Emerging Role of Universities in Collective Impact Initiatives for Business and Community Benefit: The Tripple Helix Model

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ABSTRACT

Universities are increasing their efforts to more clearly demonstrate their social value. For instance, Etzkowitz and Leydesdorff (2011) argue that the Triple Helix framework argues that three types of institutions, universities, industries, and the government, play crucial roles in the innovation process of a knowledge-based economy. This paper illustrates how Universities can incorporate collective impact partnerships in their community benefit strategies for both business and government. Further, the paper explores the Tripple Helix Model for community/business, government benefit. The study has analysed the economic and social benefits of knowledge and skills from competencies acquired from university education which is a critical source for transforming society – which can foster discussions on significant planning areas that are necessary for developing strategies for completion, where job creation, developing skills, cultivating informed citizenship, and disseminating knowledge are core concerns. The purpose of this discourse is to examine the impacts of universities on economic development and social responsibilities at all aspects, including social and economic benefits that can lead to improvement of living standards of individuals and society. The paper, however, looks at literature that is pertinent to the usefulness of universities in relation to transformation of individual and society/business. University education is a determinant of income and one of the most important investments a country should choose to make in its citizens because it provides workforce with professions, technical, and managerial skills – creating attitudes and changes necessary for the socialization, modernization, and the overall transformation of the societies.

Key Words: Community Engagement, Partnership, Collective Impact

INTRODUCTION

Administrators in today's urban and metropolitan universities are feeling pressure to demonstrate tangible value to their host city and region (Starke, Shenouda, & Smith-Howell, 2017). Urban serving universities have for a long time been a vital resource to their regions but have not always publicly demonstrated clear evidence of their community contributions. As knowledge institutions, universities are well-equipped to study and report on their positive impact on the community. Understanding, documenting, communicating, and better leveraging internal assets is important work. However, these approaches may not fully satisfy community leaders' requests to demonstrate the value of these higher learning institution to the host community. The university's neighbors may not just be asking for the university to prove, but also to improve what they offer to the host communities. Further, local government as well as national governments also need these institutions to pay their share of contribution to the national treasury in form of taxes, provision of employment and innovations since universities are renowned for knowledge generation in form of research and development.

LITERATURE REVIEW

Various collaborative models between community/business, government and universities have been

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developed. The main one is the Tripple Helix Model as shown in figure 1 below:

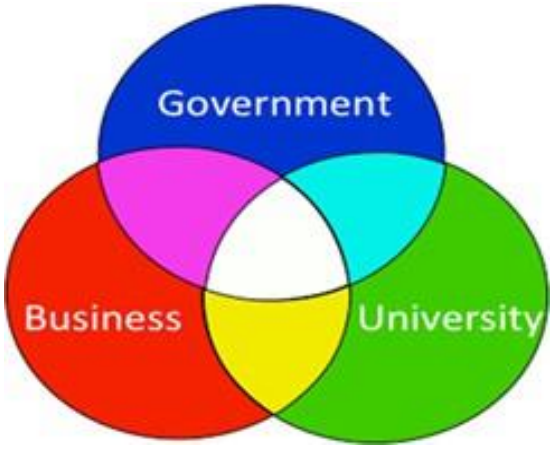

Figure No 1: Tripple Helix Model

The Triple Helix tries to collaborate different innovation stakeholders by bringing universities as key actors of innovation, and government and industry to generate innovation. Through this synergy universities should be founded on three main pillars namely education, research and entrepreneurship.

Science, technology and innovation (STI) are fundamental for a country's growth and transition from natural resource dependency to knowledge-based economies. Success of a country's economy is largely dependent on the level of partnership between the three main pillars of the economy, i.e. Government, Industry/Community, and Academia. Successful establishment and management of this partnership requires development and observation of performance measures that are important in informing interventions, facilitatory and corrective actions to build and sustain the partnership among the pillars. The concept of Triple Helix is that through the interactions of the three main segments namely Universities, Government and Industry novel ideas and innovations are born with a more solid foundation unlike ideas thought of discretely by these three actors. New ideas that would not have been thought of separately are born. It mimics brainstorming on a broader scale to develop and market innovation. Knowledge is considered a key factor in economic development.

