

## OPEN ACCESS

## A Collaborative Framework between Industry and Academia to Stimulate Entrepreneurship through Business Incubation

Maxwell Chanakira\*, Quinton C. Kanhukamwe

Harare Institute of Technology, Harare, ZIMBABWE

### Abstract

Entrepreneurship development has increasingly become a global solution to address the problem of rising unemployment. Science, Technology and Innovation (STI) have become important tools in improving the economic performance and social well-being of nations. When universities and industry work together to push the boundaries of knowledge, they become a powerful engine for innovation and economic growth. This paper is based on focus group interviews and discussions conducted with key players involved in the HIT-Sandown-UNDP Business Incubation Programme in Harare Zimbabwe. The business incubation project sought to support young Zimbabweans to transform their technical prototypes into commercially and socially viable ventures. As a result, a total of 10 prototypes were refined and investor ready business plans were developed for capital sourcing purposes. It was only through the coming together of the partners that real transformation of the lives of the participants was achieved through learning valuable business skills, coaching and mentoring. University-industry partnerships are a useful vehicle of setting up sustainable business incubation centres.

### Keywords

Collaboration, Industry, Academia, Entrepreneurship, Incubation, Commercialisation

## 1. INTRODUCTION

According to the International Labour Organisation (ILO's) report, World Employment and Social Outlook - Trends 2015, more than 212 million people will be out of work by 2019, up from 201 million in 2015. Young people, especially young women, continue to be disproportionately affected by unemployment across all regions of the world. In fact, the youth unemployment rate is practically three times higher than for their adult counterparts.

It is therefore not surprising that entrepreneurship development has become a solution to address the scourge of rising youth unemployment. However, key factors undermining the growth of entrepreneurship in Africa have been the risks and costs associated with establishing and sustaining business ventures (UNDP, 2014). Young people (15-24 years), in particular, lack access to capital and credit markets, while the majority of the technically gifted individuals are not equipped with entrepreneurship skills that are vital to establish and run viable businesses.

The OECD (2000) argues that Science, Technology and Innovation (STI) have become important ingredients to improve the economic performance and social well-being of nations. Knowledge-driven industries now account for a major share of global economic growth. Evidence exists that many developing countries have, in recent decades, become global economic giants by adopting innovations in the agriculture,

\*Correspondence to : Dr. Maxwell Chanakira  
Harare Institute of Technology P.O. Box BE 277, Belvedere, Harare, ZIMBABWE  
E-mail : pmchanakira@gmail.com

World Technopolis Review  
Copyright©World Technopolis Association

© This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0>) which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original work is properly cited

infrastructure, ICT and manufacturing industries. Hence, innovation is critical to competitiveness.

Zimbabwe, a small country with a population of 13.5 million people in Southern Africa, faces significant social and economic challenges. Growth in the manufacturing sector has been slowing down since 2011. The sector's growth was 14.4% in 2011, 2.3% in 2012, and was projected at 1.5% in 2013. Average capacity utilisation has also been declining in tandem with slowing growth, from 57.2% in 2011, 44.9% in 2012, 36.9% in 2013 and 36.6% in 2014 (CZI, 2014). The country's unemployment levels are escalating rapidly with over 30000 graduates churned out from universities and tertiary colleges every year but little jobs were created.

Industrial competitiveness and economic growth strongly depend on co-operation between universities and industry. This explains why university-industry partnerships as exemplified by Public Private Partnerships (PPPs) are increasingly viewed as a solution to the challenges being faced by institutions of higher and tertiary education in many countries. Dwindling public resources to universities compounded by the financial and economic crisis have underlined the importance of PPPs (NAMACO, 2011).

Increasingly, collaboration between academia and industry is becoming a critical component of efficient national innovation systems. Universities work with governments on one hand and industry on the other hand. When universities and industry work together to push the boundaries of knowledge, they become a powerful engine for innovation and economic growth (Science Business Innovation Board, 2012). In this regard, industrial competitiveness and economic growth strongly depend on co-operation between universities and industry. Hence, for universities that are keen to become world-class research institutions, this kind of collaboration is a top priority.

