

The Diversity of Higher Education Economic Competitiveness and Development	العنوان:
مجلة جامعة الزيتونة	المصدر:
جامعة الزيتونة	الناشر:
Edwick, Alshadli A.	المؤلف الرئيسي:
12ع	المجلد/العدد:
نعم	محكمة:
2014	التاريخ الميلادي:
28 - 51	الصفحات:
840441	رقم MD:
بحوث ومقالات	نوع المحتوى:
EcoLink, IslamicInfo, HumanIndex, EduSearch	قواعد المعلومات:
التعليم العالي، التنمية الشاملة، القدرة التنافسية، التنمية الاقتصادية	مواضيع:
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## The Diversity of Higher Education, Economic Competitiveness' and Development

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### **Abstract;**

Higher education is now a major economic driver, and colleagues and universities are critical components of national and regional work, force-development strategies and innovation systems. Higher education plays, an increasingly critical role in the economic competitiveness of local, state, and national economies. This paper lays out the growing global interest and import of economic competitiveness and the ways in which governments are seeking to harness the power of higher education to support their own competitiveness. It concludes with a discussion of how governments, businesses, and higher education institutions could collaborate to develop public agendas to guide, among other things, the economic contributions of colleagues and universities. Furthermore, to scan higher education economic development activities as well as state-level study of the economic roles of campuses in a large public university system, this paper describes the many ways in which colleagues and universities promote and foster economic development. Higher education economic development activities are diverse, involving many different economic processes.

This paper describe how; 1) these activities are often combined in complex combinations; 2) the activities interact with and are contingent on each campus' environment ; and 3) the activities and their probable impacts may changes over time. Also, the purpose of this paper is to bring greater attention to the critical role that higher education plays in economic development. The attention here is not to put these economic development functions of colleagues and universities on a pedestal above teaching, research, and community, and meant to bring greater clarity to their communities.

The paper conclude that the governments should improve and expand higher education institutions for the sake of increasing development and recommended that collaboration between government and institutions can helpful in identifying and capitalizing of the core strengthen of an economy.

**Keywords:** higher education, innovation, economic competitiveness, universities, foster, process

## 1. INTRODUCTION

Today live in an age of a knowledge-based economy, in which the creation and transmission of knowledge has come to be a primary impetus for economic development. This has led to a shift in the policies and practices used by many countries to compete economically. According to (Porter, 1990) he observed that in most of the world, a nation's economic prosperity would no longer "competitive advantage" would be increasingly based on creative and scientific innovations. This new paradigm of economic development positioned colleges and universities as primary engines of economic growth (Romer, 1990).

Also, recently many nations are involved in the great brain race, a phrase used by (WildavskBen, 2010) to describe the increasing competition among nations for new knowledge and innovation. Governments increasingly adopt comprehensive competitiveness strategies designed to improve their economic position in the global economy. Recognizing that an advantage of the great economic power of the last century was their higher education sectors many governments are now seeking to expand the capacity and quality of their own sectors, this, at times, includes actively recruiting and retaining students, scholars programs, and institutions from other nations, particular those perceived to have strong higher education's system. Some of these nations are using the higher education resources of other nations to decrease the competitive advantage gap between them. In this new environment, governments have begun to realize that higher education institutions are important anchoring tools as they help to attract and retain students and alumni. Governments also recognize that such institutions drive innovation and industry development, and have begun to invest in research institutions, research parks, and research programs.

Beyond the engagement in educating students, much of the economic development contributions derived from higher education come through partnerships with the government as well as the local community and industry. The reality is that while nations posture over competitive advantage, the economic contributions of colleges and universities occur in their local communities. So it is also, important to understand the connection between higher education institutions and the communities where they are located. See table 1 which show the change of expenditure on educational institutions for selected countries over the period (1995-

2004). It can be seen the dramatic change in expenditure on education in some countries.

**Table: 1 change in expenditure on educational institutions , selected countries (1995, 2000, 2001, 2002, 2003, 2004) index of change between 1995 and 2004 in expenditure on educational institutions from public and private sources, by all level of education {GDP deflator (1995=100) constant price}**

	1995 (1)	2000(2)	2001(3)	2002(4)	2003(5)	2004(6)	
Australia	100	127	133	137	141	145	
Austria	100	103	105	106	107	108	
Canada	100	108	111	114	n/a	n/a	
Denmark	100	123	131	132	132	138	
Finland	100	113	117	122	129	134	
France	100	110	111	111	n/a	n/a	
Germany	100	n/a	n/a	n/a	110	109	
Greece	100	155	166	176	200	208	
Hungary	100	111	119	134	155	150	
Ireland	100	137	142	148	159	171	
Italy	100	103	113	107	109	107	
Japan	100	107	108	109	112	111	
Mexico	100	129	138	148	162	159	
Poland	100	125	134	136	142	151	
Portugal	100	130	138	137	139	136	
Spain	100	110	113	115	119	124	
Sweden	100	123	124	135	137	139	
United kingdom	100	112	120	131	139	139	
United states	100	131	130	135	143	148	

Sources: Education at a Glance 2007 OECD Indicators OECD

The purpose of this paper is to cultivate greater understanding among elected officials, business representatives, policymakers, academics, and other concerned parties about the central role universities and colleges play in national, country, and local economies. There are some attempts to know how universities and colleges exert impact on economic growth. Some of them explore methodologies, metrics, and data sources that may used to gauge the performance of diverse higher education institutions in improving economic outcomes. Other present typologies of economic development activities and generate new energy and focus for national community of scholars and practitioners working to formulate new models for how universities and colleges may lead economic development in their nations,

country, and communities while still performing their more traditional and central educational functions.