Countries with high-tech knowledge have stronger economic power in the global market. To comply with the new economic market, economically developing countries as well as economically developed countries have been investing resources to enhance their research capacity in order to improve their competitive position internationally. Shin and Harman (2009) assert that East Asian countries (e.g., Korea, Japan, China, Taiwan, and Singapore) are well known examples of countries applying knowledge-based innovation strategies. Recently, Gulf countries including Saudi Arabia, on the other side of Asia, have begun too.

This section summarizes information derived from other researchers' work on the Triple Helix relationship among Government, Academia and Industry at global level, at African level and use literature to relate to how the model could be locally enshrined in our Zambian context so as to facilitate the generation of critical knowledge and policy advice and contribute to socio-economic development of Zambia. The review of other literature helped with development of a model to promote collaboration among Government, Academia and Industry, to foster innovations. It also considers a proposed model that would be workable for Zambia. Triple Helix (TH) model is known to have been developed for use in western developed countries that have necessary infrastructure for its implementation. It has been described by some researchers as not a relevant policy making tool for developing countries due to lack of appropriate infrastructure Etzkowitz *et al* (2015).

CHARACTERISTIC OF MODERN UNIVERSITIES

In the modern time, the university is not the only knowledge depositary anymore, focused on fundamental research. There is a high pressure for universities to become more active in their activity and role in the progress of the society. In the linear model of innovation, the university transmits knowledge to the business in a static mode; the fundamental research is an input for the development of product and service development.

Global perspective

In China, the state research institutions not only play an important role in conducting national research project in key technology areas through the National Key Laboratories and providing policy guidance to the national and regional government, but also initiating and implementing new knowledge-based innovation programmes in various corporate R&D centres and High and New Tech Developmental zones for technology communalization. One of the typical examples of the State Research Institution is the China Academy of Sciences (CAS) (Lu et al).

However, the key questions raised is whether the TH model which was emerged from the US and widely diffused and researched in Europe with different political and social values embedded in the regional and national innovation systems, is appropriate and effective in the Chinese context, if so, in what way the TH can be adapted. According the (Ye & Wang, 2019), the main components that are required under the ideal balanced is the industrial absorptive capacity and the academic knowledge transfer capacity which requires the presence of strong incentives provided strong policies (Liu & Cai, 2017).

However, the complex process of engaging with university and the difficulties of managing risks involved in R&D collaborations with academics have resulted in low trust relations between university and industry and the failure of innovation collaboration. Xu (2001) points out that the credibility of collaboration partners, the success of technical design, the effective management and the reward system are essential for the success of firms seeking TH mode of innovation. In addition, access to funding has also been raised as a critical issue facing university-run enterprises that recommends the commercialization of research taking center in the development of policies that are more progressive (Gachie, 2020).

AFRICAN PERSPECTIVE

From the African Union perspective, it has been envisaged that there is a direct correlation between wealth creation and investment in Research and Development that could be achieved by a framework like below:

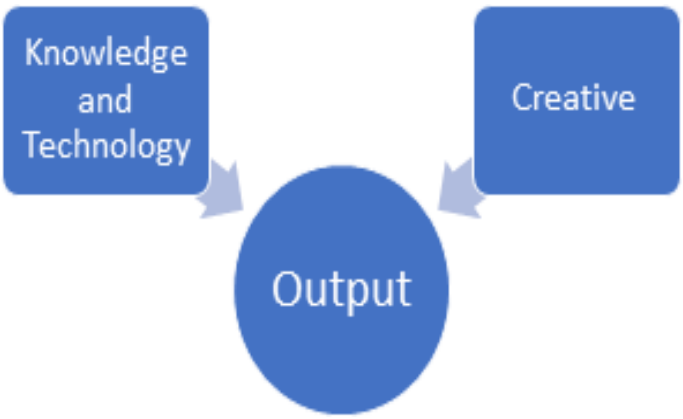

Figure 2: Source: African Union Paper (2019)

"By 2063 the necessary infrastructure will be in place to support Africa's accelerated integration and growth, technological transformation, trade and development. This will include high-speed railway networks, roads, shipping lines, sea and air transport, as well as well-developed ICT and digital economy. A Pan African High-Speed Rail network will connect all the major cities/capitals of the continent, with adjacent highways and pipelines for gas, oil and water, as well as ICT Broadband cables and other infrastructure. This will be a catalyst for manufacturing, skills development, technology, research and development, integration and intra-African trade, investments and tourism." African Union (2019).

