

## Measuring the Number of Jobs Created through Entrepreneurship Training

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### Abstract

The general understanding equates entrepreneurship to self employment of any sort although entrepreneurship is more recognised by the manifestations of innovative change. Entrepreneurship is receiving more attention in the 21st century because of its potential to contribute to economic development and creation of employment.

Entrepreneurship training is one of the key elements in the entrepreneurship development process. It creates a pillar of skills and knowledge on which entrepreneurship is built but not all entrepreneurship training programmes end with jobs been created in the economy. It has been challenging to pin down entrepreneurship training to the number of jobs created and thereby justify investment in entrepreneurship training programmes. Further, there is lack of research on approaches and methods for measuring jobs created by entrepreneurship development organisations and programmes.

An analysis of entrepreneurship education and programmes was conducted and the results show that focusing entrepreneurship training on new venture creation and creation of linkages and value chains has more potential of creating jobs in the economy. As such an approach to measuring the number of jobs created through entrepreneurship training is provided. The approach would further help organisations forecast and evaluate the effectiveness of entrepreneurship training programmes.

**Keywords:** Entrepreneurship Development, Entrepreneurship Training, Job Creation and Estimation Methodology.

### Introduction

Entrepreneurship and the functions of the entrepreneur are probably as old as the institutions of barter and exchange (Hebert and Link, 1988) despite getting significant attention at the turn of the 21<sup>st</sup> century (Kuratko and Hodgetts, 2007). Although entrepreneurship has been in existence that long, there are various definitions in literature and no standard accepted definition of the concept. Richard Cantillon (1730) defines entrepreneurship as self employment of any sort and several other definitions have loosely equated entrepreneurship to enterprise ownership and/or management. Say (1816) defines an entrepreneur as the individual who unites all means of production and who finds in the value of products, the

establishment of the entire capital, the value of wages, the interest and the rent he pays as well as the profits belonging to himself. It is generally understood that entrepreneurs create new organisations through the dynamic process such as obtaining equipment, establishing production processes, attracting employees and setting up legal entities (Shane, 2003).

However, from the text of Kuratko and Hodgetts (2007), it is Joseph Schumpeter (1934) who brings significant conceptualisation of the entrepreneur based on the manifestations of entrepreneurial activities where innovation is the key element in the process of entrepreneurship. The entrepreneurship process through innovation brings about new or improved goods, new methods of production, opening up of new markets, exploiting new sources of supply, and re-engineering of business management processes.

From the definitions, conceptualisation of the terms entrepreneurship and the entrepreneur splits into: (1) Schumpeter's thought where entrepreneurship and the entrepreneur are associated with creativity and/or innovation as a basis of creating value and development of high growth enterprises which brings about positive economic impacts (Stoke and Wilson, 2010), and (2) Cantillon's thought which equates entrepreneurship to self employment of any sort, where start-ups, development and management of small and medium enterprises are key elements of the process.

Whichever way one conceptualises the concepts of entrepreneur and entrepreneurship, entrepreneurship development has received wide spread attention for several reasons. Entrepreneurship impacts economic growth, creates wealth and jobs (Acs and Audretsch, 2003; Aidis, 2005; Benzing et al, 2009; Mc Mullen et al, 2008, Schumpeter, 1934) thereby it helps to curb growing unemployment and reduce poverty. It is now widely accepted in literature that barriers to economic development are not necessarily the scarcity of capital, resources, labour or land, but the scarcity of dynamic entrepreneurs who can bring together the resources, the markets and the mechanisms that can facilitate the entrepreneurship process.

### **The Problem and Objective of the Study**

Entrepreneurship development initiatives target to enhance economic growth and create jobs in the economy and entrepreneurship training is a key element in the entrepreneurship development process. It develops the desired calibre of the entrepreneurs in the economy. Entrepreneurship development programmes in Malawi have utilised Cantillon's (1730) conceptualisation of entrepreneurship as self employment of any sort thereby focusing on enterprise development and management. The SME sector is recognised as the engine of economic growth and employment generation. Organisations such as Malawi Entrepreneurs Development Institute (MEDI), Small Enterprises Development Organisation of Malawi (SEDOM) and Development of Malawian Traders Trust (DEMATT) now merged into the Small and Medium Enterprises Development Institute (SMEDI) were established to provide crucial supporting roles to the process through entrepreneurship education which focused on training for start-ups and enterprise management.

However, the problem is that entrepreneurship development initiatives or organisations that focus on entrepreneurship education have not been able or are not able to qualify their impact in terms of jobs they have directly contributed into the economy thereby justifying the investment they demand. Understandably questions arise on the effectiveness of entrepreneurship education in creating jobs and how effectiveness of entrepreneurship education can be evaluated to ensure that training programmes and initiatives are creating the number of jobs desired against the level of investment into such programmes. There is

lack of adequate methodologies available to entrepreneurship development organisations that can be used for such purposes of measurement.

