

## MOTIVATION AS A POTENTIAL GEAR TOWARDS BUSINESS ESTABLISHMENT BY YOUNG ENTREPRENEURS INCUBATED IN HIGHER LEARNING INSTITUTIONS BUSINESS INCUBATORS IN TANZANIA

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### ABSTRACT

*Business establishment, specifically by fresh graduates and other young entrepreneurs in Tanzania, is faced by an inadequate access to business support services (BSS). This paper empirically analyzes the presence of motivation as a potential gear on starting new businesses by incubated young entrepreneurs. A total number of 30 incubatees from two universities business incubation centers, (i.e. the University of Dar es Salaam and Sokoine University) were surveyed and two incubation managers were interviewed. The findings indicate that there was a significant association between motivation and BSS ( $p < 0.05$ ) and Cramer's  $V = 0.136$ . There was also a strong association between motivation and marketing and business management ( $p < 0.05$ , Cramer's  $V = 0.507$ ); motivation and mentoring and coaching ( $p < 0.05$ , Cramer's  $V = 0.676$ ). This implies that marketing and business management (factor 1) and mentoring and coaching (factor 2) motivated young entrepreneurs to start new businesses. The more marketing and business management skills together with mentorship and coaching were extended to young entrepreneurs, the more motivation was imparted to young entrepreneurs to start new businesses.*

**Key Words:** Young entrepreneurs, Incubatees, Business establishment, Business Support Services, and Motivation.

### 1.0 Introduction

Business Development Services (BDS) present various services used by business operators to work efficiently and grow their firms (Olomi, 2009). The United Nations Development Programme (UNDP), as an entrepreneurship promotion and enterprise performance stakeholder, played a vital role in promoting BDS. Among the key roles played by UNDP in promoting youth entrepreneurship include the creation of Business Support Centres (BSC), Local Economic Development (LED), Business Incubators (BIs) and Information and Communication Technology (ICT) (UNDP, 2004). Besides having various initiatives in promoting youth entrepreneurship, this study focused exclusively on business incubators since it is one among the potential strategies used to support entrepreneurs, particularly young entrepreneurs. In addition, business incubators nurture entrepreneurial firms through provision of guidance and support at the startup stage when entrepreneurs are most vulnerable (Roy, 2011). Business incubators, being one of BDS required to meet needs of new startup businesses, are necessary in supporting initiation, survival, and growth of new businesses in entrepreneurial ways (ibid).

Among the services offered under business incubators include office space, flexible lease terms, access to technology, financing, and technical assistance such as marketing, finance, legal, human resources, and other business development services (Olomi, 2009).

Placing these services very close to each other, the incubator tends to play a potential role in optimal resource utilization, knowledge promotion and skills transfer, both formally and informally (Davies, 2009). Business incubation, on the other hand, was formally started in the United States (US) in 1960s and spread to developed nations such as Europe and in developing nations such as South Africa through various ways (ibid). Among those ways are innovation centers and science parks or techno poles aimed at meeting a range of economic and socio-economic policy needs such as promoting youth entrepreneurship, employment and wealth creation, support of small businesses with high growth potential, technology transfer, and innovation promotion (Davies, 2009). Others include enhancing networking between higher learning institutions, research institutions, business community, development of industry clusters, and assessment of a company's risk profile.

In Tanzania, youths such as university students and graduates, mostly had established their businesses although a few of them were able to grow and survive (Ministry of Industry and Trade-MIT, 2003). Youths are defined in terms of chronological age and this study uses 15-35 years age group as youth; as proposed in Chigunta *et al.*, (2005). Most of the youths claimed that inadequate Business Support Services (BSS) offered by BDS hindered them to excel (MIT, 2003). Provision of BSS to young entrepreneurs can be achieved through business incubators which act as support mechanisms and important instruments to meet the needs of Small and Medium Enterprises (SMEs) (Alakbarov, 2010). Furthermore, SMEs mostly formulated by entrepreneurs have been appreciated as an important strategy in economic growth and development (Ferguson and Olofsson, 2004).

Although various interventions were made by the government of Tanzania and development partners to ensure successful business establishment, growth, and development; majority of entrepreneurs still face inadequate access to BSS (Olomi and Issack, 2003). In order to ensure successful business establishment by young entrepreneurs and SMEs growth in Tanzania, this paper becomes necessary since it presents the influence of business incubators on successful business establishment by young entrepreneurs. In events when incubators in higher learning institutions contribute to business establishments by young entrepreneurs, this paper will open a door to young entrepreneurs, specifically higher learning students and graduates to join business incubators in Higher Learning Institutions (HLIs). This paper focuses on incubators in higher learning institution; i.e. UDEC under the University of Dar es Salaam (UDSM) and SUGECO and Solar-Tunda under Sokoine University of Agriculture (SUA) as they tend to facilitate access of BSS to startup entrepreneurs.