Higher education's traditional role and strengths lie in educating students and producing new knowledge. Increasingly, through, higher education institutions apply these functions, and take on additional roles, to generate economic growth and prosperity in the institutions' communities, regions, and, in some cases, other countries. In part this transformation has been fostered by a growing recognition of the economic realities associated with a "flat world" where the global location of production, income and economic growth is determined by competitive advantage, (Friedman, 2005).

In this flattened world, innovation has become one of the driving forces behind a nation's economic competitiveness; as such, higher education has, in itself, become a competitive advantage (Lane, 2012; Carnevale & Rose, 2012). According to (Stieglitz Joseph, 2010) long run competitive advantage lies in the country higher education institutions and the advances in technology that drive from the advantages that those institutions provide.

Despite the growing awareness of higher education's role in economic development activities, the resulting impacts are not easy to assess and many attempts to do so have been fraught with problems (McHenry, Sanderson & Siegfried, 2012). Many economic impact studies focus on summing the spending and re-spending of money. However, such studies do not capture the full scope of an institution's economic engagements. Indeed, these activities are often, complex and sometimes nonlinear, and their effects may be contingent on local context, the cumulative effects of prior actions, and technological timing. To better understand the economic role performed by universities and colleges necessitates a mixed methods approach to trace their processes and product

## **2. GLOBAL COMPETITIVENESS AND HIGHER EDUCATION**

The economic priority of nation in the twenty century would be created, not inherited, that nation's competitive advantage in the global marketplace is based upon in industries' ability to innovate and upgrade. This conclusion challenged classical economic assumptions that the advantage of nations mostly rested on their access to natural resources and labor as well as productive regulation of their economic markets, instead (Porter, 1990) argued that competitiveness in the modern world would favor the innovations. Moreover, innovation would be "created and sustained through

a highly localized process” not a standardized model to be adopted by all nations. He noted that differences in “national values, culture, economic structures, institutions, and histories all contribute to competitive success” (Porter, 1990). This premise quickly garnered the attention of leaders around the globe and led many nations and regions to be more strategic about enhancing their global competitiveness as a means for enhancing their economic prosperity.

The economic competitiveness of nations would soon become a competition in its own right. In 2004, the World Economic Forum, located in Switzerland, began producing an annual index of national competitiveness in their global competitiveness report. The ranking are based on several pillars of economic development: public and private institutions, infrastructure, macro economic framework, health and primary education, higher education and training, market efficiency, technological readiness, business sophistication, and innovation. Given the different development stages of nations, the report breaks nations into three groups based on the most important factors driving their economic development. The stages of development beginning with the stage with least development are factor-driven, efficiency-driven, and innovation-driven.

As country move into more advanced economic stages, higher education becomes increasingly important. Countries with factor-driven economies gain competitiveness advantage based on what is available within the nation, primarily natural resources and unskilled labor. In this stage, on the most important factors in the global competitive index are institutions (government agencies and accountability), infrastructures macroeconomic framework, health and primary education. Moving into an efficiency-driven economy, wages tend to increase and productive economies need to figure out ways to support the increased wage demands and further improve quality of life. They do this by enhancing the efficiency of the production process and quality of products. The competitive advantage of nations at this stage is driven by quality and accessible higher education institutions, efficient and well-developed markets, and the ability to effectively use technology.

Although less advanced countries can still improve their productivity by adopting existing technologies of making incremental improvements in other areas, for those that have reached the innovation stage of development, this is no longer sufficient for increasing productivity. Firms in these

countries must design and develop cutting-edge products and processes to maintain a competitive and environment that is conducive to innovative activity, supported both the public and private sectors. In particular, it means sufficient investment in research and development, especially by the private sector; the presence of high quality scientific research institutions collaboration in research between universities and industry; and the protection of intellectual property (Schwab, 2011).

Moreover, these nations need to develop their workforce to be able to both create and use these new innovations. Moving from an efficiency-driven economy to an innovation-driven economy requires a nation to produce and take advantage of new products. A nation must be able to both create and utilize innovation. This requires a research infrastructure and entrepreneurial culture that can foster innovation as well as an educational infrastructure to support knowledge acquisition, skill development, and critical thinking among the nation's workforce.