The objective of the study was therefore to conduct an analysis and present an approach for measuring number of jobs created through entrepreneurship training. Specifically the study analysed the role of entrepreneurship education in the entrepreneurship development process and devised an approach to help organisations forecast, measure and evaluate the number of jobs created in an economy as a result of entrepreneurship training programmes. The study is relevant to entrepreneurship, entrepreneurship development, entrepreneurship training, job creation and measurement.

### **The Concept of Entrepreneurship**

The word entrepreneur derives from the French verb, 'entreprendre' which means to 'undertake' (Kuratko and Hodgetts, 2007). Although there continues to be no widely accepted definitions of entrepreneur and entrepreneurship (Hornaday, 1992; Watson, 2001) the study of entrepreneurship has a long tradition. Richard Cantillon (1730) loosely defines entrepreneurship as self employment of any sort and entrepreneurs as risk takers who purchased goods at certain prices in the present to sell at uncertain prices in the future. This definition of viewing anyone in self employment as an entrepreneur is commonly used. Informal street vendors, hawkers, small grocery owners, local restaurants' owners, smallholder vegetable growers, tyre fitters, barbers and every small enterprise owner categorise themselves as entrepreneurs in Malawi.

Say (1816) defines an entrepreneur as the individual who unites all means of production and finds in the value of products, the establishment of the entire capital he employs and the value of the wages, the interest and the rent which he pays as well as the profits belonging to himself. Further Joseph Schumpeter (1934) defines the entrepreneur as an individual who implements innovative change within markets which manifest in new or improved goods, new methods of production, new markets, new sources of supply, and/or re-engineered business management processes. Advancing Schumpeter's (1934) thought, Drucker (1985) defines an entrepreneur as a person who looks out for change, responds to it and exploits the opportunity generated by that change. Schumpeter's (1934) definition draws individuals who have creative and innovative ideas turned into successful business ventures as entrepreneurs. From various definitions, some of the key attributes ascribed to entrepreneurs include: risk taking (Cantillon, 1730); involvement in enterprise management (Say, 1816); creativity and/or innovation (Schumpeter, 1934) and entrepreneurial alertness (Drucker, 1985). Entrepreneurship has therefore been defined as the mindset and process to create and develop economic activity by blending risk taking, creativity and innovation with sound management within a new or existing organisation (Shane and Venkataraman, 2000). Entrepreneurship is concerned with the process of change, emergence and creation (Bruyat and Julien, 2000; Hartmann, 1959; Schumpeter, 1934; Weber, 1947).

Entrepreneurship Development Programmes (EDPs) have sought to develop entrepreneurs and the focus of the programmes has depended on the conceptualisation of entrepreneurship. However, EDPs utilising Cantillon's conceptualisation of entrepreneurship as self employment of any sort have focused on training for business start-ups, small enterprise management skills and technical skills. With the prominence of entrepreneurship advocacy EDPs are focusing on creating the entrepreneurial culture (Stoke and Wilson, 2010) where entrepreneurial attitude, creativity, technological innovations, opportunity spotting and knowledge management are receiving more attention. This is a trend towards

Schumpeterian conceptualisation where creativity and innovation are the focal points of entrepreneurship development and creation of successful business ventures.

**Entrepreneurship Development**

Entrepreneurship development refers to the process of enhancing entrepreneurial skills and knowledge through structured training and institution building programmes. The aim of entrepreneurship development is to enlarge the base of entrepreneurs in an economy in order to hasten the pace at which new ventures are created thereby accelerate jobs creation and economic development although the objectives of EDPs vary from mere creation of entrepreneurship attitudes and culture to actual start-ups and enterprise growth (WEF, 2009).

Entrepreneurship development is viewed as a cyclic process with three types of related activities i.e. stimulatory, supportive and sustaining which involve different stakeholders as depicted in the entrepreneurial ecosystem (WEF, 2009) Figure 1. Literature posits that entrepreneurship development is built around three pillars and these are (1) a level playing field, (2) access to finance and (3) access to skills and knowledge. Erecting these pillars require concerted efforts from all key players in the entrepreneurial ecosystem; the business community (private sector), the Government, the individuals and other intermediaries and academic institutions whose role has significantly changed in recent years in terms of increased entrepreneurial outreach programmes.