Various studies have been conducted on the support of business incubators in the entrepreneurship promotion focusing specifically on women entrepreneurship (Shahzad, *et al.*, 2012). These studies have not focused much on the influence of business incubators; specifically on successful business establishment by young entrepreneurs. This paper bridges the existing information gap by assessing an association of the Business Support Services (BSS) and motivation of young entrepreneurs to start new businesses.

## **2.0 Methodology**

This paper is based on the study conducted in two regions, Dar es Salaam and Morogoro. The selection of these regions was made purposely since the two higher learning institutions, the University of Dar es Salaam (UDSM) and Sokoine University of Agriculture (SUA) are respectively located in these regions. These institutions offer a substantial number of degree programs, business incubation programs, and have students from different parts of Tanzania and outside of the country. The selection of these

universities was made purposely since they are the only higher learning institutions with business incubation centres/programs as a potential tool, strategy, and technique for entrepreneurship promotion. A total sample of 30 incubatees from a sampling frame of 40 from these higher learning institution business incubators, was conducted. Additionally, the sampling distribution was 70% (21) from UDEC and 30% (9) from SUGECO/Solar-Tunda as shown in Table 2.1. This variation was based on the fact that the number of participants from UDSM was higher than those from SUA. Furthermore, all incubatees had an equal chance to be selected. On the other hand, a semi structured in-depth interview was conducted with two (2) managers of UDEC and SUGECO and Solar-Tunda business incubators.

The unit of analysis was incubated in the higher leaning incubation centers and multiple research methods and tools were used including survey, in-depth interviews, archival research, and observations. The use of various methods ensured the quality of the findings by triangulating through a comparison of the content of different sources of information (Kilonzo, 2008). Both qualitative and quantitative approaches were used in data collection. While qualitative data were collected using interview-guide, quantitative data were collected through designed questionnaires. Also archival research was done through document analysis to complement interviews and questions.

**Table 2.1: Sample Distribution of Incubates from their respective Business Incubators**

Sex of Respondents	Scores	Name of Business Incubators		Total
		UDEC	SUGECO and Solar-Tunda	
Male	Frequency	20.0 (66.7%)	5.0 (16.7%)	25.0 (83.4%)
Female	Frequency	1.0 (3.3%)	4.0 (13.3%)	5.0 (16.6%)
<b>Total</b>	<b>Frequency</b>	<b>21.0 (70.0%)</b>	<b>9.0 (30.0%)</b>	<b>30.0 (100.0%)</b>

**Source:** Survey, 2015

The questionnaire had both open and closed ended questions focused on the type of innovation commercialized by the company, their business and entrepreneurial activities in the centers, and their motivation to start new business and their performances in general. Furthermore, the financial and non- financial support services faced by incubatees before and after joining incubators and the current situations in the centers to ensure the performance of young entrepreneurs were also addressed. The incubatees covered in the study are those involved in manufacturing and service provision sectors. In this paper, five potential BSS have been identified to be offered by business incubators namely; (i) marketing activities and business management, (ii) networking activities including linkage with strategic partners, (iii) accounting and financial management, (iv) facilitation on access to finance, and (v) mentoring and coaching.

On the other hand, motivation was addressed by the variables under two factors namely; pull and push factors. The pull factors include (i) need for achievements, (ii) independence and autonomy, (iii) income security and financial success, (iv) recognition and status, (v) family and role models, (vi) community and social motivation, while (vii) i.e. Dissatisfaction presenting the push factor. These dimensions have been used to have a broad view of entrepreneurial motivation in starting new businesses. The association of BSS and motivation of young entrepreneurs to start new business was achieved by using a

cross tabulation between the BSS variables (marketing and business; networking; accounting and financial; access to finance; and mentoring and coaching) and motivation variables (presented by the pull and push factors).

Association of BSS and motivation variables involved five (5) BSS attributes and seven (7) motivation and the Chi-square ( $\chi^2$ ) values which were also examined. The Chi-square test ( $\chi^2$ ) assists in the determination whether the two discrete variables are associated. In case of any association, the distribution of the first variable tends to differ depending on the value of the second variable. In case the two variables are independent, the distribution of the first variable becomes similar for all values of the second variable (Martz, 2012).