Zimbabwe's youths have a significant role to play in economic growth and development as they have benefited from the country's high literacy levels (highest in Africa) and they love to use the latest ICT technologies. There is thus, a clear opportunity to put the education and skills of this demographic group to use in more meaningful economic activity such as in the areas of Innovation, Entrepreneurship, SME development, ICT-based activity among others. Against this background, Harare Institute of Technology (HIT), Sandown Corporate and United Nations Development Programme (UNDP) sought to stimulate innovation and entrepreneurship among Zimbabwean youths by leveraging youths' skills and

knowledge.

In this paper, we discuss the HIT-Sandown-UNDP Business Incubation Programme and in the process provide useful insights on the role and importance of PPPs in supporting innovation and nurturing entrepreneurship. The paper is organised into five sections. The first section provides an introduction to the study. The second section provides theoretical perspectives on PPPs, entrepreneurship and business incubation. The third section describes the HIT-Sandown-UNDP Business Incubation Programme. The fourth section provides an overview of the PPP model used in the business incubation pilot while the fifth section concludes the study.

## 2. THEORETICAL FRAMEWORK

### 2.1 The Concept of PPPs

The abbreviation PPP is a generic term used to describe a number of different collaborative structures that facilitate the participation of the private sector in the provision of public infrastructure and services. The participation of the private sector is usually required where government does not have the finances or expertise that is needed to push its agenda forward. PPPs can include: long-term contracts/agreements/relationships, a private funding component, provision of services or infrastructure through the private sector by the private sector on behalf of the State following the fulfilment of design and build responsibilities (IISD, 2011).

### 2.2 Benefits of PPPs

Successful industry-university collaboration needs to support the missions and motivations of each partner. Organisations engage in PPPs because there are real tangible benefits that accrue to participants. This section discusses some of the most common benefits.

#### *Financial Benefits*

In a study of 100 academics, Lee (2000) found that, from an academic perspective, the goals driving collaboration between universities and the private sector were mainly, to secure research funding, obtain funds for laboratory equipment, gain practical experience on academic research and to test theories. Hence, by expanding relationships with industry, institutions can receive significant funding and get the opportunity to strengthen their academic brand.

*Discovery of new knowledge*

Turk-Bicakci and Brint (2005) argued that the primary aim of universities is to discover scientific knowledge using new and different applications. Collaboration with industry is therefore critical for academia to create this knowledge and obtain industrial data. In turn, collaboration with universities is crucial for industry in joint, scientific-based research projects in order to develop solutions for production-sourced problems. Hence, a key motive for industry is the acquisition of knowledge with an academic base, which can then be transformed into products and services, providing industry with a competitive edge.

*Employee Development*

Universities can offer industry employees skills for fundamental research while on the other hand, industry brings 'live' problems to researchers at universities providing access to activities beyond the research they do (Jachimowicz and Umali, 2000). Hence, partnerships between universities and industry ensure that employees possess the latest knowledge and information available, both from the industry and academia.

*Efficiency*

The private sector is renowned both for its expertise and efficiency. When these skills are brought into a PPP framework, they contribute to better infrastructure and greater cost and time savings across the project. Cost and time savings arise because projects risks (e.g. finance, planning, timeframes and community consultations) are distributed between the public and private sectors according to the party best equipped to deal with each item, both in terms of expertise and costs (IISD, 2011).

*Prestige*

Association with highly regarded partners brings with it a sense of quality and prestige to both parties and this can be a compelling motive for collaboration between universities and industry. Industry may wish to engage in partnership with well-regarded universities with a view to improve their organisation's image, increase the learning capacity of the organisation (Reeves and Ryan, 2007) and develop the firm's human capital base. Conversely, universities may want to partner with reputable multinational enterprises to enhance their images as well.

**2.3 Barriers to PPPs**

There are several perceived barriers to partnerships be-

tween institutions of higher learning and industry. These are discussed in the paragraphs that follow.

*Insufficient incentives*

The question usually asked by industry is, "Are there sufficient benefits to be obtained from making cash investments in institutions of higher learning?" The answer depends on who is asked the question and obviously the economic environment in which the universities and industry trying to collaborate are operating. However, there is a view that there are insufficient incentives for industry to make cash investments for such kind of partnerships. There is need to objectively address this question.

