The status of innovation in Saudi Universities
Anis Khayati and Mohammad Selim

Abstract: In light of globalization and rapid economic changes, innovation became a necessity for all organizations. Innovation differs from one type of organization to another, and is considered more complex in the case of universities. This paper deals with innovation in Saudi universities, and searches to analyze its main features based on a number of pillars such as the quality of education, innovation in educational programs and teaching methods, innovation in applied research related to the industry, innovation in developing partnerships and networks, social innovation and innovation in achieving the university's financial sustainability. Results show that despite the increasing development of higher education, the reality of innovation in Saudi universities does not match the potential of the country. In general, the pace is low and some constraints persist. It appears that the huge amounts of financial resources allocated to the higher education sector are not sufficient to improve innovation. In effect, qualitative aspects remain influential.

Subjects: Education - Social Sciences; Development Policy; Adult Education; Higher Education; Teachers & Teacher Education

Keywords: quality of education; innovation in educational programs; research networks; social innovation; financial sustainability; higher education; Saudi Arabia

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PUBLIC INTEREST STATEMENT
Higher education in Saudi Arabia is witnessing an unprecedented progress in the history of the country, and receives great attention from the Kingdom's leaders. This is evident in the huge financial allocations destined to this sector. Despite the remarkable improvement in many aspects, the forces of innovation in Saudi universities must further focus on qualitative aspects, such as the continuous development of curriculums and vocational education. This would transform Saudi students into highly skilled, innovative and dynamic workforce. Achieving such a milestone imposes the building of university education on merit, excellence and sustainability. This can spur multi-dimensional growth in different sectors, and ensure self-sustained high economic growth rates.
1. Introduction

In the new context of globalization and rapid technological progress, economic environment is increasingly changing. Growth or at least survival requires companies and organizations to respond and adhere to innovation (Dodgson & Gann, 2018). Therefore, innovation is an essential indicator of the performance of organizations and nations (Cassiman, Golovko, & Martínez-Ros, 2010; Lee, Lee, & Garrett, 2019). Innovation represents a sustainable competitive advantage because it allows organizations to adapt and interact quickly with changes and to get protected from inappropriate environments (Prajogo, 2016; Williams, Edwards, & Benn, 2018).

The word innovation is often used to denote something new and unique, in addition to brilliant ideas. What should be pointed out is that the capacity for innovation is not a gift given to a selected group of individuals. Instead, each individual possesses an enormous innovative energy. Therefore, innovation is a comprehensive concept. It can be defined as the actions made by individuals and institutions, whether directly or indirectly, in order to obtain positive results. It also refers to the range of knowledge, experience, technical practices and interrelationships, where their application contributes to the satisfaction of real and expected economic and social needs.

It appears that innovation is not only related to the invention of a new device or something new, but it can also be an idea or a performance of a specific task in an unusual and effective manner.

It is to note that innovation differs from one type of organization to another. This paper deals with innovation in universities, and searches to analyze the main features of this specific form of innovation. Innovation in universities is considered more difficult than innovation in companies and other organizations, even in the case of developed countries (Pinheiro & Young, 2017).

In fact, the university is a complex educational institution. This complexity lies in the ambiguity of the goals and objectives, the lack of clarity in the division of labor, the problems of power and the lack of coordination between parties in the decision-making processes, the institutional interaction between internal and external environments, etc.

This paper deals with the main features and specificities of innovation in universities, and takes Saudi universities as a case study. The paper is structured as follows. Section 2 highlights the main changes in the environment of universities. Section 3 analyzes the main features of innovation in Saudi universities, and Section 4 concludes.

2. Universities and changing environment

Universities are part of a global system characterized by rapid economic and technological changes. Therefore, universities are required to build a model that reflects the continuously changing social environment. Those changes include growing impact of information and communication technologies (ICT) on the development of distance learning systems. In effect, the learning environment became characterized by diverse learning options, such as e-mail, social media, virtual labs, digital libraries and video conferencing. Changes are also reflected by the increase and the diversification of social demand for higher education. This can be shown by the high percentage of students enrolled from both sexes, the study while working, the demand for specific specializations in the labor market, and new labor market requirements regarding graduates. Those requirements are related to their technical skills, decision-making ability, flexibility in performance and ability to adapt to rapid changes. In addition, with the entrenchment of knowledge economy, many large companies and institutions have become a center for the production of knowledge outside universities’ campuses.