In crosstabs with nominal measures, PRE (Proportional Reduction in Error test) was applied. Furthermore, the Cramer's V test was used to address the extent of associations between variables (Botsch, 2011). Other appropriate measures of associations especially for ordinal variables are the gamma, Kendall tau (tau-b for square tables and tau-c for non-square tables), or less preferred Somer's D. All measurements range from 0 to 1 and the closer to 1, the stronger the association. On assessing the strength of associations, Botsch (2011) proposed the use of guidelines whereby for Cramer's V, Tau B and C less than + or - 0.10 means very weak; + or - 0.10 to 0.19 means weak; + or - 0.20 to 0.29 means moderate, and + or - 0.30 or above means strong associations. In this paper, the Cramer's V is adopted since it involves nominal measures.

$$\chi^2 = \sum_{\text{cells}}^{\text{all}} \frac{(F_e - F_o)^2}{F_e}$$
 Where  $F_o$  is referred to the observed frequencies in the actual crosstab and  $F_e$  are the frequencies expected by chance

### 3.0 Results and Discussion

#### 3.1 Background of business incubators

Based on an interview made with managers from both universities, it has been found out that the University of Dar es Salaam (UDSM) Business Incubator under UDEC was established and began to operate in the year 2007. The number of staff under UDEC incubator was and is still Five (5) with diverse experiences such as incubators operations, business consultancy and management, developing entrepreneurial business, business planning, as well business growth. Others are managing people for results, financial management, record keeping, accounting, competitive marketing strategies, customer care, maintenance management, governance, negotiation skills and effective leadership.

On the other hand, the Sokoine University of Agriculture (SUA) Agribusiness Incubator under SUGECO/Solar-Tunda was established and began its operations in the year 2011 under the Cooperative Act (2003) in partnership with Agribusiness development. The number of staff under SUGECO/Solar-Tunda-Business Incubator was and is still similar to that of UDEC, i.e. five with experiences on applied agribusiness economics, business strategic management, agricultural marketing, and entrepreneurship. Others are agribusiness skills, business decision making techniques, business management and communication, customer relations, supply chain management, finance and credit management, research, as well the analytical techniques and tools.

#### 3.2 Features of business incubators and incubatees

Business incubators and incubatees bear various features. Starting with incubatees, their average age was 24 years old with a minimum of 22 years and the maximum was 35

years old. According to Chigunta (2005), this age group (22-35) constitutes the qualifying incubatees to be known as youth or young entrepreneurs since in Tanzania youth ages range between 15-35 years. It was additionally found that 83.4% of young entrepreneurs were males while the remaining 16.6% were females as shown in Table 2.1. Results generally implied that demographic factors (age and sex) could also be among the factors likely to affect an innovative attitude as commented by Harris and Gibson (2008). According to Harris and Gibson (2008), there is a significant difference between male and female business students in their needs for innovation in business, with males having higher scores on the entrepreneurial attitude scale than females.

On the other hand, the features of business incubators are mostly associated with the core objective of the establishment of the business incubation centres. For instance, UDEC business incubator focuses on service provision while SUGECO/Solar-Tunda concentrates on agribusiness. Detailed explanations on types of business incubators and incubatees at UDEC and SUGECO/Solar-Tunda are shown in Table 3.1

**Table 3.1: Types of Business Incubators and Incubatees Sectors**

Scores	Business Sectors Performed by Young Entrepreneurs						Total
	Service provision sector under UDEC (n=21)		Agribusiness sector under SUGECO and Solar-Tunda (n=9)				
	Business Consultancy	IT Services	Livestock keeping (Poultry & pig)	Fish farming	Horticulture (Fruits & vegetables)	Food processing (Honey & rice)	
Frequency	16	5	3	2	2	2	30
Percent (%)	53.3	16.7	9.9	6.7	6.7	6.7	100

**Source:** Survey, 2015

Based on Table 3.1, it was found that 53.3% of young entrepreneurs operating business consultancy (such as business knowledge, management and skills), followed by 16.7% of Information Technology (IT) services such as software development and web design were all from UDEC. Meanwhile, 9.9% of young entrepreneurs concentrated on livestock keeping and the rest 6.7% focused on fish farming, horticulture, and food processing and all of them were from SUGECO and Solar-Tunda. These results indicated that the education background had a higher relative contribution to young entrepreneurs in starting new business than a similar youth group with a limited education background as commented by Hossain *et al.*, (2012). Hence, the background (especially the nature of

tertiary education) and the nature of business incubator have some contribution on young entrepreneurs' types of businesses.