*Limited awareness of benefits of partnerships*

Industry awareness of how partnerships can add value to their own strategic priorities is not always clear. Equally, faculty awareness of how partnership can benefit their research is not well understood. In addition, there are limited opportunities for collaborations between industry and institutions of higher learning that are sufficiently diverse to meet the needs of businesses and institutions of higher learning of all sizes (Engineering Advisory Committee, 2008).

*Dearth of deal making skills*

Collaboration between academia and industry requires a certain level of negotiation, deal making skills and strategic focus. It is critical for both the public and private sectors to possess these skills for collaborative agreements to be concluded and administered successfully. Unfortunately, such skills are usually in shortage in many organisations; both at a national and regional level, and it takes both time and experience to develop these skills, making it difficult to scale up collaborations quickly (IISD, 2011).

**2.4 Typology of Collaborations**

University-industry links encompass different typologies because of different objectives, scope and institutional arrangements (see Table 1). Collaboration may be more or less intense and may focus on training or research activities. Collaboration may be formal or informal, from formal equity partnerships, contracts, research projects, patent licensing, among others to human capital mobility, publications and interactions in conferences and expert groups, among others (Hagedoorn et al., 2000). This study has a specific focus on formal collaborations.

Universities act as an important driver of economic develop-

Table 1. A typology of university-industry links

High (Relationships)	Research Partnerships	Inter-organisational arrangements for pursuing collaborative R&D, including research consortia and joint projects.
	Research services	Research-related activities commissioned to universities by industrial clients, including contract research, consulting, quality control, testing, certification, and prototype development
	Shared infrastructure	Use of university labs and equipment by firms, business incubators, and technology parks located within universities.
Medium (Mobility)	Academic entrepreneurship	Development and commercial exploitation of technologies pursued by academic inventors through a company they (partly) own (spin-off companies).
	Human resource training and transfer	Training of industry employees, internship programs, postgraduate training in industry, secondments to industry of university faculty and research staff, adjunct faculty of industry participants.
Low (Transfer)	Commercialisation of intellectual property	Transfer of university-generated IP (such as patents) to firms (e.g., via licensing).
	Scientific publications	Use of codified scientific knowledge within industry.
	Informal interaction	Formation of social relationships (e.g., conferences, meetings, social networks).

Source: Adapted from Perkmann and Walsh (2007)

ment and catching-up through their role in education and technology absorption, adaptation and diffusion (Yusuf, 2007). Beyond the teaching-research-entrepreneurial taxonomy, some authors have advocated for shifting the focus toward creating developmental universities which collaborate with external agents (including firms) not necessarily with a focus on commercialisation and profit-making but rather with the broader purpose of contributing to social and economic development (Brundenius et al., 2009). HIT is travelling on this trajectory.

The priorities and scope of university-industry collaboration differ significantly between developed and developing countries. This is understandable given that these countries are at different stages of development. In developing countries, a major concern is the shortage of infrastructure, poor quality of education and an environment of constrained financing facing universities, which often indicate insufficient capacity to join industry in innovation-related projects. Building effective uni-

versity-industry linkages in this context takes time and sustained effort, in part because universities in developing countries generally have little experience in industry collaboration and weak managerial capacity in research. In this context, existing collaboration tends to be more informal and focus on industry recruitment of university graduates for staffing, internships and consulting. The research activity of these universities is less likely to lead to spin-offs or patents that can be commercially exploited (Guimon, 2013).

### 2.5 Business Incubation

The UK Business Incubation (2003) defines business incubation as a unique and highly flexible combination of business development processes, infrastructure and people, designed to nurture and grow new and small businesses by supporting them through early stages of development and change. The process of entrepreneurial development requires support in a number of critical areas- finance, networks, government and

markets (Livingston, 2007).

Business incubators provide business assistance to firms in the early stages of development with a view to increase the survival chances of these firms (Bøllingtoft and Ulhøi, 2005). Typically, business incubators provide office space, administrative support, coaching and mentoring services. Technology incubators on the other hand, are business incubators focusing on new companies with advanced technologies. Generally, technology incubators are known under various names such as innovation centres, science parks and technology centres (OECD, 2000).