Forms of collaboration and coordination mechanisms require careful design and implementation in developing countries where there is lack of economic environment for development of TH innovation model whose aims are development of high-tech knowledge-based innovations. The TH model has over the years been known to provide nations with strategic value in terms of identifying the transformational changes within and between the institutional spheres of University, Government and Industry.

ZAMBIAN PERSPECTIVE

From Zambian perspective, the key interventions through academia have been tabulated but not achieved. Among these is the quality of education and its relevance (Ministry of Education Zambia 2019). Access to academia in Zambia remains a challenge to most eligible participants, for example, out of 126,434 school leavers in 2016, only 12% were absorbed into universities.

The National Higher Education Policy further affirms challenges with operational efficiencies and effectiveness due to deficiencies in institutional arrangements, legal frameworks and policy posing challenges in executing mandates (MOE 2019).

There is equally a mismatch between skills required by industry and the graduates produced in the higher education institutions. With all these affirmations, in Zambia, collaboration between Government, Academia and Industry is far reaching hence the need for a research on how the relationships may be enhanced to achieve the much-needed wealth through development and innovation. On the other hand, there are claims that adequate infrastructure exists in institutions of higher learning that include lecture theaters, laboratories, sheds for seedlings and incubation facilities for facilitating innovation that would be appropriate for industry once candidates graduate (Tevet Policy 2020). From the above review of literature, it is clear that adoption of knowledge economy in Zambia will most likely illuminate economic change as the country seeks more innovative approach and enabling environments that may trigger growth. Considerable synergies between TH and economic growth have remained unexplored and hence the purpose of this proposal.

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Table No 1: Zambian Collaborative Tripartite Context

No	Area	Explanation
1	University knowledge production	Applicable to industry and not merely based on comprehensive explanations of the world matters
2	Stakeholder involvement	Include relevant government departments and private sector participation to ensure adaptive policy formulation and promotion of infrastructure development.
3	Legal and sustainability factors	For acceptability of research and innovation activities

DISCUSSION

It is important to recognize that university education contributes to social and economic development of a country through various means among which are four major missions: forming human capital using teaching; using research to discover new information to develop knowledge for new approach; disseminating pertinent information to the citizens. The Tripple Helix model takes into account the interface between and among the three players, namely; the government, the Universities and the Community/business and how the they can come together and supplement each other's effort and thereby increase their mutual benefits that are expected of each one of the members of the tripartite arrangement.

CONCLUSIONS

The university-business cooperation brings recognized benefits but has also many barriers. Students improve their learning experience and develop skills for the future employment, companies improve their business performance, the community can benefit from the increased employment, disposable income and competitive local industry, and the university can achieve the missions while academics increase their reputation, expand their research. and contribute to the image and standards of the university. The barriers that restrict the university-business cooperation are funding (companies still invest small amount of money in research) and relational aspects (lack of communication, different time horizon, difficulty of finding the suitable research partner). In conclusion, the university-business cooperation is complex and an important element in the university strategy and development.

Framework conditions, situational factors, people, availability of funds influence it, therefore universities have to include in their strategies and plans all kind of aspects that might drive this cooperation.

REFERENCES

1. African Union (2019) Third Ordinary Session for the Specialized Technical Committee on Education, Science and Technology (STC-EST)
   https://au.int/sites/default/files/newsevents/workingdocuments/37841-wd-five-year science technology and innovation plan en. pdf
2. Etzkowitz, H., Leydesdorff L. (2015) The Endless Transition: A Triple Helix of University Industry-Government. Minerva, Vol. 36, No. 3, pp. 203-208

3. Leydesdorff, L., & Rafols, I. (2011). How Do Emerging Technologies Conquer the World? An Exploration of Patterns of Diffusion and Network Formation. Journal of the American Society for Information Science and Technology, 62(5), 846-860.
4. Liu, C., & Cai, Y. (2017). Triple Helix model and institutional logics in Shenzhen Special Economic Zone. Science and Public Policy.
5. Liu, C., & Cai, Y. (2017). Triple Helix model and institutional logics in Shenzhen Special Economic Zone. Science and Public Policy.
6. Ministry of Higher Education (2019) National Higher Education policy, Lusaka
7. Ye, W., & Wang, Y. (2019). Exploring the Triple Helix Synergy in Chinese National System of Innovation. Sustainability, 1-17.