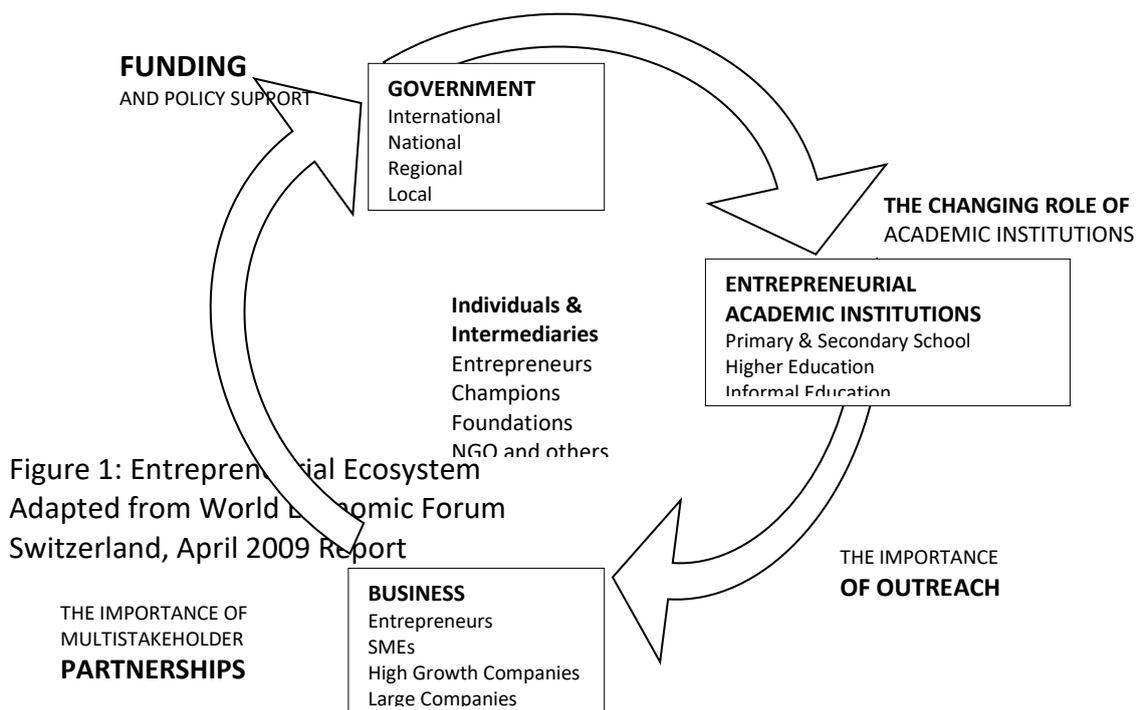


Figure 1: Entrepreneurial Ecosystem  
Adapted from World Economic Forum  
Switzerland, April 2009 Report

However stimulatory and support initiatives in entrepreneurship development differ among countries. Ayesha Baig (2007) in the Asian Productivity Organisation survey report on entrepreneurship provides a review of entrepreneurship support initiatives provided in some Asian countries. They include SME councils or departments, Small Business

Entrepreneur (SBE) Awards and Quality Awards, Promotion of technology and technopreneurs, promotion of women and youth entrepreneurs, policies and regulations for a level playing field, policies and regulations for SME development, establishment of entrepreneurship development institutions, development of entrepreneurship courses, skills development programmes, clusters, industrial parks, business development centres, establishment of SME linkage programmes, technology incubators and establishment of effective financial support to SMEs. The report highlights that these initiatives are provided in Bangladesh, India, Indonesia, Malaysia, Nepal, Pakistan, Philippines and Vietnam. It necessary to note that similar initiatives are also provided in Malawi in different combinations.

### **Role of Entrepreneurship Education and Training**

Academic and other training institutions provide entrepreneurship education either through entrepreneurship courses in management programmes, entrepreneurship programmes or through training workshops and seminars. The main intention of entrepreneurship education in the entrepreneurship development equation is to provide potential and future entrepreneurs with knowledge regarding the processes of discovering, creating, evaluating and exploiting opportunities to create future goods and services (Shane and Venkataraman, 2000).

Studies by Brooksbank and Jones-Evans (2005) and Robinson and Sexton (1994) found that education attainment was positively correlated to entrepreneurial activity. Further studies by Linan et al (2005) and Souitaris, Zerbinati and Al-Laham (2007) showed that entrepreneurship programmes play a fundamental role in developing entrepreneurial qualities of students. There has been increased provision of entrepreneurship programmes and courses in universities under the famous credo of developing employers and not employees (Naong, 2011).

Other training institutions have been set up by governments to specifically train entrepreneurs. In Malawi, for example, the Malawi Entrepreneurs Development Institute (MEDI) was established to offer training to small and medium entrepreneurs in enterprise management courses. However, as observed by the World Economic Forum (2009) there has not been enough empirical research on entrepreneurial education itself and its impact. The number of graduates who actually start new enterprises is low (Hanon, 2005) and despite being aware of entrepreneurial opportunities, potential entrepreneurs are cautious over risks involved (Blackburn and Curran, 1989). Heinonen, et al (2006) asserts that providing students entrepreneurial risk-taking, creativity and innovation through traditional pedagogy is that not easy. There is little that is known about the impact entrepreneurship education programmes have in developing students' entrepreneurial leadership capabilities (Bagheri and Pihie, 2009) and their eventual engagement in entrepreneurial activities to create new ventures and jobs. On the relationship between education and entrepreneurship, Markus Poschke (2008) further argues that in the USA the distribution of entrepreneurs is 'U Shaped' with entrepreneurs existing in the most substantial numbers at both extremes of education. Individuals with relatively low and high levels of education attainment are more likely to become entrepreneurs and spend more time engaged in entrepreneurship. In Malawi however, statistics show that education attainment and entrepreneurship are inversely related where individuals with relatively low levels of education engage more in entrepreneurship (self employment) than highly educated individuals.