It is usually difficult for universities in Africa to set up and run business incubation programmes on their own due to limited funding and lack of expertise. Most business incubation centres in Africa are set up and supported financially by industry. Some notable examples include Reseau Entreprendre Tunis (and Monastir) established in 2012 and is part of Reseau Entreprendre International, an association of local business owners and entrepreneurs; MobileSenegal established in 2008 with support through Pace University (Google, NCIIA, IBM) in the United States and GrowthHub, an incubator and accelerator launched by GrowthAfrica, a Danish consulting company in May 2012 (IST-Africa, 2014).

### 3. METHODOLOGY

This study is based on focus group interviews and discussions conducted with key players involved in the HIT-Sandown-UNDP Business Incubation Programme in Harare Zimbabwe in January 2015. Focus groups have the advantage that they generate data which is often deeper and richer (Saunders et al., 2003), than those obtained from one-to-one interviews. Participants to the study were knowledgeable and experienced in the area of university-industry partnerships.

Each focus group interview began with a one-hour presentation by the authors on researched data. During the focus group interviews, key themes in pre-determined questions were recorded, discussed and analysed. The focus groups ranged in size from 6-8 people. The authors moderated the group discussions while a colleague carefully recorded the key points agreed. On average, the focus group interviews lasted three hours each. At the end of each interview, participants were given an opportunity to go through the key points raised in order to secure clarity and agreement.

The process was not designed to evaluate the performance of the Business Incubation Programme but rather to understand and profile the project and appreciate the efforts of key players in advancing the entrepreneurial agenda in Zimbabwe.

## 4. HIT-SANDOWN-UNDP BUSINESS INCUBATION

In November 2014, the Harare Institute of Technology (HIT), Sandown Corporate Limited and UNDP Zimbabwe came together in a collaborative framework to jointly launch their first Business Incubation Programme by leveraging the areas of comparative strength between the three partners in order to provide a service that supported the process of incubating graduates' projects into business enterprises. HIT is a State owned degree-awarding Institute (public) while the UNDP is a United Nations body tasked with pushing an agenda for international development (public) while Sandown Corporate is a private UK-based firm (private).

### 4.1 Project Objectives

The business incubation project sought to support young Zimbabweans in transforming their technical prototypes into commercially and socially viable ventures. This was considered necessary in order to enable HIT to make a contribution to the economic development of the country.

This process involved refining a total of 10 prototypes, writing investor ready business plans, designing and carrying out a market survey for capital sourcing purposes.

### 4.2 Profile of PPP Partners

#### 4.2.1 Harare Institute of Technology (HIT)

HIT (<http://www.hit.ac.zw>) is a state-owned institution, which evolved from being a National Vocational Training and Development Centre to a fully-fledged degree-awarding Institute with full university status in September 2004. The Institute delivers quality engineering and technology programmes at the undergraduate level and aspires to be the hub of technology development in Zimbabwe. The vision of HIT is to be the leading institution on the development, incubation, transfer and commercialisation of technology and skills development for greater national industrialisation.

HIT's destiny is to be the stimulant of scholarship in innovation. Its cause is to cultivate commitment towards technopre-

Table 2. Business Incubation Participants

Name	Sex	Age	Degree	Project Sector
Liliosa Mushonga	F	24	Computer Science	Energy
Emmanuel Madzokere	M	24	Electronic Commerce	E-Commerce
Gresham Muradzikwa	M	27	Computer Science	E-Commerce
Chenaimwoyo Nhema	F	30	Electronic Commerce	Agriculture
Tendai Nyamugudza	M	27	Electronic Commerce	Education
Kudzai Shamba	M	24	Electronic Commerce	Education
Rumbidzai Jani	F	24	Electronic Commerce	Local Authorities
Kudakwashe Chifamba	M	26	Computer Science	Home Automation
Tinovimbanashe Maduku	F	25	Electronic Commerce	Pharmacy
Edward Zengeni	M	27	Computer Science	IT

neurial leadership while its calling is to commercialise technology through professionalism rooted in integrity. One of the vehicles through which HIT achieves these ideals is through its centres of excellence, which are briefly outlined in the next section. HIT conducts research, designs, manufactures, develops, incubates, transfers and commercialises technology for all sectors of the economy through its centres of excellence, which include:

- (a) Technopreneurship Development Centre (TDC): this unit imparts and fosters appropriate business entrepreneurial skills, attitudes and motivation in the university's students and the greater community.
- (b) Technology Centre (TC): the centre engages in production and manufacturing activities from the various academic units within the HIT. It also offers short-term technical training to industry.