Competitive advantage is not just important for being able to foster economic prosperity within a nation. Some now argue that global power is increasingly being tied to economic might. (Clifton, 2011) noted that one of the leading international polling organizations, argues that the data from the vast array of Gallup's polling suggest that the competition for good jobs and GDP growth is becoming increasingly critical and that in the next three decades, global competition among nations will be led by economic force, political or military power. Thus, if economic might is driving the power struggle among nations, then innovation will likely be one of the keys to long-term success. And, in many nations, higher education institutions are the primary force driving innovation and developing workers for the innovation-driven economy. Indeed, that because of their unique ecosystem universities is one of the most important institutions in the competition for jobs and, thus economic power.

For example, an American research university has been often posited as one of the primary drivers of the nation's economic competitiveness. Many have touted its role in producing a high-skilled work force, attracting some of the best minds from other countries, and fostering creative activity and innovation. Of increasing interest is also how these institutions have been able to sustain their global dominance over the past several decades (Knapp and Shobe, 2007).

Recognition of higher education's crucial role in supporting economic competitiveness has changed markedly in the last twenty years. In the competitive advantage on nations (Porter, 1990), discussion of the role of higher education in a nation's competitive advantage is surprisingly minimal, porter focus at the time was primarily on the role of firms in fostering competitive advantage. He noted that firms are particularly important in shaping the creation of factors that drive the economy and firms can influence the direction of higher education institutions by sponsoring students, helping institutions identify the needs of industry, helping with curriculum planning, hiring graduated, and financially supporting equipment, facilities, scholarship, research, and programs that recognize outstanding teachers and students.

Twenty years later, higher education is understood not just as a means for supporting a nation's competitive advantage, but as a competitive advantage in its own right. Nations such as the United Kingdom and the United States, among other, have a long history of investing significant resources in their higher education sectors. This commitment to higher education has resulted in the development of quite advanced educational system (Carnevale and Klose, 2012).

The theory of competitive advantage can be used to understand the development of higher education as a tradable service. For example, the United States of America's competitive advantage is the area of higher education has resulted in the US successful exporting its higher education sector to most other countries. Why would country desire to import higher education services? U.S has already invested significantly a very strong global reputation. For many nations, the costs of creating a comparable system to educate their students would be unfathomable. As such, it is more efficient to invest their limited resources in other industries and, instead, send their students abroad to study.

#### **NATIONAL COMPETITIVENESS: HIGHER EDUCATION'S ROLE**

It is too difficult to determine exactly how higher education emerged as a competitive advantage in the advanced countries. One might point to any myriad of the country to spur the development of research into the agricultural and mechanical arts through the funding of new colleges and universities. Many other policies could likely be added to this list, but policies alone did not create and sustain the worldwide success of this particular national strength. A number of institutional, cultural, and



historical factors also contributed. (Geiger, 2004) suggest the answer is the decentralized, competitive structure of the university system which fostered and rewarded innovative and entrepreneurial behavior. The collective diversity and flexibility of the entire high education sector, with community colleges, liberal arts colleges, comprehensive institutes, and so forth offering multiple educational pathways on how national pathways to a wide range of students surely also helped. But for the purposes of this section, I am focusing on how national governments incorporate higher education into their competitiveness strategies. Many development countries design a plan for high education institutions could be used or grown to support its economic competitiveness. These are certainly calls for increasingly the number of college graduate in the coming years, and some leaders believe the third world countries should support additional research funding, but these are not plans or strategies. This disconnect is partially explained by the fact that governments, and the role of higher education in the competitive advantage of country is discussed below.

Education is central to our ability to improve our quality of life and wellbeing through success in selling goods and services on international markets. The quality of education outcomes is central to national competitiveness. For example Ireland's education system has been a key contributor to economic growth and improvements in living standards in recent years. We need to have one of the best education and research system in the world to drive economic recovery (National Competitiveness Council, 2009). For many nations, the role of higher education in fostering economic competitiveness is seen primarily as the production of highly skilled labor. For example, the competitiveness reports of such varied nations as Croatia, Malaysia, South Korea, and Guyana all point to the need for more workers for the knowledge-based industries. For example, in the case of Malaysia, the government wanted to stem the significant outflows of students from the nation. (Ziguras, 2003) estimated that in 1995 Malaysia lost approximately US\$ 800 million due to the very large number of students studying overseas; this does not include the potential loss of productivity occasioned by a large number of those students not returning to the country. To counter this trend of their students studying abroad, the Malaysia government began expanding its domestic capacity, as well as attracting branch campuses from overseas institutions (Lees, 2001; Sirat, 2005)

The increasing importance of economic power, particularly as measured through economic competitiveness, has fostered renewed interest by nations in their higher education systems. Many nations seem increasingly less willing to outsource the advanced training of their students to other nations. The corresponding changes will likely mean increased competition for international students; but also new resources for higher education institutions in nations that deem higher education of strategic importance.