### **3.3 Business Support Services (BSS) offered by higher learning business incubators (BIs)**

Results indicate that marketing assistance and business management had 42.9% scores followed by networking activities e.g. internet and link with strategic partners (26.2%), and mentorship and coaching (15.4%) as shown in Table 3.2.

**Table 3.2: Business Support Services Offered by Business Incubators**

<b>Sn</b>	<b>Business Support Services (BSS)</b>	<b>Percent (%)</b>
1	Marketing assistance and business management	42.9
2	Networking activities (Access to internet, link with strategic partners)	26.2
3	Accounting and Financial management	3.6
4	Facilitation on access to finance, venture capital, and guarantee programs	11.9
5	Advisory boards, mentor/coach, and technology commercialization	15.4
<b>Total</b>		<b>100.0</b>

**Source:** Survey, 2015

### **3.4 Marketing assistance and business management**

Business management involves those business activities that are undertaken by incubators to help incubatees develop and finally be able to start their new businesses. Among them include management skills, customer relationships and marketing techniques, and business management required by young entrepreneurs. Under marketing assistance, business incubators play a role of supporting incubatees to market their products and/or services. Among activities include supporting development of services and/or incubatees' products and helping them to know how to manage marketing strategies and the way to undertake promotional activities. Such strategies and promotion activities include supporting incubatees to attend special events such as trade shows (e.g. Dar es Salaam International Trade Fair-DITF) and Farmers' Day. Others include giving young entrepreneurs an opportunity to represent incubators in some events such as in higher learning institutions trade shows where they tend to be exposed and familiarized with various local and international customers.

### **3.5 Networking activities**

These involve the availability and accessibilities of network, networking among incubatees, modality of networking among incubates, and external networking. According to Merrifield (1987) and Peters *et al.* (2004), networking is an important feature in the incubation process since incubatees get connected by various stakeholders such as incubator manager, staff, and various organization and institutions supporting the incubation process. Thus, business incubators play a bridging function which is an important role to act as an intermediary or mediator between incubatees and relevant innovation systems. Therefore, the business incubators create a network of individual incubatees and incubation managers, staff, incubator's advisory board, industry contacts, companies and employees, local universities, community members, and professional service providers. Among the professional service providers include lawyers, accountants, consultants, marketing specialists, venture capitalists, angel investors, and volunteers (Hackett and Dilts, 2004).

### **3.6 Accounting and financial management**

According to Jindrichovska (2013), accounting and financial management are regarded as critical elements of the management of a business as a whole. Within this function, the management of its assets is possibly the most important. Under the accounting and financial management, the important variables include the capacity of incubatees on financial management, its efficiency, the way training is offered, financial decisions, and record keeping. It is observed that 3.6% of incubatees commented on the financial management capability as an important BSS. Accounting and financial management knowledge enabled young entrepreneurs to know their business performances. Among practices conducted by incubatees include calculations on current assets they owned, revenues generated, and fixed and variables costs. These financial variables help them to determine the extent to which their businesses grow in terms of capital gains; i.e. ROI, ROA, and profitability. Furthermore, the majority of incubatees had a high efficiency in financial management area and enough skills in financial and record keeping.

### **3.7 Access of finance, venture capital and guarantee programs**

In this section, the contribution of incubators to facilitate an easy access to finance by incubatees was covered. The variables involved are the facilitation of access to finance incubatees, type of loan guarantee scheme available for incubatees, and the condition set to secure a loan. Managers and incubatees had various observations on the access to finance. Business incubation managers commented that they facilitate the access of finance to incubatees through linking them to microfinance institutions, banks such as CRDB and other financial supporters. On the other hand, the majority of incubatees had different perceptions on the way incubators supported them and on accessing the finance. For instance, 11.9% of incubatees commented that facilitation on access to finance helped them to start their businesses as displayed in Table 3.3. Incubatees' responses indicated that business incubators so far tried their level best to facilitate young entrepreneurs to access finance. However, more efforts are required on facilitation to access finance so that young entrepreneurs can be able to access different sources of finance such as from various microfinance institutions, loan guarantee schemes, and investors. Several challenges are experienced by business incubation centres on facilitation of young entrepreneurs to access finance. For instance, SUGECO and Solar Tunda managements claimed that:

*...there are several challenges facing SUGECO and Solar Tunda business incubators, namely: unfulfilled promises from government leaders and bodies and financial enterprises not performing as expected. The failures on the fulfillments of their promises pose challenges to repayment of the extended credit by CRDB Bank to these enterprises through SUGECO. More funds from CRDB will be extended when these challenges are solved.*

Based on the above quotation, commitment is required from various stakeholders including the government as a whole; and financial supporters so that young entrepreneurs will be able to access finance as per signed agreements. Commitments required are like fulfillments of all agreements made by the respective business incubators like grants giving, soft loans, and other necessary forms of support to ensure excellent performance of incubatees. Inadequate commitments hinder other stakeholders such as CRDB Bank to extend financial support to young entrepreneurs following the delay of incubators (as collateral) to repay loans (offered to their incubatees) as per their agreements.