Since the role of universities is vital for any society that seeks progress, the university should not be transformed into a rigid organization. On the contrary, it must be characterized by continuous development, modernization and improvement. The university should renew its roles and increase its effectiveness in the contribution to community welfare and knowledge development.
In this context, some authors consider that universities should act as educational organizations that export knowledge by providing educational services to students, institutions and society. For instance, Kim (2013) considers that the challenge that faces universities is to improve the factors of knowledge productivity. Also, Nicolescu (2018) points out that the university needs to be an organization of knowledge creation and dissemination, as well as a source of research and social development.

In addition, universities need to develop and modify their traditional academic structure in order to open effective channels of communication with surrounding markets, and to support the optimal investment in teaching and scientific research activities. This includes multidisciplinary research centers, education centers, e-learning, etc. (Coates, 2017).

Other authors (Guerrero, Urbano, Fayolle, Klofsten, & Mian, 2016; Spigel & Harrison, 2018) consider that universities must evolve in the same way as business organizations. Therefore, they should seek to achieve a higher level of professional management with a focus on the diversity of fields and financial sustainability.

Besides, The UNESCO’s recommendations on higher education emphasize the need to understand emerging challenges by creating mutual partnerships in order to facilitate the exchange and the transfer of appropriate knowledge (Michelsen, 2015).

3. Innovation in Saudi Universities

The appearance of universities in Saudi Arabia begun in 1957 by the establishment of King Saud University (KSU) in Riyadh, followed by the Islamic University in Madina in 1961. Later, as a result of the economic and developmental boom in the 1970s and 1980s, there has been a significant growth in higher education. New universities have been opened, and existing universities have witnessed a significant growth in their infrastructure and in the number of students and instructors (Table 1).

Although higher education for girls began only in the year 1970, at present, the enrollment of girls is almost equal to the boys (rate of 92.8% in 2017).

A study of the history of education in Saudi Arabia indicates the size of the financial expenditure in the sector. Table 2 shows that the ratio of spending on total education to total budget increased from 18.73% in 1990 to 25.23% in 2015, while the ratio of spending on total education to GDP increased from 5.26% in 1990 to 7.81% in 2018.

Regarding higher education, government allocations have increased several times over the past years. Financial allocations have raised from about SR 10 billion in 2005 to SR 77.2 billion in the year 2013, which represents about 9% of the total budget. Undoubtedly, this confirms the

<table>
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<tr>
<th>Year</th>
<th>Number of Students</th>
<th>Number of Instructors</th>
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<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
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<tr>
<td>1990–1991</td>
<td>132,827</td>
<td>71,934</td>
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<tr>
<td>2000–2001</td>
<td>195,052</td>
<td>237,296</td>
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<td>2010–2011</td>
<td>497,705</td>
<td>523,583</td>
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<tr>
<td>2015–2016</td>
<td>829,609</td>
<td>792,832</td>
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<tr>
<td>2016–2017</td>
<td>871,794</td>
<td>809,119</td>
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Source: Saudi Ministry of Education (MOE, 2019).
State’s interest in supporting and strengthening higher education. The total financial resources allocated to the higher education sector during the Ninth Development Plan (2010–2014) amounted to SR 220.2 billion, and the average cost for a student in higher education amounted to around SR 35,000. Saudi Arabia Scholarship Program is particularly costly (more than SR 44 billion). The Program provides financial support for 116,362 students studying abroad in different fields of study (MOE, 2019).

However, the financial effort does not necessarily guarantee an improvement in the quality of education, or an advancement in innovation possibilities in this sector (Haddad, Freguglia, & Gomes, 2017). A review of higher education literature (Christensen & Eyring, 2011; Perkmann et al., 2013; Schmitz, Urbano, Dandolini, de Souza, & Guerrero, 2017), shows that innovation in universities is based on a number of pillars, such as:

### 3.1. Quality of education

The process of innovation requires first that the universities undertake a strategic planning of innovation. Strategic planning is related to the interconnection between national development plans and the vision as well as the missions of the university. Strategic planning should be done in a way that allows the university to contribute to the dissemination of knowledge, the development of national industries and the spread of an innovative business model.

A prerequisite to be successful in the establishment of a strategy of innovation is to make the quality of education a priority. The quality of education englobes different features, notably the quality of students, instructors, infrastructure, educational administration, legislations and regulations, etc. (Kezar, 2014).