#### **4. HIGHER EDUCATION'S CONTRIBUTION TO COUNTRY ECONOMIC COMPETITIVENESS**

Globally, the concept of competitiveness is mostly discussed at the national level, but it is also influencing much activity at the national level as well. For example Libya and United Emirates are both active in increasing their own competitive advantage (Wannis & Earling, 2007). In terms of higher education, both have adopted strategies to import higher education and build new domestic institutions to help expand their advantage (Groom, 2010). They also compete with each other as with well as other nations in terms of attracting students, workers, and business. In nations where governments retain control over higher education, economic development and competitiveness strategies that utilize higher education can be quite varied, but often lead to government competing over business, laborers, and other drivers of economic development. Higher education institutions can play an active role in its competition seeking to attract students, faculty, resources, and recognition. Many countries now have competitiveness councils and are ranked based on their own economic competitiveness and how business friendly they are. Some states even have their own international trade departments, designed in overseas markets. As with nations have come to recognize the importance of higher education's institutions, though many now have been forced to cut back on their support to higher education (Johnstone, 2012).

Despite this new economic reality, many higher education institutions many countries remain substantially linked to their government environments and states stakeholders. As such many institutions remain committed to valuing their contributions to their state and explaining how they are important for fostering the country's economic competitiveness.

Innovation has become the driver of economic competitiveness. Colleges and universities, particularly those with a significant research infrastructure, have proven to be one of the primary sources of innovation. In fact, (Abel

and Deitz , 2009) found that having a research university in a community is one of the most important contributions to creating and innovation-based economy, as such entities not only produce new knowledge and facilities knowledge spillover into the local community but their infrastructure is important for retaining and attracting high-skilled laborers into the local population. The research by country institute revealed that there were two basic strategies for fostering innovation. The first, which was often pursued with a collaboration of government, industry, and private and public higher education institutions, focused on creating a research infrastructure that would allow for building and or attracting an industrial cluster. The university, in collaboration with a local economic development organization, was able to attract many companies into the business (Shaffer & Wright, 2010).

A second contribution is the support offered to local business. Many colleges and universities host small business development offices designed to support entrepreneurs and small business owners with creating and building their companies. Communities and technical colleges collaborate with business and industry to provide job creating initiatives (Jacobs, 2012).

Why are higher education institutions interested in providing such support? The efficiency and effectiveness of a business's operations contributes to how well a region can adapt and absorb new technology (Glaeser and Saiz, 2003). While knowledge creations supports innovation, building better business helps facilitate the transfer of knowledge and innovations into the local marketplace. Community revitalization, a third avenue of contribution, also proved to be an important component of the economic impact of colleges and universities. The impetus for such initiatives is twofold. First, higher education leaders recognize the benefit to being located in productive and welcoming communities. The local environment can affect an institutions' ability to recruit and retain students, staff, and faculty. Second, local and state leaders are increasingly calling on institutions to invest in the local community. In many places, colleges and universities are among the largest employers and serve as community centers. In addition, despite their growing global engagements, colleges and universities, as anchor institutions, remain inextricably linked to their local communities (lane & Kniser, 2008) this is very different than corporations, whose headquarters, research labs, and production facilities have become increasingly mobile. Thus higher education institutions have also

increasingly taken role once filled by private industry in terms of investing directly into public infrastructure and community institutions (Shaffer and Wright, 2010).

### 5. FRAMING THEIR COMPETITIVE ADVANTAGE ECONOMIC IMPACT STUDIES

Many universities and colleges share their economic contributions to local stakeholders colleges and university which they fostering economic growth. Much economic future is largely tied to the competitiveness of its knowledge-based industries. Consequently, many countries share a common interest in the foundations that make these industries strong. There is no element of that foundation that is more important than the state's public university system. This is not arguing that these institutions do not contribute to the competitiveness of their regions. Without these institutions, it is very likely that their region's ability to attract and grow business and industry would be greatly reduced. But given the now widely accepted belief that production and use of innovation is the key to long-term competitiveness, it is surprising that their innovation highlight their role in the innovation-driven economy. Though it is true measuring such contributions can be complicated. Governments

Given that many governments are now making strong research universities central to their economic development plans; competitive pressures may it difficult for many universities major research universities to maintain their national and international stature. It seems that institutions may want to examine their competitiveness claims and identify ways to measure and evidence contributions (Knapp and Shobe, 2007). See table which show the public internal rates of return for individual obtaining a university-level degree in 2003. Table show us the percentage of the Public internal rates of return for an individual obtaining a university, it was a substantial number in United States and Hungary over the period. Furthermore, the table 3 stated the the private internal rates of return for an individual obtaining a university it was a moderate over the period, also show us the different between male and female over the period.

**Table: 2 Public Internal rates of return for an individual obtaining a university-level degree 2003 in selected countries**

	Rate of return when the individu	Rate of return when the individu	Rate of return when individu	Rate of return when individu	Non direct but foregon	Non direct but foregon

	al acquires the next higher education	al acquires the next higher education	al at age 40 (direct cost) and foregone earning	al at age 40 (direct cost) and foregone earning	e earning	e earning
	Male%	Female %	Male %	Female %	Male%	Female %
Belgium	12.2	17.9	10.6	9.4	10.3	9.0
Denmark	7.8	6.9	3.4	1.0	3.3	0.9
Finland	13.6	11.3	10.7	8.7	10.6	8.6
Hungary	18.8	13.1	14.8	10.3	13.6	9.2
Korea	14.2	16.8	7.4	17.2	5.9	13.1
New Zealand	9.9	9.9	2.4	2.1	1.7	1.2
Norway	9.5	9.9	4.3	4.5	4.3	4.5
Sweden	7.5	6.3	3.6	1.8	3.4	1.6
Switzerland	6.3	5.8	-0.1	-0.7	-0.2	-0.9
United kingdom	13.7	16.1	6.4	8.4	5.6	7.1
United states	14.1	13.0	9.6	6.0	7.3	3.2

Source: OECD. See Annex 3 for notes (<http://www.oecd.org/edu/eqg2007>).