Entrepreneurs with relatively low levels of education become entrepreneurs out of necessity to survive (Weaver, Dickson and Solomon, 2006). Mwatsika (2014) attribute push factors like unemployment and having no alternatives as reasons for pursuing entrepreneurship amongst the lowly educated in Malawi. They are entrepreneurs by Cantillon's conceptualisation of entrepreneurship where any self employed individual is considered an entrepreneur. Many of these entrepreneurs simply replicate other businesses and do not actually bring new products or innovations to the market. Although these replicative entrepreneurs are important to the economy, they are not critical contributors to economic growth in terms of number of jobs they create.

On the other hand entrepreneurs with relatively high levels of education become entrepreneurs in pursuit of opportunity (Weaver Dickson and Solomon, 2006). Shane and Venkataraman (2000) define entrepreneurial opportunities as situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than the cost of their production. Although it is argued that opportunities influence entrepreneurial behaviour, it is not argued that opportunities fully determine the entrepreneurial process. According to literature, seeking independence, need for achievement, personal wealth and recognition are the other key pull factors to entrepreneurship within this group. Most entrepreneurs in this category fit Schumpeter's conceptualisation of entrepreneurship where innovation is a key element and they contribute significantly to economic growth. Businesses run by educated entrepreneurs attain competitive advantage that according to Gilbert et al (2004) stems from entrepreneurial capabilities, management abilities, technical know-how and adaptability to the internal and external business environments.

Entrepreneurship training has a huge role to play to change peoples' perceptions towards entrepreneurship as a viable career option. Creating positive attitudes towards entrepreneurship would affect peoples' intentions to venture into entrepreneurship as Jackson and Rodkey (1994) argue that attitude towards entrepreneurship is an important aspect which predict potential entrepreneurs in future. However, entrepreneurship training programmes with the objective of shifting peoples' attitudes and perceptions towards entrepreneurship would not offer immediate contribution towards job creation.

Entrepreneurship training offers enterprise management skills aimed at improving performances of SMEs by equipping entrepreneurs or small enterprise owners with skills in managing finances, operations, human resource, marketing, use of ICT, etc which are essential in managing and improving performances of the enterprise. Entrepreneurship training further focus on skills that develop the entrepreneur's capability to initiate and respond to change. That covers a range of skills that include creativity and innovation techniques, entrepreneurial leadership, networking, linkages, opportunity spotting and analysis techniques etc. This is where Schumpeter's (1934) conceptualisation of entrepreneurship and innovative change is elucidated. Nevertheless from either perspective entrepreneurship training has to result in growth of new ventures and creation of jobs in the economy if entrepreneurship has to impact economic growth.

### **Lack of Entrepreneurship Training in SMEs**

According to various researchers, (Johnson, 2002; Lange et al, 2000; Sargeant, 1996; Story, 1994), training in SMEs is hampered by a number of influences. Lange et al (2000) identified cultural, financial, access, provision of training and awareness as factors influencing SME training. Sargeant (1996) indicated that lack of SME owners/managers to recognise the need

for training and often being occupied with day to day concerns of running their businesses affected their involvement in training programmes while Johnson (2002) found that another possible explanation of limited use of external training by SMEs is that SME owners/managers are simply unaware of the existence of the range of organisations, services and programmes that are available to help them to meet their skills needs. Furthermore formal training is an investment into a business and Storey (1994) found that the attitude of SME owners/managers towards training and advice were based on a desire to be shown the benefits from such an investment. However, there is little convincing evidence to suggest that increased investment in formal training leads automatically to improved business performance in SMEs. There is a problem associated with establishing the causal relationship between training and improved performance (Marshall et al, 1993) and in Malawi, SMEs are the least to invest in formal entrepreneurship training.

The above indicates that there is need for more entrepreneurship training programmes to be available to individuals who cannot access universities and other institutions of higher learning if the impact of entrepreneurship training in creating jobs in the economy is to be realised. Entrepreneurs must be made aware of training programmes available and support programmes put in place to enable more entrepreneurs have access to entrepreneurship training. The entrepreneurship training programmes should be practical and specific in developing entrepreneurial skills required by entrepreneurs in different sectors of the economy with visible impact in improving performance in areas of quality and innovativeness that bring competitiveness to SMEs and improves the bottom line.

### **Value Chains, Linkages and Employment Multipliers**

The concept of value chain (VC) was developed by Michael Porter (1985). Porter defined 'value' as the amount buyers are willing to pay for what a firm provides and a VC as a combination of generic value adding activities operating within a firm. Therefore a VC captures a sequence of related and dependent activities that are needed to bring a product or service from conception, through the different phases of production to delivery to final consumers and after sales and finally to disposal or recycling (UNIDO, 2004).

These VCs can be local, national, regional or global. However with the increasing globalisation and outsourcing strategies of global firms to gain competitive advantage, profitable and expansive VCs are global value chains (GVCs) coordinated through global production networks (GPNs). Competing with international enterprises is now a challenge not only for export sectors but for any producer of tradable goods and services (Altenburg, 2007).

GPNs consist of the Flagship firm and local suppliers. The Flagship firm defines the strategy and organisation policy of the network. According to UNIDO (2004), participating in GVCs and GPNs induce firms to improve efficiency in individual activities, to change the mix of activities or try to innovate by moving into another VC but the challenge for developing country producers is to access the chains' lead firm either directly or indirectly.