### 3.8 Mentoring and coaching

In mentoring and coaching, the following attributes were involved; namely: offered mentorship and coaching, time frame on delivering mentorship and coaching, background of mentors and/or coaches and value added by mentors and/or coaches. Incubatees had different perceptions on mentoring and coaching. The study has found out that 15.4% (Table 3.3) benefited from the offered mentorship and coaching since their backgrounds and qualities were important factors to support young entrepreneurs.

### 3.9 Association of BSS offered and motivation of young entrepreneurs to start new businesses

Before determining the association of BSS and motivation, data reduction was done to explore the interrelationship amongst respective variables for BSS and motivation. Based on that, factor analysis was adopted. Factor analysis is group of analytical techniques used for different purposes including data reduction, development, and evaluation of test and scales (Bengesi, 2013). According to Pallant (2011), there are two main approaches used for factor analysis and are commonly discussed in various literatures: exploratory and confirmatory. An exploratory factor analysis is used to explore the inter-relationship amongst a set of variables; and on the other hand, the confirmatory factor analysis is used to test specific hypotheses or theories regarding the structure of the underlying latent variables. In this case, the exploratory factor analysis was adopted aimed at exploring the inter-relationship amongst variables and reduce them into fewer factors that are easily manageable.

#### 3.9.1 Compliance of data for factor analysis

The compliance of data for factor analysis was performed through Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test and strength of correlation among variables. The intention of the test was to determine whether data are suitable for factor analysis.

**Table 3.3: Kaiser-Meyer-Olkin Measure of Sampling adequacy and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.643
Bartlett's Test of Sphericity	Approx. Chi-Square	1243.450
	Df	253
	Sig.	0.000

**Source:** Survey, 2015

Table 3.3 presents results of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. The KMO measure of 0.643 indicates a high sampling adequacy for factor analysis that is quite far beyond the cut-off point of 0.5 (Kaiser, 1970 and Kaiser 1974 as cited in Bengesi, 2013). The literature indicates that for factor analysis to work, some relationships between tests variables are required (Pallant, 2011). The recorded significant difference value of Bartlett's test  $p < 0.01$  implies that the original R-matrix is significantly different from an identity matrix. These findings suggest

that there are some correlations between test variables and that the data is suitable for factor analysis.

**Table 3.4: Communalities after Extraction**

Items	Initial	Extraction
Incubatees' ability to manage, operate, and business leadership	1	0.935
Incubatees' business skills	1	0.904
Incubatees' customer relation	1	0.920
Incubatees' observation on quality of personnel in BIs	1	0.913
Incubatees' observations on availability of network	1	0.906
Incubatees' accessibility of network	1	0.916
Networking among incubatees	1	0.844
The way incubatees are connected with actors	1	0.907
Incubatees' connection with external network	1	0.951
Incubatees' knowledge on financial management	1	0.806
Incubatees' observations on efficiency of training on financial management	1	0.897
Incubatees' observations on training on financial management	1	0.870
Incubatees' financial decision making	1	0.811
Incubatees' comments on offered mentorship	1	0.507
Incubatees' need to achieve economic security	1	0.740
Incubatees' personal growth and self-realization	1	0.760
Ability of incubatees' control of own time	1	0.838
Potential of incubatees to achieve high position in society	1	0.817
Incubatees' need to be respected by friends	1	0.838
Incubatees' needed money to survive	1	0.866
Incubatees' need to have a chance to build great wealth	1	0.862
How incubatees see business ownership as an opportunity to gain additional income	1	0.741

**Extraction Method: Principal Component Analysis. Source: Survey, 2015**

Table 3.4 presents a summary of communalities after extraction. The results indicate that of all 22 variables subjected to a factor analysis, the communalities after extraction ranged between 0.507 and 0.951 which are all above the cut-off point of 0.3. According to Pallant (2011), communalities give information on how much variance in each item is explained and a value less than 0.3 indicates that the respective item does not fit well with other items in its component. In the light of these findings, the values of communalities above 0.3 suggest that the test items fit well in their respective factors.