Table: 3 Private Internal rates of return for an individual obtaining a university-level degree 2003 in selected countries

	Rate of return when the individual acquires the next higher education	Rate of return when the individual acquires the next higher education	Rate of return when individual at age 40 (direct cost) and foregone earning	Rate of return when individual at age 40 (direct cost) and foregone earning	Non direct but foregone earning	Non direct but foregone earning
	Male%	Female%	Male %	Female%	Male%	Female%
Belgium	10.7	15.2	20.0	28.2	21.1	32.2
Denmark	8.3	8.1	12.4	10.2	12.5	10.5
Finland	16.7	16.0	16.2	13.2	16.4	13.4
Hungary	22.6	15.0	25.1	19.4	27.8	22.0
Korea	12.2	14.9	15.0	27.7	15.9	31.1
New Zealand	9.3	12.9	6.5	7.5	7.2	8.8

Norway	12.1	15.7	15.6	15.9	15.8	16.2
Sweden	8.9	8.2	10.4	8.2	11.3	22.3
Switzerland	10.0	9.8	10.9	20.6	11.3	22.2
United kingdom	16.8	19.6	11.4	14.9	12.5	16.8
United states	14.3	13.1	12.9	9.7	15.1	13.0

Source: OECD. See Annex 3 for notes ([www.oecd.org/edu/eqg2007](http://www.oecd.org/edu/eqg2007)).

## 6. ECONOMIC DEVELOPMENT STRATEGIES: BUILDING COLLABORATIONS

Some prominent theories about fostering economic growth and competitiveness are built, at least in part, on the contributions of higher education institutions. (Florida Richard, 2003) talks about the need for regions to attract the creative class, the innovators and creators of the new economy. According to (Clifton, 2011) he suggests 'super mentors' play an important role in cultivating and growing small business. Moreover, industries benefit significantly from the exchange of ideas generated by knowledge spillover (Carlino, 2001). Finally, (Etzkowitz and Leydesdorff, 2000) argued that successful local innovations systems resemble are intertwined. Common among all of these economic development and innovation-fostering strategies is colleges and universities. These institutions are believed to create environments attractive to the creative class, foster super mentors and fill a critical role in the development of new research and new ideas.

In many cases, it seems that discussions of economic development are one-sided. Institutional leaders, as demonstrated above, often highlight the myriad ways in which their college or university could contribute economically to their country. Government leaders invoke the need for higher education to support their competitiveness agenda, but it seems such plans are often designed with little direct recently gone so far as to question the value of institutional activities that are not clearly tied to the economic goals of the country.

An economic development plan should not be viewed as a substitute or replacement for an institution's mission or strategic plan. There are many important functions related to research, teaching, and service that are not clearly aligned or connected to economic development goals and strategies. This does not mean they are unimportant. There are, however, substantial aspects of the activities of colleges and universities that can and do

contribute economically to society. One of the critical connections to remember is that between the institution and the local/ regional community. Each region has a different set of historical, cultural, and, thus, will likely influence the economic development strategies of the related governments. While the role of higher education institutions in fostering economic development and competitiveness is now widely valued, there is no one common approach to either economic prosperity or higher education's role in developing such.

### **7. A TYPOLOGY OF COLLEGE AND UNIVERSITY ECONOMIC ACTIVITY**

Higher education's engagement with economic development comes in myriad forms and fashions. In this setting, higher education institutions and systems are a primary source of the new knowledge needed to produce high-paying jobs in the innovation economy, and they are essential to developing a workplace prepared to take those jobs. Across Libya we found that the higher education is putting its research and educational power to work by developing new ideas, deploying inventions for commercial, educating entrepreneurs, and helping business prepare workers for advanced tasks.

Drawing from our finding we classify economic activity by universities and colleges among five broad categories, observing higher education institutions as: (1) economic units, (2) developers of human capital, (3) engines of innovation in research and development, (4) sources of business assistance, and (5) resources for community vitality.

### **8. THE INSTITUTION AS AN ECONOMIC UNIT: SPENDER AND CONSUMER**

At perhaps their most elemental level, higher education institutions are economic actors that receive and expend resources in exchange for goods and services. Universities and colleges offer services to students and parents, who in turn bring resources to the institution through tuition payments, living expenses, visits, and other economic activities. Most also receive grants from other public and private sources, such as research grants from the government, private foundations, or corporations. These resources are then spent by the items essential, construction, vendors, service contracts and other factors. In turn, these expenditures are re-spent, as university employees buy food, shelter and other items, or as construction companies purchase supplies. And they circulate farther as those who work for businesses supported by higher education institutions spend their income.