An examination of universities in Saudi Arabia reveals that the number of students is already high and is increasing rapidly, as can be seen from Table 1. This comes with no surprise, as Saudi Arabia is the only country in the world that offers an important aid to its nationals enrolled at universities (around SR 1000 per month). At the same time, criteria of admission remain relatively loose, and sometimes even done through nepotism. As a result, the academic level of students remains low particularly in mathematics, in which Saudi students are occupying late positions in international exams. This causes a serious obstacle to innovation since students need to be scientifically well qualified to absorb knowledge and participate later in the creation process.

Because of the high number of students, the number of Saudi instructors is insufficient to absorb this demand. Consequently, most universities recruit instructors from different countries on a contractual basis (generally annual contracts). Potentially, this hinders smoothness and continuity in the conduct of the educational process (Whitchurch & Gordon, 2017).

<table>
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<th>Table 2. Evolution of the spending in total education sector (1990–2018)</th>
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<td>Total Budget (in million SR)</td>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>1990</td>
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<td>2015</td>
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<td>2018</td>
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Source: Various sources based on data from the Ministry of Finance (MOF).
Concerning Saudi instructors, despite the high expenses destined to improve their level through different measures, which include financial support to attend foreign conferences and various training courses; in many cases, their academic records remain limited in educational and research competencies. Saudi instructors often have a lack of enthusiasm to enhance continuously their professional development, improve their scientific production and participate in scientific and professional societies (Al Mohsen, 2013).

As for foreign contractual instructors, they are mainly concerned with showing their loyalty to administration in order to preserve their jobs and their advantages. In fact, the renewal of their contract adheres to no specified criteria and clear reasons. This would have a negative impact on their commitment to work (Mintrop, Ordenes, Coghlan, Pryor, & Madero, 2018).

Concerning the management quality in universities, the literature shows that it depends largely on leaders, and their ability to undertake structural approaches towards innovation and quality (McCaffery, 2018). This includes the development of activities that lead to the creation of a culture of total quality management. In Saudi universities, many presidents and senior officials are occupying their positions for a long time, some of them for decades. Those positions are generally given to ensure loyalty to the system rather than to foster competence and create innovation. Besides, legislations and regulations in Saudi universities are not always clear and flexible to keep along with all changes and transformations (Alshayea, 2013).

By contrast, there is a notable improvement in the quality of infrastructure. Overall, good facilities and buildings with their different components (such as classrooms, libraries, academic centers, students’ clubs, etc.) are available at Saudi universities. A number of universities implemented the interactive classroom design (Alebaikan & Troudi, 2010). No doubt, this represents an effective tool in achieving the overall quality in education. Besides, there is an increasing use of modern technologies as methods of education and in different other activities such as planning, analysis, evaluation and control. These technologies are used in education centers, laboratories, libraries, etc. and they facilitate exchange and access to information with the highest possible efficiency.

3.2. Innovation in educational programs and curriculums

When planning educational programs and curriculums, several important considerations should be taken into consideration. First, the objectives of curriculums should be well defined and derived from the general objectives of education. Also, curriculums should be consistent with the stages of growth of students. In addition, they should be closely related to the local environment in order to reflect its needs and generate society’s progress (Stabbback, 2016).

It is to note that the participation in the development of educational programs should be broadened to all parties related to education in the community, including specialists from the education system, representatives of business associations, trade unions, scientific and professional societies, local leaders, etc. Besides, there is a need to undertake periodic reviews of curriculums and to make necessary adjustments whenever necessary.

The mentioned conditions are not fully satisfied in Saudi universities. Curriculums are not well defined, since there is no clear integrated policy framework in this regard. Also, there is no clear planning or process that involves making a set of decisions to reach specific goals and stages (Almansour & Kempner, 2015).

Elyas and Picard (2013) consider that educational programs are not deep and flexible enough to include the various global challenges and changes in knowledge. Curriculums in some educational fields, mainly in humanities, remain very antiquated and stultifying. They were initially replicated from the pedantic Egyptian educational system (Walters et al., 2010). Despite the fact that many academicians tried to move away from this inefficient system, educational bureaucrats along with
conservatives” resist any change. In effect, many Saudi universities witness a kind of struggle between the so-called “conservatives” and “secularists”.