Of most importance from the concept of VC are the linkages between and among firms in the creation of value. Hirschman (1958) introduced the concept of linkages based on the fact that to produce a product or service firms depend on one another for inputs therefore investment in a firm produces demand effects that induce subsequent investments by input suppliers (backward linkages) or by sales and distribution (forward linkages). Developing VCs at local or national level increases firms' linkages, competitiveness, innovativeness and capabilities to break into GVCs that induce further growth of local and national firms and VCs.

Increased linkages bring huge multiplier effects in income, employment and government revenues. Because firms in the local economy are dependent upon other firms for their supplies, any change in investment to meet increasing customer's value (demand) would bring about a change in the economy's level of production, household income, employment, government revenue and foreign exchange flows.

Training entrepreneurs in the practice of these concepts increases opportunity spotting capabilities, through Value Chain Analysis (VCA), induce growth of new firms through linkages to innovative high growth firms in the Local Production Network (LPN) and create more jobs through the multiplier effects.

### **Evaluation of Entrepreneurship Education Programmes**

Shane and Venkataraman (2000) say the main intention of entrepreneurship education is to provide potential and future entrepreneurs with knowledge regarding the processes of discovering, creating, evaluating and exploiting opportunities to create future goods and services. However, with 86 million unemployed young men and women in 2004 (ILO, 2006) and the rising of unemployment in economies to date, practitioners and policy makers would be desperate to see results from investment in entrepreneurship education by way of jobs being created in the economies.

A study by Tarantino (2003) cited in Naong (2011) reveals that unemployment among the youth is particularly a problem in Africa with unemployment rates of 21 percent in Sub Saharan Africa and 22.8 percent in North Africa and the unemployment rate for youths ages 15 – 24 was twice that of overall labour force in 2003 (ILO, 2006). Therefore the need to create jobs in economies to absorb the growing unemployment figures cannot be overemphasised. For entrepreneurship education to have impact in creating jobs and curb the growing unemployment, the focus of training should be right and balanced. Entrepreneurship education has three perspectives that include: (1) *education about enterprise* where the focus is primarily changing the attitudes, creating intentions and the culture of entrepreneurship, (2) *education in enterprise* where the focus is sharpening enterprise management skills of practising entrepreneurs, and (3) *education for enterprise* where the focus is on potential entrepreneurs to engage in creating new ventures (start-ups) (Raposo and do Paco, 2011).

A review by Raposo and do Paco (2011) show that one suitable indicator to evaluate the results of entrepreneurship education is the rate of new business creation. Studies indicate however, that the results of entrepreneurship *education about enterprise* are not immediate but the results from entrepreneurship *education for enterprise*. Ewing Marion Kauffman Foundation (2010) and Bureau of Labour Statistics (BLS) (2010) show that start ups create essentially all net new jobs in the USA and that means if the goal of entrepreneurship development and entrepreneurship education is job creation, then the focus should be on undertaking and exploiting the creation of new ventures and particularly those with high growth potential.

Business development and education institutions need to develop deliberate programmes to offer entrepreneurship *education for enterprise* i.e. entrepreneurship training where the focus is creating new ventures and new jobs. However with the shift in approach to managing for results in the public sector, entrepreneurship training organisations and programmes should produce the results (economic impact) desired from their endeavours in creating jobs in the economy. The job creation goal would then be measured by the total number of jobs created (employment generated) by the investment both direct and induced (G-20, 2011) and be evaluated on the same basis.

However, there is little evaluation of effectiveness of entrepreneurship training organisations and programmes (Raposo and do Paco, 2011). That could be attributed to lack of appropriate tools and measurement methodologies. The number of jobs created through entrepreneurship education has often been calculated through longitudinal studies and analysis of employment data from labour statistics bureaus the results of which have supported the notion that entrepreneurship education has impact on creating jobs in the economy (BLS, 2010). Nonetheless, each entrepreneurship training programme should be able to forecast its impact based on the number of jobs to be created in the economy and therefore as observed by Raposo and do Paco (2011), measurement methodologies associated with entrepreneurship education are an interesting topic for study. The growing interest in entrepreneurship education and its impact present some important policy questions both for institutions that deliver entrepreneurship training programmes and for support organisations that provide funding.

Entrepreneurship training programmes focused on creating jobs require to justify why they deserve to be funded based on the impact in terms of number of jobs to be created after the intervention. To provide this analysis requires a thorough assessment methodology that can be used to forecast and evaluate jobs created as a result of particular interventions.

### **Methodology**

To come up with the approach for forecasting, measuring, and evaluating the number of jobs created through entrepreneurship education, an extensive review of literature was conducted. The reviews focused on the requirements and factors that affect job creation and those that would affect job creation from training programmes. There is lack of existing methodologies, for review, for forecasting, measuring number of jobs created and evaluating effectiveness of entrepreneurship education programmes and training in terms of job creation. The process of creating jobs is affected by myriad of factors that range from the individual entrepreneur factors, industry factors and business environmental factors (economic, political, social, technological and global factors). Further analyses were done on the operations of organisations and programmes involved in entrepreneurship development and training looking at policies, procedures, goals and implementation of programmes and initiatives. Focus of training, selection procedures of participants, factors considered for participation in training, goals of particular training programmes, training methods, training evaluation procedures and process etc. were analysed.