As these cycles of spending and re-spending continue, depending on their origins and destinations as well as on the spatial boundary of analysis, a dollar imported by a university is seen as producing a multiplier effect on the local economy- at least to the extent that the spending and re-spending remains within the local economy.

Moreover, perceiving higher education institutions in this limited role as spenders and consumers omits economic impacts generated by the content of what it is that universities and colleges do, such as key impact of an educated population or basic research that makes technological innovations feasible, new businesses spun off by university research activities and entrepreneurial services benefiting from workforce training and entrepreneurial services, or businesses attracted to a community because of university presence.

Higher education institutions are not akin to large retail stores, whose impact can be summed from their roles as employers and purchase of goods. In addition to their direct effect on local spending and re-spending, we found that universities and colleges are performing several other general functions, among them, creating and transforming knowledge as an active resource for businesses and communities.

## **9. RESEARCH, DEVELOPMENT AND INNOVATION**

Universities create new knowledge, including basic research as well as activities aimed at producing market innovations, such as commercializing research finding, public-private partnership to produce marketable research finding, and pulling together researchers from multiple disciplines, different departments and schools, and high technology businesses to create clusters of people and institution that learn from each other, generate new ideas, and translate them into innovations.

Research activities among institutions of higher education have been found to have significant consistent economic spillover effects at the local regional levels, typically through commercial innovations and research (Jaffe, 1989; Anselin, Varga, & Acs 1997). Universities and colleges the key to growing high-tech industry was to foster robust research universities and institutions, a critical factor for economic growth because high-tech industry "is becoming a more important determinant of the relative economic success of metros" (DeVol & Wong, 1999).

Abel and Deitz, (2011) found that while higher education levels in the populace are important to state and regional economies, there is a more



powerful impact if the local schools are research universities. Because “college graduates are highly mobile,” there are a positive relationship between a metropolitan area and production (Number of colleges students and educates) and Human Capital”. however “R&D activity tends to be much more geographically concentrated,” and because these activities “influence the demand for human capital in a region that a spillovers from academic R&D plan an important role in attracting highly educated workers to a region.

Yet basic research does not always generate market innovations and eventual sales revenues (Geiger& Sa, 2008). To commercialize research produced by university personnel, universities have adopted several practices designed to generate more innovation and licensing revenue.

## **10. ORGANIZATIONAL INSTITUTIONAL STRUCTURES TO PROMOTE INNOVATION**

The science-based technologies that inform a number of fields with burgeoning commercial application are typically interdisciplinary and not easily assimilated into traditional academic departments. In-incorporating these new fields- or new combinations of older fields- into the department and curricular structure of universities has been a challenge. Deliberate steps to restructure academic programs on an interdisciplinary basis have become increasingly common and special institutes for science-based technologies have proliferated.

### **10. 1 SUPPORTING BUSINESS**

Even without playing a direct role in conducting research, universities and colleges can support local businesses and communities through subsidies and services, such as access to laboratories, office space, computing facilities, and incubators. They can also assist their surrounding cities and towns by using campus building of other major projects to improve community life and sustainability, or by assisting with other projects that spur overall community development.

### **10.2 FOSTERING COMMUNITY VITALITY**

Higher education institutions also contribute indirectly to the economic health of their region by fostering the vitality of their surrounding communities. Universities provide cultural enrichment and recreational resources, serving as hub for community and regional identity building. Higher education institutions also assist local government, businesses, and

nonprofit organizations in local problem solving, particularly with respect to urban and regional planning public and environment health, and needs assessment. And they can use their physical resources in ways that address community around declining neighborhoods.

## **11. CHARACTERISTICS OF ECONOMICS DEVELOPMENT ACTIVITIES AMONG UNIVERSITIES AND COLLEGES**

There are many different types of higher education economic development activities and several characteristics that stand out as significant for understanding their impact on local and regional economics.

First, what is most striking is the great variety of economic development activities that universities and colleges have developed. Moreover, these activities are not just different methods of producing similar effects; they involve different economic processes. The economic effects of these diverse activities operate through different casual chains, over different time horizons, and across different geographical areas.

By contrast, the effects of training and education on human capital and productivity are much harder to gauge, as these effects depend on local demand for particular skills relative to other labor markets as well as additional factors affecting the migration of people trained or educated at the college or university. Business services and subsidies (such as entrepreneurial training or free or low-caste physical facilities, as incubators, offer) are more certain to go to local firms. Their impacts, however, on the local economy depend on whether and how these factors affect firms' productivity, their ability to find market niche, or many other firm-level variables related to growth and sustainability. Finally, the economic effects of research or "idea factories" involve very complex and typically long chains of events- often twenty years or longer- running from the generation of discoveries, their dispersion among other researchers of potential entrepreneurs, the application of those ideas to marketable innovation, and the effects of innovation on economic growth (National Research Council, 2006).