Besides, curriculums do not always take into consideration the specificities of the local environment. In many cases, notably in some scientific fields, they are indoctrinated and integrally copied from foreign curriculums, without making an effort to adapt them to local reality in a way that makes educational programs contribute to the formation of an integrated personality, and stimulate ideas and critical thinking minds through applied practices.

3.3. Innovation in applied research related to the industry

Innovation in applied research includes innovation in the process, production and marketing of goods and services in different sectors such as manufacturing, construction, finance, health, food, water desalination, renewable energy, software, etc.

With the spread of the knowledge economy, the time period between discovery and use became shorter and the necessity of transforming research into products became greater (Villasalero, 2013). Therefore, we witness an increased dependency of industry on the knowledge originating from academic institutions. In this regard, universities are increasingly viewed as catalysts for a science-based economy. Therefore, economic development represents a new dimension added to the main objectives of universities, namely teaching, research and community engagement. An example of the interaction of academic engagement is represented by the establishment of industrial Ph.Ds. (Jacobsson & Perez Vico, 2010).

Many studies (Alamri, 2011; Almansour, 2016; Smith & Abouammoh, 2013) show that the status of academic research in Saudi universities is characterized by the following obstacles: Relative low budgets destined to scientific research at universities in comparison to developed countries; an absence of clear strategies in linking scientific research to sustainable development plans; a lack of social awareness about the important role of research in the growth process, and a relatively poor qualification of human resources working in research centers.

This can be reflected by the limited number of ISI indexed journals in the country (only 10 in 2016), and the limited number of patents (664 in 2017).

However, during the last years, Saudi Arabia has sought to launch a number of initiatives and activities that support a positive trend towards building a scientific research system. Those initiatives include a notable increase in the total funding of scientific research, which reached in 2013 an amount of SR24.4billion (US $ 6.5 billion), with a rate of 0.87% of GDP. In addition, there is a steady increase in the amount of governmental investments allocated to the scientific and technical research industry, which rose to 0.59% of GDP, directed in large part to universities. Besides, an important basic infrastructure for the conduct of research has been established. In 2015, this infrastructure included 101 research centers, 14 centers of research excellence in various scientific and human fields, and research chairs have exceeded 100 in a number of Saudi universities (MOE, 2019). This infrastructure is expected to improve according to the 10th National Development Plan (2015–2019) and the second phase of Saudi national science, technology and innovation plan (SNSTIP) (2015–2019).

Also, there is a clear effort made to enhance the professional development and improve the scientific production of faculty members. The MOE allocated about SR 60 million for the establishment of 439 specialized training courses at universities, as well as 35 joint programs with distinguished centers in international universities. The aim was to enable faculty members to benefit from international experiences and transfer them to Saudi universities, as well as to encourage the interconnection of Saudi universities with foreign expertise. A number of research institutes and science parks have been established in some universities. Institutes of research connect universities with the society by providing research services to the benefit of governmental and private organizations,
while science parks provide the appropriate economic and technical environment that would help researchers in innovation, intellectual creativity and industrial development.

In coordination with universities, the MOE is supporting about 100 scientific societies. This support includes the development of scientific activities, the establishment of conferences and the publishing of scientific journals. The Ministry has also encouraged a number of twinning programs linking different departments, colleges and programs in Saudi universities to their counterparts in the world’s leading universities.

### 3.4. Innovation in developing partnerships and networks

Innovation often results from multiple interactions of economic agents and institutions, which form the so-called national innovation system. National innovation systems extend today even to an international level. They focus on the movements and relations between governments, academic institutions and the different branches of industries. Therefore, in relation to knowledge production, there is a need for a shift from specific individual institutions to a global interactive model that integrates relations between universities, companies and governments.

Consequently, in a knowledge economy, universities try to promote interactive ties with other enterprises and external networks in addition to their partners (Di Nauta, Merola, Caputo, & Evangelista, 2018; Etzkowitz & Zhou, 2017), and this in order to take advantage of mutual advantages and complementary strengths. This web of relationships help universities to decrease the costs and risks of innovation among a greater number of organizations, to acquire the latest research results, to have access to the newest technologies and to share the results of new products or processes of production.

With the expansion in the fields of scientific research in Saudi universities and the emergence of independent entities for scientific research, the forms of partnership between the universities and the private sector have increased. The private sector is involved in cooperative training programs done by many universities. In addition, many private sector establishments utilize the expertise and competencies of the universities’ teaching staff in specialized researches and professional consultations. As representatives of the private sector, the Chambers of Commerce and Industry also include faculty members as active participants in their committees. In general, types of partnership include scientific supervision, training and consultancy, scientific chairs and contractual research. However, with the exception of contractual research, which is the main type of real partnership, the other patterns seem to be limited to some specific sectors.