The review of literature and analysis of entrepreneurship development and education/training organisations enabled the development of the entrepreneurship training framework and offered the key focus for the approach in forecasting and measuring the number of jobs that can be created in an economy as a result of entrepreneurship training.

### **Limitations**

The approach provided and discussed is limited to forecasting and evaluating jobs created through entrepreneurship training that is focused on new venture creation and creation of linkages and value chains in particular industry sectors in an economy. However, entrepreneurship training has a wider focus with other programmes aimed at creating the entrepreneurship culture, attitude and intentions; and/or improving performance in areas of the business and enterprise management without a direct focus on creating jobs.

The approach is further limited due to the fact that it has not yet been built into a model that accommodates all factors that impact on business performance and job creation. The factors

are considered and analysed prior to applying the probabilities into the equation for determining new jobs created. However, it provides a very good starting point for forecasting, measuring and evaluating the number of jobs created as a result of entrepreneurship education or training.

### **Approach to Estimating Jobs Created through Entrepreneurship Training**

It has always been difficult to justify expenditures for entrepreneurship training in relation to the benefits in terms of the number of jobs created. Various organisations and projects have aimed at creating jobs by training entrepreneurs and SMEs but found it challenging to showcase the number of jobs created through such training programmes and interventions. An assessment approach is presented for estimating the number of jobs to be created through entrepreneurship training. However it is important to remember that there are a number of factors that impact on the effectiveness of entrepreneurship training in creating jobs and these include business support for venture creation, performance and growth factors in individual enterprises and the business environment (UNDP, 2004). The success of entrepreneurship training programmes would further depend on the selection criteria of participants, the training courses content and delivery methods, quality of business plans and their implementation and the coordination of the whole process to various entrepreneurial support initiatives available in the economy as outlined in the entrepreneurship training framework Figure 2.

The approach focuses on estimating the number of jobs created through entrepreneurship training in new venture start-ups and VC and linkage schemes. Therefore the jobs created are in two categories and that include: (1) the direct jobs created in new ventures started as a result of venture creation (start-up) training or entrepreneurship education and (2) jobs created in existing firms as a result of direct or induced growth from linkages and VC schemes created after entrepreneurship training.

### **Estimating Direct Jobs**

We define direct jobs (DJs) as the jobs created in the economy by new ventures established as a result of entrepreneurship training programmes. Therefore the number of direct jobs created would be the sum of all jobs created in each new venture established following each entrepreneurship training programme(s). To estimate the number of jobs to be created, the entrepreneurship training programmes in venture creation would have to be very specific in terms of industrial sector focus and type of ventures targeted for creation following on from the training programmes and the targeted number of potential entrepreneurs to be trained.