### 3.9.2 Factor Extraction

While there are several methods of factor extraction such as principal component factor analysis, principal factors, image factoring, maximum likelihood, alpha factoring, unweighted least squares, and generalized least squares; several authors suggest that the most commonly suitable method is the principal component analysis (Pallant, 2011). This

paper adopted a Principal Component Factor Analysis (PCA) as suggested by several scholars. Table 3.5 presents a list of eigenvalues associated with each factor before extraction, after extraction, and after rotation. Before extraction, the analysis identified 22 linear components with the data set. The eigenvalues associated with each factor represent the amount of the total variance explained by that particular linear component (factor) (Pallant, 2011).

**Table 3.5: Total Variance Explained by Extracted Factors**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	<b>13.290</b>	60.411	60.411	13.290	60.411	60.411	7.853	35.693	35.693
2	<b>2.939</b>	13.357	73.768	2.939	13.357	73.768	5.058	22.990	58.683
3	<b>1.604</b>	7.290	81.058	1.604	7.290	81.058	4.233	19.240	77.923
4	<b>1.026</b>	4.664	85.722	1.026	4.664	85.722	1.716	7.799	85.722
5	0.821	3.730	89.452						
6	0.627	2.852	92.304						
7	0.453	2.060	94.364						
8	0.281	1.278	95.642						
9	0.248	1.125	96.767						
10	0.196	0.890	97.657						
11	0.177	0.807	98.464						
12	0.121	0.549	99.014						
13	0.088	0.401	99.415						
14	0.047	0.215	99.630						
15	0.041	0.186	99.816						
16	0.017	0.078	99.894						
17	0.016	0.071	99.965						

18	0.007	0.024	99.990						
19	0.005	0.015	99.994						
20	0.004	0.007	99.996						
21	0.002	0.005	99.998						
22	0.001	0.004	100.000						

Extraction Method: Principal Component Analysis.

Source: Survey, 2015

The analysis then extracted all factors with eigenvalues of 1.0 and above based on the Kaiser's recommendation (Field, 2009; and Pallant, 2011) of which un-rotated factor solution retained four (4) factors which are explained by 85.72 percent of the total variance. The largest proportion of the variance before rotation is explained by factor 1 (60.41%), which is relatively higher compared to other factors. The eigenvalues associated with individual factors are again displayed with their percentage of variance explained in the column labeled 'extraction sums of squared loadings'. The values are the same as the values before extraction except that the values for the discarded factors with eigenvalues below 1.0 are ignored. Hence, Table 3.6 is blank after the fourth factor.

### 3.9.3 Factor Rotation

In the final part of Table 3.6, 'rotation sums of squared loadings', eigenvalues of factor after oblique (direct oblim) rotation are displayed. The oblique rotation was chosen with the assumption that the extracted factors are related. Rotation has the effect of optimizing the factor structure and one consequence for the data set is that the relative importance of the four factors is equalized. Before rotation, factor 1 accounted for considerable more variance (60.411%) compared to the remaining three factors (13.357%, 7.290%, and 4.664%). However, after rotation, factor 1 accounted for only 35.693% of variance compared to 22.990%, 19.240%, and 7.799% for the remaining three factors.

**Table 3.6: Pattern Matrix for Exploratory Factor Analysis after Oblique Rotation**

Item	Factors			
	1	2	3	4
Incubatees' customer relation	0.974			
Incubatees' observation on quality of personnel in BIs	0.967			
Incubatees' ability to manage, operate and business leadership	0.813			
Incubatees' business skills	0.828			
Networking among incubatees	0.770			
Incubatees' connection with external network	0.760			
Availability of network	0.648			
Incubatees' accessibility to network	0.757			
The way incubatees are connected with actors	0.755			
Incubatees' comments on offered mentorship		0.277		
Incubatees' observations on training in financial management		0.481		

Incubatees' observations on efficiency of a training on financial management		0.509		
Incubatees' financial decision making		0.609		
Incubatees' chance to build great wealth			0.942	
Incubatees' needed money to survive			0.696	
Incubatees' knowledge on financial management			-0.161	
Potential of incubatees to achieve high position in society				- 0.967
Incubatees' personal growth and self-realization				- 0.838
Incubatees' need to achieve economic security				- 0.752
Ability of incubatees to control own time				- 0.883
How incubatees see business ownership as an opportunity to gain additional income				- 0.120
Incubatees' need to be respected by friends				- 0.494

Source: Survey, 2015

Table 3.7 presents a summary of the pattern matrix for exploratory factor analysis after oblique rotation. Field and Miles (2010) point out that in oblique rotation it is advisable to present results of both the pattern matrix and structure matrix to be able to compare the factor structure and confirm if there is any correlation among factors. In examining the pattern matrix and structure matrix for the findings presented in Table 3.6 and Table 3.7 respectively, a similar pattern of factor loadings is realized. However, the double loadings on a structure matrix (Table 3.7) confirm the existence of correlations among factors. The existence of correlations among factors supports the use of the oblique rotation.