Second, these activities are often intermingled in efforts to produce economic impacts; that is, the activities are frequently bundled. While we have described the various economic activities of universities and colleges as if they are discrete, separate programs, they are often combined in package of interrelated efforts within a universities or colleges. Although we found some specialization in approaches across campuses- the research

universities did more commercialization of discoveries, of course, while community colleges focused more on developing specialized training programs for specific business or industries- we also found a lot of overlap of activities as some universities performed many economic development functions. Combinations of activities were especially common among the larger, more ambitious economic development initiatives.

Third, our overview of higher education economic development activities suggests that economic impacts are contingent on many factors not controlled by the university. Timing and context- and entrepreneurs who pull these factors together- were important in designing effective economic development efforts. Many economic development activities are not typical “programs” in the sense of a set of activities that can be replicated with the expectation that they will generate similar results in other settings. Effective implementation is more artful-sensitive and responsive to the resources and opportunities available to a university or college at a specific time. One implication of these contingencies is that, if we do find a university or college to have a major impact, it is not necessarily true that what they did would produce similar results if attempted by another institution at another time.

Fourth, we found ways in which academic institutions dealt with the contingencies and managed the uncertainties-sometimes by developing and implementing initiatives in many small and distinct steps, steps that can be adjusted in light of feedback from prior actions. This process of innovative instrumentalism involves the “strategic decision on move forward in stages, as quickly as funding and demand allowed,” thus permitting the projects to show progress to potential funders and clients and avoid overextension and debt. To produce this sustained and cumulative process, an essential ingredient was a “nucleus of committed, persistent people” who “worked within an organizational culture that encouraged and valued entrepreneurship.

Fifth, as implied by the points already made higher education economic development colleges and universities. Firms are expected to graduate from incubators (though many do not, and many do not last long after graduation), and as a cluster of firms, partnership, and relationship, is built up, it may reach a tipping point where it begins to be an attraction to other enterprises and entrepreneurial efforts on its own.

### 13. INVEST IN THE FUTURE

In the wake of global economic crises many countries face the twin challenges of making public finances sustainable while building the foundation for continued long-term economic growth. Education is a large item of public expenditure in most countries. At the same time it is also an essential investment for developing long run growth potential of countries and for responding to the fundamental changes in technology and demographics that are re-shaping labor force. Education also play a major role in keeping individuals in the labor force longer-an advantage that becoming a necessity, Libya face demographic and structure changes in labor market. Not less important, good education increases employability. Focusing on labor market condition, people with lower levels education had more difficulties finding and keeping a job. Libya seen an unemployment rates among people with same level of education have remain in the same level while for those without upper secondary education, unemployment rates have repeatedly raise.

**Table: 4 Expenditure on educational institutions as a percentage of GDP, by levels of education (1995, 2000, 2004) in selected countries (from public and private sources by year)**

	2004	2004	2004	2000	2000	2000	1995	1995	1995
	Primary and post-secondary education	Tertiary education	Total of level of education	Primary and post-secondary education	Tertiary education	Total of level of education	Primary and post-secondary education	Tertiary education	Total of level of education
Australia	4.2	1.6	5.9	4.2	1.5	5.6	3.7	1.7	5.5
Belgium	4.1	1.2	6.1	4.1	1.3	6.1	n/a	n/a	n/a
Canada	n/a	n/a	n/a	3.3	2.3	5.6	4.5	2.3	6.8
Denmark	4.3	1.8	6.1	4.1	1.6	5.7	4.0	1.6	5.6
Finland	3.9	1.8	5.7	3.6	1.7	5.3	4.0	1.9	5.9
France	4.1	1.3	5.4	n/a	n/a	n/a	n/a	n/a	n/a

Germany	3.5	1.1	4.6	n/a	n/a	n/a	3.7	1.1	4.8
Iceland	5.4	1.2	6.6	4.7	0.9	5.6	n/a	n/a	n/a
Italy	3.4	0.9	4.3	3.2	0.9	4.1	n/a	0.7	0.7
Japan	2.9	1.3	4.2	3.0	1.3	4.3	3.1	1.1	4.2
Korea	4.4	2.3	6.7	4.0	2.6	6.6	n/a	n/a	n/a
Mexico	4.3	1.3	5.6	3.8	1.1	5.5	4.0	1.1	5.1
Netherlands	3.4	1.3	4.7	3.0	1.2	4.2	3.0	1.4	5.4
Poland	3.8	1.5	5.3	3.9	1.1	5.0	n/a	n/a	n/a
Portugal	3.8	1.0	4.8	3.9	1.0	4.9	3.6	0.9	4.5
Spain	3.0	1.2	4.2	3.2	1.1	4.3	3.8	1.0	4.8
United Kingdom	4.4	1.1	5.5	3.6	1.0	4.6	3.9	1.2	5.1
United states	4.1	2.9	7.0	3.9	2.7	6.6	3.9	2.4	6.3

Source: OECD ([www.oecd.org/edu/eag2007](http://www.oecd.org/edu/eag2007))

Table 4 show us the percentage of expenditure on education institutions as a percentage of GDP the remarkable percentage was in the United States in 2004 it was 4 percentage of GDP and the least number is 0.9 in Italy and Iceland.

