Impact of Internal Governance on Creating Entrepreneurial Universities: A Study Based on Sri Lankan Universities

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Abstract

Becoming an entrepreneurial university is the key strategy that needs to be adopted by public universities at present. When becoming an entrepreneurial university they need to adopt innovative and entrepreneurial approaches in the provision of their products and services and develop partnerships, networks and other relationships with public and private organizations. To adopt for all these internal governance structure (university structure and leadership) of the public universities plays a key role. This research intends to identify how far Sri Lankan public universities organizational structure and entrepreneurial leadership behavior has supported on becoming entrepreneurial universities. The study has developed two hypothesis and primary data collected from four public universities has been analyzed through regression analysis. Finally, outcomes of this research identified that university structure has a significant negative impact in the process of becoming an entrepreneurial university as well as entrepreneurial leadership behavior is still lacking from Sri Lankan context.

Keywords: *Entrepreneurial University, Entrepreneurial Leadership Behavior, Internal Governance, Organizational Structure*

1. Introduction

At present the higher education system in countries is undergoing enormous reforms. The new order of higher education is borderless, premised on collaborative learning, technology enabled, innovative and entrepreneurial. Universities thriving in this revised setting are viewed primarily as key for producing knowledge and workforce for the needs of modern society. Such universities are considered tools of social and economic change and expected to play a central part in the innovation system, economic development, knowledge-based economy and the competitiveness of nation-states.

Becoming an entrepreneurial university is the key strategy that needs to be adopted by the public universities to face the financial challenges and the competition today. The lack of financial support provided by the government has pushed the public universities to be entrepreneurial in searching funds from alternative sources. That is

firstly, the universities themselves need to adopt innovative and entrepreneurial approaches in the provision of their products and services. This is required to deviate from the ways of doing business as usual to more innovative and enterprising solutions. It includes changing the mechanisms and formulae for enrolling students, commencing innovative new courses, changing the role of universities from knowledge dissemination focused to include other services such as knowledge creation, technology development and technology transfer. It also includes the use of innovative ways for recruiting and retaining staff and to be a national and global player well connected with and aligned to national goals so that the universities are direct players of economic development. New ways of attracting the best students, being amongst globally ranked universities, and generating and managing funding without completely depending on government funding are further aspects. Simply speaking, it is the formula and recipe for going global and world class. Secondly, the graduates the universities produce need to be innovative and enterprising to be knowledge workers who can be the leaders in the economic development game and to be knowledge workers who can compete with any graduate produced in the world's best universities.

When adopting the strategy of becoming an entrepreneurial university as mention above it needs to develop partnerships, networks and other relationships with public and private organizations that are an umbrella for interaction, collaboration and co-operation. For these new relationships to be build entrepreneurial organizations needs to have a strong bottom-up development and initiative focus, empowering individuals at all levels of the organization to enjoy freedom for action. The dominant controlling and motivating parameter is not systems but shared mission, values and culture, and trust (Davies 2001; Daumard 2001). Thus, a major challenge and opportunity to universities is to build entrepreneurship upon the considerable freedom enjoyed by departments and individuals.

This highlight that when becoming an entrepreneurial university governance and management plays a key role (Clark; 1998, Etzkowitz; 2004). That is new procedures to manage, new authority structure, and new ways of resource allocation need departments more entrepreneurial obtained towards process, organization culture and people (Todorovic, et al., 2005). In this situation, the managerial ethos is oriented to institutional governance, leadership and planning (Subotzky, 1999) and requires an university manager with professionalized, leadership and full-time job personal characteristics (Dill, 1995; Henkel, 1997; Sporn, 2001). In this transition, the change of governance has been named a shift from state control to self-regulation of the universities, with a supervising state as a consequence (Clark, 1998; van Vught, 1999). The self-regulation is related with the concept of autonomy and it can be analyzed on two dimensions of purpose (cultural or utilitarian) and authority

(centralized or decentralized) where results are different models of state governance and space of action for the institutions. Finally it reveals that the capitalization, independence, interdependence, hybridization and re-flexibility help to development an innovation and entrepreneurialism in Universities. In other words, it is not a place for hierarchy and bureaucracy because a horizontal coordination is the better way to share intellectual, financial and physical resources (Van Vught, 1999).

Making Sri Lankan universities entrepreneurial has become an essential strategy in Sri Lanka's march to become a knowledge hub and to contribute meaningfully for rapid economic development through knowledge economy. This challenge is compounded by the fact that higher education is emerging as a key global industry in the context of globalization, liberalization and global excess capacity, and by other nations becoming increasingly competitive, innovative and entrepreneurial, not only in the provision of higher education but also in other industries.

In this context Sri Lankan Universities have to fully embrace entrepreneurialism not only to be aligned with the national goals but also to produce value added, highly employable graduates and to be recognized as internationally ranked, globally competitive higher education providers. From the universities' point of view Producing graduates in demand – for employment & higher studies, to be a university in demand – both locally and internationally, to be less dependent on state funding – generate more money, to develop desired graduates' attributes in many ways, being a provider of solutions to intellectual/technical needs of the industry, being a driver/trend setter to industry directions, being a significant contributor to national policy making/economic development, making graduates innovative and entrepreneurial and to be a best fit to national innovation eco system are been considered as the reasons for the universities to be entrepreneurial (Jayawardena, 2012).