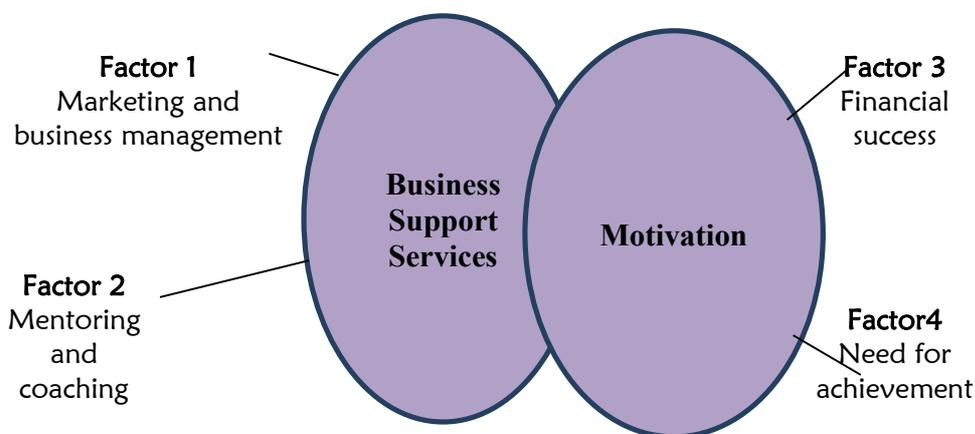
**Table 3.7: Structure Matrix for Exploratory Factor Analysis after Oblique rotation**

Item	Factors			
	1	2	3	4
Incubatees' customer relation	.948			-.534
Incubatees' observation on quality of personnel in BIs	.948			-.573
Incubatees' ability to manage, operate, and business leadership	.904		.199	-.599
Incubatees' business skills	.889		.195	-.567
Networking among incubatees	.875		- .276	-.728
Incubatees' connection with external network	.856		- .344	-.744
Availability of network	.761			
Incubatees' accessibility to network	.846			
The way incubatees are connected with actors	.840			

Incubatees' comments on offered mentorship		.631		-.690
Incubatees' observations on training in financial management		.813		-.844
Incubatees' observations on efficiency of training on financial management		.825		
Incubatees' financial decision making		.848	-	
			.135	
Incubatees' chance to build great wealth	-.154		.922	
Incubatees' needed money to survive	.134		.571	-.206
Incubatees' knowledge on financial management e.g. record keeping			-	-.820
			.306	
Potential of incubatees to achieve high position in society				-.922
Incubatees' personal growth and self-realization	.717			-.913
Incubatees' need to achieve economic security			-	-.838
			.139	
Ability of incubatees to control own time	.434		-	-.865
			.316	
How incubatees see business ownership as an opportunity to gain additional income	.234		-	-.340
			.879	
Incubatees' need to be respected by friends		.671	-	-.673
			.486	

Source: Survey, 2015

Based on Table 3.6 of the summary of the pattern matrix for exploratory factor analysis (N=30) complemented by the results summarized in a structure matrix in Table 3.7, it was possible to develop themes of factors based on the items loaded highly in each factor. Based on this, the extracted factors, after rotation, were named as marketing and business management (factor 1), mentoring and coaching (factor 2), financial success and economic status (factor 3), and need for achievement (factor 4).



**Figure 3.1: Names of extracted factors linked to the corresponding constructs**

Based on the literature, the four (4) factors were allocated in the corresponding constructs namely; marketing and business management as suggested by Barrow (2001) and EC, (2002), mentoring and coaching which present BSS as proposed by Carayannis and von Zedtwitz (2005) and Bergek and Norman (2008). Others are financial success and economic status as presented by Orhan and Scott (2001) and need for achievement which presents motivation as highlighted by Scott (1986) as shown in Figure 3.1. In order to ensure that extracted factors measure a common construct, reliability analysis was conducted.