#### 4.2.2 Sandown Corporate Ltd

SANDOWN CORPORATE LTD (<http://sandowncorporate.com>) is an international group of specialist, highly capable management and business development consultants with wide operational experience. The company's directors and consultants have a wealth of practical experience having managed and run their own businesses as well as valuable experience and contacts in the private and public sector across Europe and Sub-Saharan Africa including international NGO's

and multi-lateral organisations.

The company's associates and consultants come from diverse backgrounds and experiences and are multi-lingual (speaking French, Spanish, Portuguese, German, Russian, Creole, Swahili and other African languages). All share a strong background in international and multi-cultural work, together with a rigorous academic and professional grounding.

#### 4.2.3 UNDP

The United Nations Development Programme (UNDP) (<http://www.zw.undp.org>) is a United Nations arm that works in more than 170 countries and territories, helping to achieve the eradication of poverty and the reduction of inequalities and exclusion. The UNDP helps countries to develop policies, leadership skills, partnering abilities, institutional capabilities and builds resilience in order to sustain development results.

The organisation focuses on helping countries to build and share solutions in three main areas:

- Sustainable development
- Democratic governance and peace building
- Climate and disaster resilience

The UNDP also administers the UN Capital Development Fund, which helps developing countries grow their economies by supplementing existing sources of capital assistance by means of grants and loans; and UN Volunteers, which fields

over 6,000 volunteers from 160 countries in support of peace and development through volunteerism worldwide.

### 4.3 Business Incubation Participants

The business Incubation programme identified 10 high performing graduates from the Harare Institute of Technology (See Table 2 for graduates' profile). The programme was housed at the Harare Institute of Technology and through a 6-month incubation process sought to support these young Zimbabweans to transform their technical prototypes into commercially and socially viable ventures. As a result, a total of 10 prototypes were refined and investor ready business plans developed for capital sourcing purposes.

The ten participants consisted of six males and four females, were all educated to degree level, with an average age of 26 years.

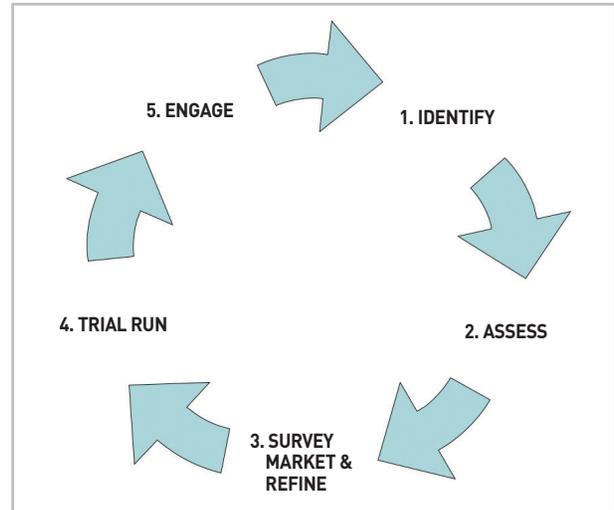


Fig. 1. HIT-Sandown-UNDP Business Incubation Pilot Process Model

## 5. THE HIT-SANDOWN-UNDP PPPS PROCESS MODEL

Figure 1 below captures the process model used to execute the HIT-Sandown-UNDP business incubation and the outputs from the business incubation process:

### Step 1: Identification of 10 high performing graduates

The first step in the business incubation process was to identify 10 high performing graduates across all schools from the HIT graduating class of 2014. Almost all the graduates had a degree classification of 2.1 or better, several were the best performing in different subjects in their class but invariably all had working prototypes that were designed to solve pressing problems either in their community or in the country. The graduates were housed at the HIT start-up laboratory. The partners allocated the responsibility of identifying the high performing graduates to HIT.