Despite the existence of different types of cooperation, there is a lack of cooperation in R&D between universities and private institutions. A study done the Center for Research and Studies at the Chamber of Commerce and Industry in Riyadh in 2007 found that 72% of enterprises in Saudi Arabia do not benefit at all from the R&D capabilities available in Saudi universities. The study points out that 41% of these enterprises do not know about the facilities and the cooperation possibilities available at universities. This reflects the weakness of communication channels between universities and the private sector. Khorsheed and Al-Fawzan (2014) and Shin, Lee, and Kim (2011) explain the weakness of cooperation in R&D by the following main reasons: (i) the lack of competitive research outputs in universities due to limited governmental support (ii) in many cases, universities wait for private sector initiatives to request partnership, and do not take the initiative (iii) universities lack centers of transfer for converting the results of scientific research into preliminary products that can be marketed before commercial production (iv) the interest of many instructors in universities to get academic promotion rather than to invest the results of their academic research.

There are, however, some positive and successful examples of cooperation between universities and private institutions. Those include the partnership between the enterprise Aramco and some Saudi universities, notably King Fahd University of Petroleum and Minerals (KFUPM). Aramco is financing a limited number of research programs as part of a strategy to develop its activities and
to promote scientific research in universities. The cooperation between King Abdulaziz City for Science and Technology (KACST) and Saudi pharmaceutical companies is another example of partnership in scientific fields. Some other companies, such as Almarai and Nadak are financing scientific chairs in Saudi universities, as well as joint research programs for product development. It appears that cooperation with universities is tied to large economic firms. These firms, while benefiting from this partnership, can bring advanced technology from abroad with their huge financial capabilities. Therefore, cooperation should be rather directed to small and medium sized companies (SMEs), since their inability to acquire advanced technology from abroad makes them more dependent on national scientific research.

In general, despite the positive indicators in this field represented by some examples of successful cooperation mentioned above, the gap between the reality and the potential of this partnership is still large.

3.5. Social innovation

Social innovation can be defined as new strategies, ideas, concepts and systems that seek to strengthen the work of civil society institutions by meeting social needs (Marques, Morgan, & Richardson, 2018). The idea of social innovation first appeared by a group of social pioneers such as Benjamin Franklin and Robert Owen, and appeared again in many American universities such as Harvard University and Cornell University in the nineties.

Social innovation would extract the net economic value from social relations by providing an important social component of science and technology to fit specific needs. It would also provide a mechanism to improve the living standards of the poor and create business models that improve the standard of living.

Therefore, an enrollment of universities in social innovation would lead to remarkable results, especially if social innovation becomes part of a roadmap for change (Elliott, 2013; Oganisjana, Svirina, Surikova, Grīnberga-Zalite, & Kozlovskis, 2017). Universities represent a crucial step in moving the process of social innovation forward, and the principles of social innovation have been taught in many universities in America and Europe over the last ten years.

Social innovation was not an issue of great interest in Saudi universities. Only few years ago, a series of workshops at KFUPM shed light on the potential role of universities in this field. KFUPM realized the existence of sincere wishes of many segments of the Saudi society to participate in charitable work. Those wishes lacked, however, the institutional work based on governance, transparency and accountability that makes donors reassured. Thus, the university took a number of important steps in this framework. Among them, the establishment of a classification or rating system related to the evaluation of charitable sector governance. The system is developed for the Ministry of Labor and Social Development, in partnership with a number of private foundations such as Al Rajhi Foundation. The classification system acts as a tool for the development of corporate governance by providing assessment reports available to public opinion. It would encourage non-profit organizations (NPOs) to adhere to best practices that enhances competition and quality of services and programs in this social field.

Also, KFUPM established a Center of Excellence for the development of NPOs, which aims to provide consultancy, potential visions and other qualitative programs. Besides, in cooperation with Al Fozen social foundation, KFUPM established Al Fozan Academy that aims to improve the management of NPOs by implementing professional qualification programs for the development of leaders and managers in different areas. The Academy provides short training courses, practitioner certificates, advanced diploma programs, executive management MBA related to the non-profit sector, and affords external scholarship programs.
We can also mention the project known as “Idama”, which is done in cooperation with Al-Subaie Charity Foundation. It aims to provide a scientific and practical knowledge structure on the management of volunteers in the charitable sector.