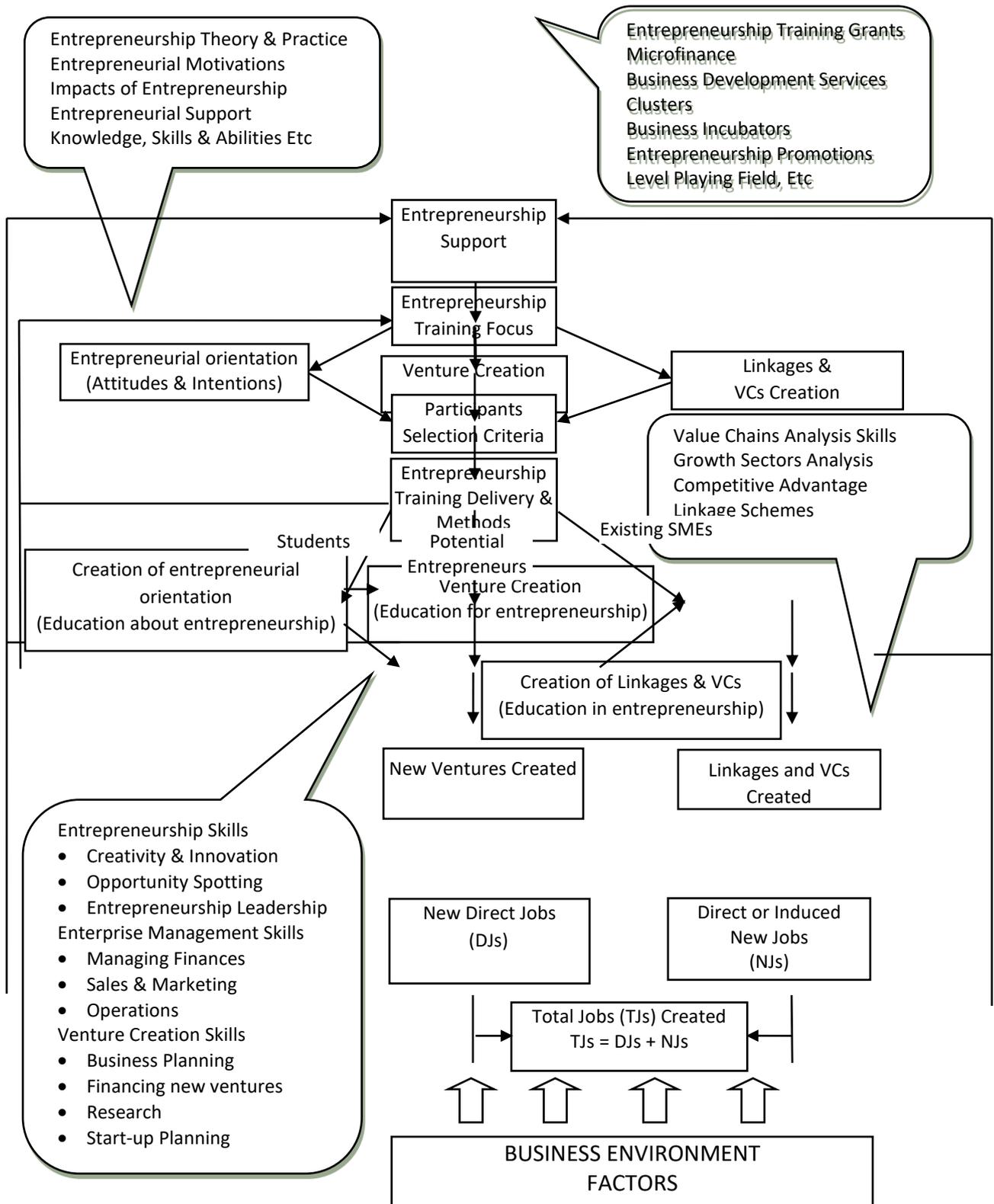


Figure 2: Entrepreneurship training framework

example an entrepreneurship training programme could target to train 100 potential entrepreneurs to start-up restaurant and bakery businesses in particular locations.

On that understanding, the expected number of new ventures to be established could be a function of entrepreneurs potential in terms of personal and other accessible resources and the level of entrepreneurial support available. Depending on the minimum level of start-up

operations for each enterprise as determined by the feasibility studies for each kind of new venture, the probability and number of direct jobs to be created through new ventures can be analysed and forecasted. Direct jobs would be presented as follows:

$$DJs = dJ1 + dJ2 + \dots + dJn$$

where dJ1 denotes direct jobs created in venture 1, dJ2 direct jobs created in venture 2 and dJn as direct jobs created in the nth venture. However, many factors affect new venture's ability to perform and create forecasted jobs. Each new venture will have its own likelihood to achieve new job creation potential denoted by probability value 'p' based on the analysis of individual new venture factors. Therefore new jobs created will be determined by the probability of each venture creating the number of forecasted jobs as presented in the following equation.

$$DJs = p(dJ1) + p(dJ2) + \dots + p(dJn)$$

The probabilities of each venture creating the forecasted number of jobs would be worked out by analysing business feasibility reports and business plans for new venture start-ups produced by potential entrepreneurs. The estimated number of direct jobs to be created would be the sum of all jobs expected to be created by each new venture established after the entrepreneurship training programme(s) where the number of new ventures created is a function of entrepreneurial potential of each participant and the entrepreneurial support available for new venture creation.

Ascertaining the number of direct jobs created in the economy through entrepreneurship training in new venture start-ups therefore involves evaluating the number of actual start-ups resulted from entrepreneurship training and summing up the number of jobs created in each venture. The expenditure in entrepreneurship training programme(s) against the total number of actual direct jobs created in the economy then determines the effectiveness of entrepreneurship training programme(s) delivered at particular points in time. Effective entrepreneurship training programme(s) would create more jobs per unit of entrepreneurship training expenditure.

### **Jobs Created through Linkages and Value Chains**

Linkages and VC schemes are aimed at creating collaboration between and among businesses in the economy that result in direct or induced growth of businesses. As businesses grow, more jobs are created in the economy.

Jobs created in the economy through entrepreneurship training in linkages and VC schemes would be accounted for by analysing the total number of new jobs created following on from the entrepreneurship training and establishment of VC linkages in the economy. There are many factors that impact on the creation of jobs through VC linkages and one of them is the entrepreneurship training. To work out the number of new jobs created through entrepreneurship training in VC linkages, there would be need to analyse the existing number of jobs in each firm participating in VC linkage schemes at the point of training through questionnaires or other assessment tools. The effectiveness of entrepreneurship training and VC linkage schemes would then be evaluated at the end of the determined period.