### Step 2: Assess

The second step was to provide technical and business viability assessments on the business ideas behind the prototypes. Each prototype was subjected to technical backstopping- re-checking the technical aspects of the prototype to see if it really worked well and identifying inherent weaknesses. Once the technical team was satisfied with the results of the technical backstopping, the next step was to write demand-driven business plans on their projects.

The business plans were an opportunity to inculcate entrepreneurship skills and competences. The business plans were assessed for soundness and viability. The process of writing business plan proposals was supervised by HIT. Concurrent with the technical and business viability assessments was the copyright registration of the projects. This process was deemed necessary to protect the work of the graduates from theft.

### Step 3: Market Survey and Refine

The third step was to conduct a comprehensive market survey with potential clients – both the consumers and companies who could use their products or services or buy the rights to their prototypes. The market survey provided answers to the following questions: Is there a market for this product? Is the demand sufficient to sustain a business? Are there any companies interested in further developing the prototype into a product or service? What additional feedback is forthcoming from the market? Interspersed with the market survey and refinement, Sandown Corporate provided extensive business coaching and mentoring to the graduates to further ground them in the operations of a business.

### Step 4: Trial Run

The fourth step was to deploy the prototypes in the field with potential customers and test them in live situations, run them from company premises while monitoring their efficiency and effectiveness. The trial run also provided the opportunity to check on the stability and weaknesses of the prototypes.

### Step 5: Engage

The fifth and final step was to engage potential partners and investors so they could invest in the projects of their choice in a way that they are comfortable with. Investors could buy the business idea completely or buy part of the equity in the business. Sandown provided critical market linkages to partners designed to mobilise resources and provide investment brokerage.

## 6. CONCLUSION AND RECOMMENDATIONS

In terms of typology, the HIT-Sandown-UNDP partnership was formal with its terms and references contained in a signed Memorandum of Understanding (MoU) between the three partners. The coupling of the relationship was low (transfer) focusing on a combination of training activities, software copyrights and publication of results.

An important point is to reflect on why each institution entered into this partnership. HIT did not have the financial means to set up and run business incubation on its own. Neither institution had the expertise on business coaching, mentoring and negotiation with investors. HIT needed funding and expertise in business mentoring and coaching. UNDP has an agenda to develop institutions and people. HIT provided space where UNDP could channel resources for development. The multilateral institution provided critical funding for the project to succeed. Sandown Corporate Ltd considered it prestigious to work alongside HIT and UNDP, a feat that would enhance its image further.

The question usually asked by industry is, "Are there sufficient benefits to be obtained from making cash investments in institutions of higher learning?" Sandown Corporate Ltd brought private sector expertise to this collaboration although it was UNDP as a developmental partner that picked the entire financial burden of the collaboration. This collaboration did not provide a definitive answer to this question. However, where industry is satisfied that there is something to be gained from such a collaborative arrangement, industry does invest in institutions of higher education and training.

Faculty awareness of how partnerships can benefit their research is rising at HIT as they see the benefits of this collaboration. Comparatively, industry awareness of how partnerships can add value to their own strategic priorities is still low in Zimbabwe but it is hoped that this awareness can be improved as results of such kind of collaborations produce positive re-

sults for all partners concerned.

The HIT-Sandown-UNDP collaboration has demonstrated the need for a certain level of negotiation, deal making skills and strategic focus. Although these skills were readily available in both Sandown Corporate Ltd and UNDP, negotiation and deal making skills were in short supply at HIT. For HIT, it became the case of 'on-the-job training', learning step by step as the collaboration moved forward. The drawback for learning on the job is that it takes both time and experience to develop these skills, making it difficult to scale up collaborations quickly.

From an academic perspective, one important motive for HIT in entering this collaboration was to secure research funding, gain practical experience on academic research and implement incubation and commercialization theories. HIT secured modest research funding to support technical backstopping activities, facilitate the writing of demand-driven business plans, engage in practical market survey and support students working on the projects with a modest stipend. Members of staff were able to actually implement incubation and commercialization theories and get an understanding of what is required for these processes to succeed.

