Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6, 6203-6208
2024
Publisher: Learning Gate
DOI: 10.55214/25768484.v8i6.3351

The challenges of the relationship between university and business

Djimnadjingar Ratangar[1*], Senoussi Seid Abakar[2], Moussa Kabir Saleh[3]
[1,2,3]Teacher-Researcher, Faculty of Business Sciences and Techniques University of Moundou-Chad; dratangar@gmail.com (D.R.) senouseid@gmail.com (S.S.A.) moussasaleh1982@gmail.com (M.K.S.).

Abstract: The academic and business worlds have often been seen as two very different worlds, one focusing on scientific research the other confined to practical production activities. In this article, we will attempt to explore the mechanisms the mechanisms that can bring the product of university higher education with the demand for human resources by companies, through the through the creation of a university-enterprise interface to encourage the worlds of academia and business to meet, work better together.

Keywords: *Business, Cooperation, Human resources, Training, University.*

1. Introduction

No one can ignore the vital role played by universities in economic, social and cultural development. To fulfill its mission of making knowledge accessible, sharing it and exploiting it, opening up to the socio-economic world is more than a necessity.

Indeed, the university-company partnership is part of the university's mission to enable it to work in harmony with its economic environment, through multiple structures representing the interface between the university and the company. The issue of university-company relations in Chad has grown in importance in recent years. On the one hand, it reflects a strong desire on the part of many higher education students for a job in line with their training, and on the other, it is a necessity for companies looking for quality recruitment and for universities looking for sites for academic research. Universities have always had a dual mission: the creation and transmission of knowledge. But their missions have gradually been extended to include economic and social development (Etzkowitz, Webster, Healey, 1998). In a similar vein, (Pignet, 2012) claims that this new mission translates firstly into the role of ensuring the employability and professional integration of its graduates, and secondly into the sharing of knowledge: applied research in line with economic and social needs. The aims of the university's second mission, research, began to be called into question in the USA in the late 70s, when the country became aware of its loss of competitiveness to Japan.

To restore its hegemony and capacity for innovation, the Bayh-Dole Act was passed in 1980, profoundly transforming public research. It encouraged American universities to commercialize the technologies resulting from their work, and gave them ownership of the intellectual property behind their patents. Technology transfer offices, associated with the university, were created to commercialize the technologies resulting from the laboratories (Grimaldi et ali, 2011).

Later, with the end of the Cold War and its impact on military research projects, a "new science economy" was established to boost the country's competitiveness (Dasgupta, David 1994).

In the 90s, several European countries followed suit, firstly at the instigation of the European Commission (Green Paper on Innovation, 1996) and then, in 2000, at the Lisbon European Council. In addition to teaching and research, universities have been entrusted with a third mission: economic development.

* Correspondence: dratangar@gmail.com

2. The Corporate University Relationship: More Than Just a Necessity?

In line with the emergence of this third mission, a great deal of research is focusing on the role played by the university as an economic player. As part of this general trend, the relationship between the university and the business world is a major focus of study in the literature.

According to Shilling (2005), companies today are faced with the need to innovate in order to be competitive. Collaboration with universities has become a gateway to increasing their capacity for innovation, and accelerating the development of new products. Lee and Park (2006) argue that states seek to increase their capacity for innovation by expanding the capacity of different actors such as universities. Following this line of thought, Abramo et al (2009) argue that states should foster collaboration between university and industry, thereby creating the right conditions for the exploitation of university output for commercial purposes. Chen (1994) has highlighted the competitive advantages acquired by the company through the university-industry relationship, which, according to the same author, represents an important source of innovation. Anderson et al (2010) have also highlighted the growing importance of university technology transfer for the US economy. Daghfous (2004) points out the importance of collaboration between companies and universities as a rapid and effective means of capacity building.

In terms of business benefits, numerous authors such as (Boardman, 2008; Powell et al, 1996; Zucker et al, 1998; Stuart et al, 1999) have demonstrated the astonishing growth rates of companies that have partnerships with universities, compared with those that have no links with universities. Pertuze et al (2010) described and analyzed the results of a three-year study of 25 multinational companies to identify best practice in university/industry collaboration from a business perspective. Further research into the activities of European universities in collaborating with industry (DG Education and Culture, 2011) has also been carried out to understand how this type of collaboration can be managed from a university perspective.

For their part, Barnes et al (2002) studied six case studies in the UK to gain a better understanding of the management of university-industry collaborations. In a context of university-industry collaboration, the process of transferring knowledge from university to industry can take two forms: formal and informal. Formal transfer leads to tangible, visible results. This includes patents, research papers, licensing agreements, etc. Informal transfer, on the other hand, leads to intangible results. Its impact includes conferences, workshops, social networks, joint research projects, consulting, and skilled employees (Van Horne et al, 2008).