New Jobs (NJs) would be created in the economy as a result of direct growth and/or induced growth of firms participating in VC linkage schemes created following entrepreneurship training. Existing jobs (EJs) are the number of jobs existing in each participating firm in VC linkages at the time of entrepreneurship training represented as follows:

$$EJs = eJ1 + eJ2 + \dots + eJn$$

where eJ1 denotes existing jobs in business 1, eJ2 existing jobs in business 2 and eJn as the existing jobs in the nth business participating in the linkage and VC creation entrepreneurship training programmes. The number of New Jobs (NJs) would be ascertained by subtracting the EJs at the beginning of the schemes from the new employment figures at the end of the determined evaluation period of say 12 months. That will be presented as follows:

$$\begin{aligned} \text{NJs} &= (nJ1 - eJ1) + (nJ2 - eJ2) + \dots + (nJn - eJn), \text{ and} \\ \text{NJs} &= p(nJ1 - eJ1) + p(nJ2 - eJ2) + \dots + p(nJn - eJn) \end{aligned}$$

where 'p' denotes the likelihood of each firm in the VC linkages creating new jobs.

A number of performance factors in the firms that participated in entrepreneurship training and VC linkage schemes would be assessed that would include growth of employment figures. The employment figures at the beginning of the entrepreneurship training and VC linkage schemes for each participating firm would be subtracted from the existing employment figures at the point of evaluation. The net difference represents the impact of entrepreneurship training and VC linkages schemes in creating jobs in the economy holding other factors constant.

However, success of entrepreneurship training and VC linkage could be highlighted through other performance indicators like turnover, quality of assets, technological advancement etc. The new jobs created through entrepreneurship training in VC linkages would be the sum of all new jobs created in each firm that participated in VC linkages training and schemes although impact would be extended to other firms directly or indirectly involved in the VC schemes through multiplier effects.

### Total Jobs Created

The total number of jobs (TJs) created in the economy from entrepreneurship training programmes would be estimated as the sum of all direct jobs created from new ventures and/or sum of all new jobs created in firms participating in VC linkage schemes. Therefore Total Jobs (TJs) will be presented as follows:

$$\begin{aligned} \text{TJs} &= \text{DJs} + \text{NJs} \\ &= p(\text{DJs}) + p(\text{NJs}) \end{aligned}$$

Where p(DJs) was given by:  $p(dJ1) + p(dJ2) + \dots + p(dJn)$ ; and p(NJs) was given by:  $p(nJ1 - eJ1) + p(nJ2 - eJ2) + \dots + p(nJn - eJn)$ .

### Analysing Effectiveness of Entrepreneurship Training

We define Effectiveness of Entrepreneurship Training (EET) by the expenditure incurred in entrepreneurship training programmes to create a single job. Effective entrepreneurship training programmes would spend less per job created. Effectiveness of entrepreneurship training in creating jobs in the economy will be a function of training expenditure (Te) and the TJs eventually created as depicted by the equation below:

$$\begin{aligned} \text{EET} &= \frac{\text{Te}}{p(\text{DJs}) + p(\text{NJs})} \\ \text{EET} &= \frac{\text{Te}}{\text{TJs}} \\ \text{EET} &= \text{e/J (expenditure per job created)} \end{aligned}$$

Due to the fact that several factors affect training and job creation, analysing effectiveness of entrepreneurship training would enhance capability of entrepreneurship training programmes to create jobs in the economy since the variable factors impacting on job

creation through training would be analysed, evaluated and considered when developing entrepreneurship training programmes.

### **Conclusion**

A basic approach has been presented for estimating the number of jobs created through entrepreneurship training in new venture creation and creation of VC and linkages. Focusing entrepreneurship training in creating new ventures and VC linkages in the economy could have more chances of contributing to job creation because not all entrepreneurship training programmes end with creation of jobs.

Seemingly, entrepreneurship training programmes can be influenced by conceptualisation of entrepreneurship either focusing on venture start-ups and SME management skills or on innovativeness, competitiveness and growth of firms. Either way, entrepreneurship training programmes would have greater impact if there is a purposeful focus on new ventures creation and creation of value chains and linkages.

It has been challenging to justify investment in venture creation training programmes but the approach presented provides a starting point in providing justification for investing in entrepreneurship training programmes and their impact on employment generation. It should be noted however, that many factors impact on the success of new ventures and effectiveness of value chains and linkages and that there is no guarantee that trained potential entrepreneurs would start new ventures successfully and let alone guarantee the success of the new ventures. It should be remembered that creating a new business is a process fraught with difficulty and failure, and many businesses fail in the first twelve months of trading according to various researches (Reynolds & Miller, 1992, Sullivan et al 1998; Lussier and Robert 1996).

The study however, identifies new venture start-ups and creation of value chains and linkages as the two areas capable of creating jobs if entrepreneurship training is purposefully focused with other entrepreneurship support programmes and institutions in place.

### **Areas for Future Research**

There is growing enrolment in entrepreneurship courses and programmes in colleges and universities across the developing world. It is necessary to investigate the intentions of students in learning entrepreneurship because that would determine the impact the programmes have in generating jobs through entrepreneurial activities in the longer term.

There is also growing interest to know the impact of university programmes in creating entrepreneurial attitudes and intentions of students that would translate into entrepreneurial activities. Investigating the impact of university course and programmes in developing entrepreneurship is therefore fundamental. It would further be educating if the approach provided herein was tested in entrepreneurship training initiatives and programmes to measure appropriateness of application of the process.

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