3.6. Innovation in the achievement of financial sustainability

Financial sustainability can be defined as the ability to secure stable and adequate financial resources, and to distribute the expenditures in an efficient way and in the appropriate time (Bolivar, 2017). According to this definition, achieving financial sustainability requires to pay attention to the diversification of the sources of income and the priorities of expenditure. At the university level, the concept of sustainability refers to the university's ability to manage its financial resources so that it can meet its financial obligations, both now and in the future (Dumestre, 2016). Therefore, financial sustainability implies the capacity to provide sufficient self-funding from diverse sources, such as crowd financing, that would allow the university to continue its work and to provide services to beneficiaries. This requires an efficient financial administration and the establishment of a system that provides directors and officers with accurate information.

In Saudi Arabia, government funding in higher education accounts for more than 90% of total funding. However, recently, there is a tendency towards the diversification of the sources of university funding. Saudi Arabia has put in place a large number of educational and organizational mechanisms to mobilize additional financial resources from outside the governmental system. Those mechanisms include the creation of a fund for higher education, the establishment of paid educational programs, the expansion in scientific chairs and the increase in universities’ waqf (Charities).

In 2003, the MOE established a fund called the Higher Education Fund that includes expenses paid by underperforming students, in addition to students who exceed the normal period of graduation and those who enroll during the summer semester. During 2013, the revenues of this fund amounted to about SR 340 thousand, and have benefited 23 universities in financing some of their educational programs (Doggi, 2015).

Paid educational programs began in 2002. They consist on providing distance learning programs as well as evening education to students who are working and cannot follow their education through morning programs. This program covers undergraduate, master and doctoral degrees. Paid educational programs represent a source of funding for universities since students are enrolled in those programs at their own cost. The implementation of this program has led to the expansion of higher education to other members of the community. Fees for those programs differ from one specialization to another and from one university to another, ranging generally between from SR 80,000 to SR 120,000 for graduate programs.

Also, Saudi universities are working to increase their resources by providing consultancy services for both public and private sectors. This would foster the concept of productive university. In some universities, such as KFUPM, the revenues from these services have reached 25% of the university’s budget. In King Abdulaziz University (KAU), the number of consultancy contracts signed with other entities in various fields (health, economic, educational, social, technical, etc.) has reached more than 24 contracts and the number of beneficiaries exceeded 62 organizations.

Endowed chairs are considered as a relatively new type of funding in higher education. King Saud University is one of the leading universities in the field, with more than 100 research chairs, among 189 endowed chairs in Saudi universities in 2013. The participation of the private sector in funding scientific chairs amounted to about SR 700 million. However, in Saudi Arabia, by contrast to other countries, those chairs are generally limited to a temporary period, usually between three and five years.
As for charities, they play an important role in financing education at the global level. It is a way for the private sector to participate in social and economic development. In Saudi Arabia, KSU and KFUPM possess the most prominent achievements in this field, with respective amounts of about SR 3 billion and SR 3.5 billion.

4. Conclusion
The promotion of a culture of innovation in higher education and in the society in general is done by the transformation of universities into innovative institutions, through different measures such as new ideas, decentralized decision-making mechanisms, entrepreneurship and financial sustainability. It is the responsibility of the scientific community to start those measures and build on previous successes and failures, in order to formulate plans for an investment in innovation that creates development, growth and prosperity within the society.

As a leading model for the Gulf States, Saudi Arabia’s economy is strong, dynamic and highly growing. These characteristics are ideal for increasing competitiveness and improving innovation in universities. However, despite the increasing development of higher education and the doubling of the number of universities in few years; at present, the reality of innovation in Saudi universities does not match aspirations as well as the potential of the country. Improvement of innovation in Saudi universities is evident. The country is making the best ranking among Arab nations, and some of its universities are ranked in advanced positions in international rankings. Also, about 162 departments and colleges in the country are accredited by foreign recognized institutions (including 112 ABET and 4 AACSB accreditations). Nevertheless, the pace is still relatively slow and some constraints persist in different fields. Up to now, the development of innovation is mainly undertaken throughout the financial capacities of the country. We witness for instance an important improvement in infrastructure. However, innovation also contains many qualitative aspects such as curriculums, and a qualitative leap is needed to promote innovation.

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References