Nevertheless, cultural differences between universities and industry have played an important role in the collaboration agreement, and are becoming significant obstacles to collaboration and a constraining factor in knowledge transfer (Bjerregaard, 2010). Valentin (2000) and Schartinger et al. (2001), listed a series of challenges in the collaboration process. Companies may have different interests from universities. While companies tend to hide results, considering them intellectual property, universities are often under pressure to publish results.

3. Why do Companies and Universities Work Together?

Following all the published literature and the different approaches undertaken to understand the phenomenon of company-university interaction, various authors have taken an interest in the factors favoring university-company rapprochement for one or other of the players. From the universities' point of view, there are many arguments in favor of collaboration with companies. According to Azaroff (1982), Schmoch (1997) and Lee (2000), there are five types of motivations that the authors emphasize:

The primary motivation for universities to enter into collaboration with industry is financial. Closer ties with industry enable a university to increase its financial capacity and secure certain funds for research laboratories.

The second motivation lies in the opportunity to get feedback on one's research. Through an external perspective on the direction of his own research, the researcher has the opportunity to see whether his reflections are at the heart of practitioners' current concerns.

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The third motivation is the enrichment of researchers' knowledge. Collaboration with companies gives researchers access to practical knowledge developed in industry. Added to this is the possibility of empirically testing their own research, which can improve the robustness of their studies.

The fourth motivation is the desire of universities to play a role in society. In this sense, through collaboration with industry, university researchers contribute to national well-being. This brings us back to the university's third emerging mission: sharing knowledge and contributing to economic and social development (Yusuf, Nabeshima, 2007).

The fifth and final motivation for universities to forge closer ties with industry is the professional integration of students[1]. Collaboration gives the university access to a wide range of job opportunities. On an individual level, researchers can also find out about vacancies when they collaborate with a company. What's more, students involved in a research partnership with a company may end up being hired by the latter. From the company's point of view.

There are a number of motivating factors behind our recourse to collaborations and partnerships with universities:

- The first motivational lever is competitiveness. Very often, practitioners are motivated by the idea of developing new products or processes. Collaboration offers the opportunity to develop long-term R&D projects.
- The second motivating factor is the opportunity to keep abreast of different research trends. Thanks to a close relationship with university research groups, companies can even influence research directions, particularly in new technologies.
- The third lever is to enrich managers' knowledge by facilitating access to the state of academic knowledge.
- The fourth lever motivating companies to cooperate with universities is the possibility of providing assistance at lower cost, particularly for solving technical or organizational problems.
- The final lever motivating firms to maintain close relations with universities is privileged access to a pool of qualified students. By taking part in networking activities, companies can meet students and recruit the most interesting profiles for the positions they need to fill (compared with companies that are far from the university). The professional integration of students depends to a large extent on adapting the training on offer to the requirements of the job market, particularly in terms of skills. It is vitally important for universities to understand the needs of companies, and for companies to make these needs known, as their performance in terms of professional integration and training depends on the cooperation and dialogue, they are able to establish.

4. University Enterprise in Chad

At the workshop on higher education in Chad (2005), the issue of university-company relations only began to be raised towards the end of the 1990s, firstly because of a legacy of traditions, and secondly and above all because of the evolution of the Chadian university and Chadian companies.

Until the 1980s, the small number of students at the University of N'Djamena in Chad and the high demand for managers in all the country's activities meant that students could get a pre-employment contract before completing their studies. In the early 1990s, the surge in student numbers at the University of N'Djamena in Chad in response to strong social demand, combined with the dramatic decade of the 1990s, the economic crisis and soaring unemployment, led to the international isolation of the University of N'Djamena in Chad.

Today, in many developed countries, the issue of university-company relations is dominated by research concerns, whether fundamental or applied. Here too, we need to clarify the context in Chad. The very strong growth in enrolment in higher education came up against a major constraint: the capacity to train teaching and scientific staff, which was at least ten years behind schedule. Doctoral

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training and research capacities universities were mobilized around the priority of training teacher-researchers. Concerns about the application of research were recurrent in political discourse, but came up against harsh realities in the field. Even the few research centers that were set up were faced with the need to train researchers and support theses. To make matters worse, very few Chadian companies, if any, were really concerned with research and development (Benzaghou, 2011). Despite this reality, it is worth noting that the Chadian university network includes nine public universities, one of which has special status (King Faisal University), seven university institutes and four higher teacher training colleges. This variety meets the demand for diversified knowledge and know-how in the service of public and private interests. University studies mark the end of initial training before entering the job market. Today, it is in the national interest for economic and academic players to work together to enhance the employability of young people in training, and to develop the value of research and innovation, so that the creation of a fabric of innovative companies is a key element in local economic development. This cooperation requires the development of university-business interfaces to facilitate the forging of solid, long-term relationships.