**3.9.4 Reliability analysis**

Reliability analysis was conducted to test the credibility of data. In this study, the Cronbach's alpha was computed to examine internal reliability. Table 3.8 presents the Cronbach's alpha values and the number of items converged for each factor.

$$Cronbach's\alpha(\alpha) = \frac{N^2 \overline{Cov}}{\sum S_{item}^2 \sum Cov_{item}}$$

Where:

$N^2$  = square multiple of the number of items

$\overline{Cov}$  = average covariance between items

$\sum S_{item}^2$  = sum of all item variances

$\sum Cov_{item}$  = sum of all item covariances

**Table 3.8: Item analysis for rotated factors**

Factors	Factors			
	1	2	3	4
Mean	1.921	1.534	2.032	2.223
Cronbach's Alpha	0.889	0.870	0.822	0.807
Squared Multiple Correlation	0.805	0.844	0.823	0.856

Source: Survey, 2015

The summary of the results indicates that the Cronbach's alpha values for the four factors range between 0.807 and 0.889. According to Bryman and Bell (2007), Cronbach's alpha values above 0.8 represent an acceptable level of internal reliability. Based on this, the higher Cronbach's alpha values recorded in this study denote that the measurement tool measured well the concept leading to the performance of young entrepreneurs.

After satisfying the reliability of the extracted factors, the associations between BSS and motivation was answered as follows. Table 3.9 indicates the associations between BSS and motivation. In these associations, BSS motivation and the Chi-square ( $\chi^2$ ) values were examined.

**Table 3.9: Associations of BSS and Motivation of Young Entrepreneurs**

Motivation Factors	Factors		Df	Sig.	Cramer's V
	BSS Factors				
Financial success (Factor 3)	Mentoring and coaching (Factor 2)		4	0.000	0.136
	Marketing and business management (Factor 1)		4	0.000	0.478
Achievements (Factor 4)	Mentoring and coaching (Factor 2)		4	0.000	0.676
	Marketing and business management (Factor 1)		4	0.000	0.507
<b>N</b>			<b>30</b>		

Source: Survey, 2015

\* Significant at  $\alpha=0.05$

Results indicate significant association between BSS and motivation of young entrepreneurs to start new businesses. By considering each BSS factor (as mentioned in Table 3.9), it has been found out that there is a significant association between the motivation and BSS ( $p<0.05$ ). However, a weak relationship was reported (as Cramer's  $V=0.136$ ) on financial success and BSS; i.e. mentoring and coaching (factor 2). This means that incubatees were not sufficiently mentored and facilitated on accessing finance. Thus, more support from business incubators and actors on facilitation on access to finance is required and finally leading to a strong association between BSS and motivation like other variables.

The associations between BSS and motivation is described as follows: it has been found out that there is a strong association between motivation and marketing and business management ( $p<0.05$ , Cramer's  $V=0.507$ ); motivation and mentoring and coaching ( $p<0.05$ , Cramer's  $V=0.676$ ). This implies that marketing and business management (factor 1) and mentoring and coaching (factor 2) motivate young entrepreneurs to start new businesses. The more the marketing and business management

skills together with mentorship and coaching were extended to young entrepreneurs, the more the motivation was imparted to young entrepreneurs to start new businesses. This makes young entrepreneurs to have a good performance as they are monitored by their mentors, coaches, and role models.

The results support the importance of business incubators of having competent mentors and coaches who are already operating businesses and the related activities so as to inspire young entrepreneurs to follow their steps in starting businesses. Generally, results indicate a significant relationship between BSS and motivation as commented by Botsch (2011) with computed Cramer's  $V > \pm 0.30$ . However, more initiatives are required on facilitation of access to finance so that young entrepreneurs can have access to finance from various sources such as microfinance, banks, and other investors to start business as commented earlier. Initiatives made by business incubators on facilitating access to finance contribute at large on the performance of young entrepreneurs.

#### **4.0 Conclusion**

This paper presents detailed information on associations between BSS and motivation. It has been found that there is a strong association between motivation and marketing and business management ( $p < 0.05$ , Cramer's  $V = 0.507$ ); and motivation and mentoring and coaching ( $p < 0.05$ , Cramer's  $V = 0.676$ ). This implies that as more marketing and business management skills together with mentorship and coaching are extended to young entrepreneurs, more motivation to start new businesses is gained. Thus, motivation is considered to be an important gear towards business establishment by incubated young entrepreneurs. Additionally, the findings on the significant relationship between BSS and motivation of young entrepreneurs to start new business conform to the comment made by Botsch (2011) specifically when the Cramer's  $V > \pm 0.30$ .

Generally, these results support the importance of business incubators of having competent mentors and coaches who are operating either business or business related activities so as to inspire young entrepreneurs to follow their steps as their role model towards business establishment. However, more initiatives are required on facilitation of access to finance so that young entrepreneurs can have access to finance from various sources such as microfinance, banks, and other investors to start new businesses. Hence, initiatives made by business incubators on facilitating access to finance contribute at large in the performance of young entrepreneurs.

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