The collaboration ensured that collaborating partner employees were exposed to the latest skills, knowledge and information available on concluding partnerships, software development processes, software copyrights registration, incubation processes, transparent financial management and reporting. The collaboration provided some level of staff development to partner employees.

HIT was able to discover scientific knowledge using new and different applications. There were energy use monitoring systems, university-bank integration systems, e-commerce systems, information archiving systems and remote monitoring systems. Sandown Corporate Ltd and UNDP had an interest in seeing these software systems adopted by communities for community development and eventually commercialized.

Association with highly regarded partners brings with it a sense of prestige to all parties and this can be a compelling motive for collaboration between universities and industry. HIT is renowned as a young and dynamic technology university, sought after by partners because of this reputation while UNDP is a highly regarded global development partner and Sandown Corporate is a reputable London-based business consultancy company. The coming together of these partners in a collaborative framework had the effect of improving partner organization's image, increase the learning capacity of their organizations and develop their human capital base.

To make the HIT-Sandown-UNDP incubation process a success, each partner had to play a clear but complementary role to the other partners. This situation fully demonstrated that this was a partnership with each member bringing unique resources and capabilities to the collaboration. As discussed earlier, the process of entrepreneurial development requires support in a number of critical areas- finance, networks, government and markets. UNDP provided seed funding for the incubation process, coordination of the entire process and a broad range of private networks to the collaboration. The seed funding covered the acquisition of stationary and equipment, teas and refreshments, costs of hosting training seminars, writing business plans, undertaking market survey and paying small incentives to project participants. HIT provided office space, administrative support, training on business plan writing, supervision on market surveys and access to government networks. Sandown Corporate Ltd provided individual coaching and mentoring services.

An African Proverb says, “If you want to go fast, go alone. If you want to go far, go together.” The truth of this proverb has been demonstrated in the HIT-Sandown-UNDP partnership. Although, the projects are at various stages of prototyping in the market and will shortly be commercialised, a number of valuable lessons have been learnt for the period that the Business Incubation was running. The lessons are briefly captured in the following paragraphs:

#### **i. Critical entrepreneurship and business skills imparted to Techies**

Consistent with the African proverb quoted above, the lives of the graduates were transformed through this partnership. Each of the partners could have gone very fast on their own but it was only through the coming together of the partners that real transformation of the lives of the Techies was achieved through learning valuable business skills, coaching and mentoring. Hence, partnerships of this nature are not only critical to the Techies but have transformed their lives and given them hope for the future.

#### **ii. Incubation process supported through unique partner skills**

The reason why a partnership of this nature was able to go far is that each partner had unique skills that they brought to the table. HIT provided the start-up laboratory (innovation space), academic rigour in writing business plans, technical backstopping and directing market surveys. Sandown brought

business mentoring and coaching, business plan refinement and investor readiness to the table. UNDP brought advocacy, coordination, funding and general direction of the project. The project would not have succeeded without each of the partners’ critical skills.

#### **iii. There is a chasm between theory and practice**

Although the graduates had been trained in writing business plans, they admitted that it was a different proposition when they had to write a business plan for their company. In other words, for the graduates, there was a chasm between theory and practice. Particularly challenging for the Techies, was the financial part of the business plan. The valuable lesson learned is that for selected projects, students must move to a stage where they are ready to run their businesses through a collaborative project of this nature.

#### **iv. Ten Software Copyrights Registered**

An important outcome of this project was the registration of ten software copyrights with the local copyright office. As discussed earlier, the registration of copyrights was necessary to protect the intellectual property of the graduates.

University-industry partnerships are a useful vehicle for business achieving business incubation as demonstrated in this PPP narrative. To make collaborations of this nature more effective, it is important that each partner carefully reflect on the purpose of entering the partnership to eliminate unrealistic expectations in the future. It is important that the behaviors of each partner reinforce rather than damage the partnership. Values of honesty, integrity, handwork and prudent financial management are critical to the success of the partnership.