Daoud (2014) defines the university-enterprise interface as "any perennial or temporary structure, with material and/or immaterial resources, enabling specific value-generating relationships to be established between universities and production or service companies". In Chad, a number of university-business interface structures exist, and we will briefly mention a few of them: Bet Al Nadjah is a Chadian non-profit association that fights poverty and unemployment, particularly among young people and women, by providing multi-faceted support to project leaders in the creation and development of micro, small and medium-sized enterprises in Chad. Bet Al Nadjah A also provides employability and mobility services in the form of internships for students at Chadian universities. The second organization is SMART VILLAGE, whose vision is to help policy-makers, donors and socio-economic planners for rural electrification worldwide. It also creates the environment for the emergence of regional training, innovation and research hubs in Chad. While both organizations have the same generic objectives, aimed at developing university-enterprise relations, they nevertheless use distinct and innovative approaches that are deemed complementary. The Houses of Entrepreneurship (Entrepreneurship Houses) are structures supported by FONAJ (National Youth Support Fund - National Youth Support Fund) and FONAP (National Vocational Training Support Fund - National Vocational Training Support Fund) to raise awareness among students and initiate them into the act of entrepreneurship in partnership with universities and national graduate schools. The first House of Entrepreneurship was created in 2016, bringing the concept of the House of Entrepreneurship to universities and national graduate schools across the country.

The company/university liaison office, whose mission is to initiate and perpetuate a partnership with players in the economic sector, and to collectively reflect on and build concrete actions to be implemented to develop this company/university partnership. The main objective of these organizations is to train young managers and engineers to be rapidly operational within companies, and to systematically develop the spirit of entrepreneurship within engineering programs. The career centers aim to equip students with the elements they need to develop their employability and face the world of work in a well-prepared way, to support them in their efforts to obtain practical internships considered as a pre-integration stage in working life, and to give them an overview of the job market and its requirements with a view to facilitating their introduction to potential recruiters.

The graduate integration observatory, whose mission is to collect, analyze and disseminate information concerning the professional integration of university graduates, to propose relevant information to consolidate the strategy and action plans aimed at improving the match between training and employment, to disseminate the culture of employment, and to devise a policy of communication with the business world. Despite these efforts, much remains to be done in terms of university-company collaboration in Chad.

According to INSEED (National Institute for Statistics, Economic and Demographic Studies), young graduates accounted for 5.7% of the total unemployed population in 2022. The findings of the ECOSIT 4 census by INSEED are worrying: two out of five unemployed people are university graduates. This situation may be due to the supply of graduates outstripping demand on the job market,

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or to a mismatch between the higher education provided and the real needs in terms of qualifications and skills demanded by the job market.

5. What Solutions Should Chadian Universities Adopt to Deal with This Reality?

Universities offer a wide range of solutions. They have all realized that professional integration is now a requirement of their stakeholders and an indicator of the quality of their degrees (Côme, 2011).

Indeed, there are many ways in which cooperation between universities and business can be created, maintained and enriched. We will try to outline the solutions and structures most widely used around the world.

1. Work placements are the oldest form of training. The current originality of these internships is the place they are now given in terms of credits awarded (60 in the Master's program), duration (32 weeks for an academic year) and the project structuring the training programs (personalized follow-up, introduction of courses on professional integration, local knowledge, etc.).
2. There are many different ways of supporting young entrepreneurs. Incubators, incubators and business incubators are all ways of encouraging entrepreneurship, but they differ depending on the project. Business incubators welcome all those with projects that have not yet been finalized, whether they are job-seekers or, in the case of universities, trainees, to help them get off the ground. Business incubators are support structures for young entrepreneurs. Business incubators welcome more mature projects at various stages (incubation, development phase, start-up). They provide them with accommodation, support, advice and a range of services (meeting rooms, secretarial services, photocopying, etc.). Incubators, on the other hand, welcome only business projects from public laboratories. Their aim is to encourage the creation of innovative companies and ensure their survival for more than 5 years. These three schemes have proved their worth, helping to create a large number of new businesses and thus boosting the employability of the graduates behind them. However, they concern only a small proportion of students and, with the exception of the incubators, their objectives are broader than simply strengthening links between companies and universities and the professional integration of graduates.
3. The various support and accompaniment units for the professionalization of students, professional integration observatories involving companies such as competitiveness clusters or technology watch.
4. Alumni associations are an essential tool in any academic institution, and alumni are the best ambassadors and spokespeople for their institution, as well as the most effective relays with the socio-economic world. This type of association should therefore be strongly encouraged by institutions, which can provide premises, telephone lines, logistical support, etc. A well-managed and active association ensures the constant updating of a directory, the dissemination of job and internship offers, and networking through the exchange of e-mail addresses, the creation of websites (blog, exchanges, etc.) and the creation of a network of contacts.

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ISSN: 2576-8484
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