectives, 8,1,pp.3-22
28. Toma, Sorin-George; Grigore, Ana-Maria; Marinescu, Paul ,2014, Economic Development and Entrepreneurship , Procedia Economics and Finance, Volume 8, 2014, Pages 436-443
29. Wu, Yanrui ,2010, Innovation and Economic Growth in China, University of Western Australia, Department of Economics in its series Economics Discussion / Working Papers with number 10-10.
30. Zachariadis, M. ,2002, "R&D, Innovation and Technological progress: A test of the Schumpeterian frame work without scale effects " www.bus.lsu.edu/economics/papers/pap02_18.pdf
31. Zsuzsannaa, Szabo K.; Hermana, Emilia ,2012, Innovative Entrepreneurship for Economic Development in EU, Procedia Economics and Finance 3, 2012) 268 – 275