Overall, the demand for better education has shown few sign slowing, despite the very significant increase in the number of tertiary graduates. Across the country, Libyan people with tertiary degree found a skilled job in their first year in the labor market. The fact that labor market have absorb the significant increase in individuals with tertiary education that rapidly labor market demand for skilled labor is changing its global competition for jobs moves up the education ladder, it will be crucial for Libya to develop policies that encourage the acquisition and official use of these competencies to retain both high value jobs and highly educated labor as

labor market change and the demand for competencies rises, adults will need to be able to re-enter education to upgrade their competencies or to change their professions.

Despite, compelling evidence of the economic and social benefit of education at a time of tight budget, there is a strong need for effectiveness and efficiency in the education system's response to the skill needs of a fast-changing labor market, and conditions must be found to generate greater value of money from educational investments. It is worrying that the significant increase in spending per student over the last decade has in many countries, not been matched with improvements in the quality of learning outcomes.

Improving the performance of education systems and raising value for money will be a formidable task for public policy. It will require education systems that have often tended to be supply driven to develop effective mechanisms to understand and respond to the rapidly changing economic and social demand for competencies. Effective policies here will require a solid understanding not just of the development of competencies, but also of how better competencies use their talent people, and how better competencies feed into better jobs, higher productivities, and ultimately better economic and social outcomes. The future will measure the success of education systems no longer by how much countries spend on education or by how many individuals complete a degree, but by the educational outcomes achieved and by their impact on economic and social progress. Citizens and employers now expect education systems to:

- 1- be responsive by ensuring that education and training providers adapt efficiently to changing demand;
- 2- Deliver quality education in learning provision so that the right skills are acquired at the right time, at the right place and in the most effective mode;
- 3- provide the flexibility needed to allow people to study and train in what they want, when they want and how they want;
- 4- Reduce barriers to entry such as institutional rigidities, up-front fees and age restrictions and ensure a sufficient variety of entry and re-entry pathways and;
- 5- last but not least, to develop efficient and sustainable approaches to the financing of learning with a rational basis for who, should pay for what, when, and how much.

Libya will continue to address these challenges vigorously and to pursue not just the economic development indicators data, but also advance in area where a considerable investment is still needs to be made in conceptual work. The further development of the knowledge society is her to stay, and requires a capable, highly qualified and innovative labor force. Managing the growth and development of educational systems in ways that improve access, enhance quality, increase performance and boost value for money is not ways. Libya must establish which policy choices and mix promote efficient learning in their specific context. International comparisons can offer valuable insight, as they allow Libya to see its own education systems in relation to the quality, equity and efficiently of educational services achieved elsewhere in the world. Sharing of policy experience can also how different educational system address similar problem.

### **13. RECOMMANDATION**

- a- Universities and colleges have been played a critical role to fostering economic development process, have yet to be documented fully and their impact has not been measured in any systematic form.
- b- Libyan economy needs many initiatives which have the potential to contribute to creating opportunities for the thousands of Libyan currently experiencing long-term unemployment
- c- There are an urgent need to enhance the effort to create another mission to the universities and colleges, in addition to meeting the skill needs of manufactures and training workers, these institutions are spurring the development of economic opportunities through the support and creation of new firms within their society
- d- To take advantage of these new opportunities it becomes critical for universities and colleges institutions to be aligned with two other important economic development actors. First are the local economic development groups both public and private within economic. E-universities and colleges can play an important role in the development and growth of new and relocated firms. There has been little engagement on issues such as research and specific skills training of incumbent engineers and managers of many local companies.
- f- Universities and colleges can applied a new research projects that support the productivity and growth of startup companies. In addition, this can include practical courses in accounting and basic management classes, which aid individuals in the writing business plans and product development strategies
- g- There are remaining a need for increased economic development to create employment and economic activities. Revitalization of the economy will require experimentation with new strategies to promote economic development and job growth. Universities and colleges can and should be part of these new strategies. Collaboration among educational leaders, local economic development organizations, business and industry, and government officials will be required to realize the full benefits of universities and colleges as economic drivers.

#### 14. CONCLUSION

What is lost in much of the rhetoric, however, is the need for government leaders and higher education officials to work collaboratively in developing economic development and competitiveness plans and strategies. A government broadly evoking the desire to improve or expand its higher education institutions for the sake of increasing economic development is likely to have minimal effects. Similarly, broad claims by an institution about its role in supporting a state or nations' economic competitiveness often fall on deaf ears. Collaboration between governments and institutions can be helpful in identifying and capitalizing on the core strengths of an economy. Moreover, such efforts can help facilitate the alignment of resources to support emerging competences strategies. Economic development is not the only purpose for higher education, but society is increasingly valuing this role. Colleges and universities, particularly in the age of the innovations-driven economy, play a critical role in these dynamics.

The diversity of economic development activities, the different economic process they involve, and the complex working and probable effects they can have no local economic conditions suggest that a variety of methods may be most appropriate for estimating their impacts. Seeing the wide range of economic development activities also gives rise to another set of questions: Why are there so many activities? How are they related to one another? How have they evolved within institutions? And how are they distributed across universities and colleges? The usual conceptualization of university economic development activities treats them as exogenous interventions in the economy.

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