## **REFERENCES**

- Bøllingtoft, A. (2012) “The bottom-up business incubator: Leverage to networking and cooperation practices in a self-generated, entrepreneurial-enabled environment”, *Technovation* 32(5): 304-315.
- Bøllingtoft, A., and Ulhøi, J.P. (2005) “The networked business incubator—leveraging entrepreneurial agency?.” *Journal of business venturing* 20(2): 265-290.
- Brinkerhoff, D.W., and Brinkerhoff, J. M. (2011) “Public Private Partnerships: Perspectives on Purposes, Publicness and

- Good Governance”, *Public Administration and Development* 31: 2–14.
- Brundenius, C., Lundvall, B. Å., and Sutz, J. (2009) “The Role of Universities in Innovation Systems in Developing Countries: Developmental University Systems—Empirical, Analytical and Normative Perspectives”, In *Handbook of Innovation Systems and Developing Countries*, edited by B. A. Lundvall, K. J. Joseph, C. Chaminade, and J. Vang, Cheltenham, UK: Edward Elgar, 311–336.
- CZI (2014) *Confederations of Zimbabwean Industries (CZI) Manufacturing Survey 2014*, Harare.
- Engineering Advisory Committee (2008) *Report of Encouraging Industry-University Partnerships*, Engineering Advisory Committee, Subcommittee on Industry-University Partnerships, UK.
- Guimon, J. (2013) *World Bank Policy Brief: Promoting University-Industry Collaboration in Developing Countries*, Washington DC: World Bank.
- Hagedoorn, J., Link, A. N., and Vonortas, N.S. (2000) “Research Partnerships”, *Research Policy* 29(4-5): 567-586.
- International Institute for Sustainable Development (IISD) (2011) *Policy Brief: Sustainable Development: Is there a role for Public-Private Partnerships?*, Winnipeg, Canada.
- International Labour Organization (ILO) (2014) *World Employment and Social Outlook - Trends 2015*, Genève, Switzerland.
- IST-Africa (2014) *Guide to Living Labs and Innovation Spaces in IST-Africa Partner Countries*, IST-Africa.
- Jachimowicz, F., and Umali, J. (2000) “Working for Mutual Benefit”, *Chemical Innovation* 30(9): 17-20.
- Lee, Y.S. (2000) “The Sustainability of University-Industry Research Collaboration: An Empirical Assessment”, *Journal of Technology Transfer* 25: 111-133.
- Livingston, J. (2007) *Founders Work: Stories of Startups' Early Days*, Berkeley, CA: Apress.
- NAMACO (2011) *Private Public Partnerships in Higher in Higher and Tertiary Education in Zimbabwe*, The National Manpower Advisory Council (NAMACO): Zimbabwe.
- OECD (2000) *Policy Brief: Science, Technology and Innovation in the New Economy*, France.
- Perkmann, M., and Walsh, K. (2007) “University–industry relationships and open innovation: Towards a research agenda”, *International Journal of Management Reviews* 9(4): 259-280.
- Reeves, E., and Ryan, J. (2007) “Piloting Public-private Partnerships: Expensive Lessons from Ireland’s Schools’ Sector”, *Public Money and Management* 27(5): 331–338.
- Saunders, M., Lewis, P., and Thornhill, A. (2003) *Research Method for Business Students (3rd Edition)*, New York: Prentice Hall.
- Science Business Innovation Board (2012) *Making industry university partnerships work*, Science Business: United Kingdom.
- Turk-Bicakci, L., and Brint, S. (2005) “University-Industry Collaboration: Patterns of Growth for Low- and Middle-Level Performers”, *Higher Education* 49: 61-89.
- UK Business Incubation (2003) *Business Incubation in the East Midlands: a review*, A summary report for the East Midlands Development Agency.
- UNDP (2014) *HIT-Sandown-UNDP Business Incubation Programme*, Harare.
- Yusuf, S. (2007) “University-Industry Links: Policy Dimensions”, In *How Universities Promote Economic Growth*, edited by S. Yusuf and K. Nabeshima, Washington D.C.: World Bank, 1-26.

---

Received October 27, 2015

Revised April 15, 2016

Accepted May 16, 2016