In order to make national universities in Sri Lanka to be entrepreneurial it is important to inculcate institutional leadership style, structural change and shift in organizational practices in these universities. These internal governance changes will influence the successful transformation of becoming an entrepreneurial university. However, there is a lacuna of research is been done in order to identify how Sri Lankan public universities internal governance has been helpful in becoming entrepreneurial university. Though the policy decisions have been taken to make the public universities entrepreneurial its effectiveness depends on the internal governance changes in the university. Therefore this research intends to identify how public university structure and entrepreneurial leadership behavior support the process of becoming entrepreneurial universities in Sri Lanka.

2. Literature Review

2.1. Organizational Structure

The term organizational structure can be defined as the formal configuration between individuals and groups regarding the allocation of responsibilities, tasks and authority within the organization (Greenberg, 2011). Rigidity in structure restrains knowledge flow across units, departments and beyond knowledge flow across units, departments and beyond organizational boundaries. Developments and reframed structures of corporate sector have extended ripple effect to the boundaries of academia, demanding reorganization of university structures (Kirby, 2002). Non-hierarchic structure permit collective behavior and flexibility in work design leading to creativity and innovation. The structural framework of knowledge capability is determined by appropriate organizational policies, procedures, reward systems and incentives. It is presumed that these structural elements of the capability framework should be crafted with the intention to motivate and reward employees to spend time on knowledge sharing to ensure creation of new knowledge. Gold, et al., (2001) presented and elaborated key indicators of structural capability to create knowledge through extensive review of prior research. These indicators reflect that such structures support knowledge exchanges and lesson learning activities of specific interest groups. Similarly, socialization of the faculty and researchers enhances speed the process of knowledge creation, which is possible with flexible university structure. Markman, et al., (2009) determined in his research that collaborative research work has more positive impact on innovation speed. Combined effort has better research outcomes enhancing commercialization. Dorri & Talebnejod, (2008) prominently identified rigid university structure as a hurdle to knowledge creation. Bureaucratic command structures limit entrepreneurial capabilities of academic staff, intensifying competitive pressures to innovate and combat challenges.

2.2. Entrepreneurial Leadership Behavior

According to, Nicholson (1998) there are character differences between entrepreneurial leaders and other managers. Cunningham & Barton & Lischeron (1991) supports this idea and argues that the entrepreneurial leader is a people manager in motivating directing and leading people, whereas defining a vision is central. Entrepreneurial leadership is more about personal traits or style, setting clear goals and creating opportunities. Being the entrepreneurial leader means to be more than a manager (a leader of people). The entrepreneurial leader should possess seven characteristics leading to that the entrepreneurial leader sees opportunities where others do not (Santora, et al., 1999). Identifying opportunities where others do not, require certain competencies, to be compatible with the changing nature and growing needs in the new and established organizations (Swiercz & Lydon, 2002).

Concluding that Entrepreneurial leadership is a leader who creates, identifies and exploits opportunities in an innovative, risk taking way (Currie, et al., 2008) and the ability to influence other managing resources for opportunity seeking and advantage seeking behavior (Ireland & Hitt, 1999). Important being a leader and managing resources for opportunity seeking, is to create an entrepreneurial vision and inspiring a team of competent and competitive people to enact the vision (Gupta, et al., 2004). The leader is the one who has to create visionary scenarios that are necessary for selecting and mobilizing a supporting cast of interdependent members who commit to and enact the vision to achieve strategic value creation (Gupta, et al., 2004)(p.2). The entrepreneurial competencies can be developed by purposeful entrepreneurship education (Kempster & Cope, 2010).

Raunch, et al., (2009) highlights that even though the field of entrepreneurship is relatively new to the university environment. Commercialization of academic research depends on the university leadership and their support to encourage academic staff to commercialize their research. Researchers are of the opinion that leadership behaviors are essential in determining the success of organizations, or even a nation as a whole (Arham & Muenjohn, 2012) and paramount importance in an academic setting (Bass & Riggio, 2006). In a competitive environment, organizations are supposed to be entrepreneurially oriented, to compete and survive and entrepreneurial leaders are required to build, inspire, further and uphold entrepreneurial orientation within the organizational setting which eventually enhances the overall performance and efficiency (Wang, 2008). Universities are considered the hub of knowledge activity and are unique as they hold the key to inventions and innovations. These inventions and innovations are due to the skilled knowledge centers that reside in the form of faculty. Thus, faculty is the major source of all technological advancements that are attributed to the universities.

These evidence show that to transform a public university to an entrepreneurial university internal governance (university structure and leadership) needs to be changed accordingly. This research intends to identify how the structures, leadership and organizational practices changed over time in Sri Lankan national universities with this new shift.

3. Methodology

The study has adopted a deductive approach of research. At the outset of the study, two declarative types of hypotheses have been developed with a view to study how internal governance factors impact on creating entrepreneurial universities in Sri Lanka. The two hypotheses are as follows:

H_1: University structure influence on creating entrepreneurial universities in Sri Lanka

H_2: Entrepreneurial leadership behavior influences on creating entrepreneurial Universities in Sri Lanka

Based on the literature review, the conceptual framework (figure 01) was developed for the study.

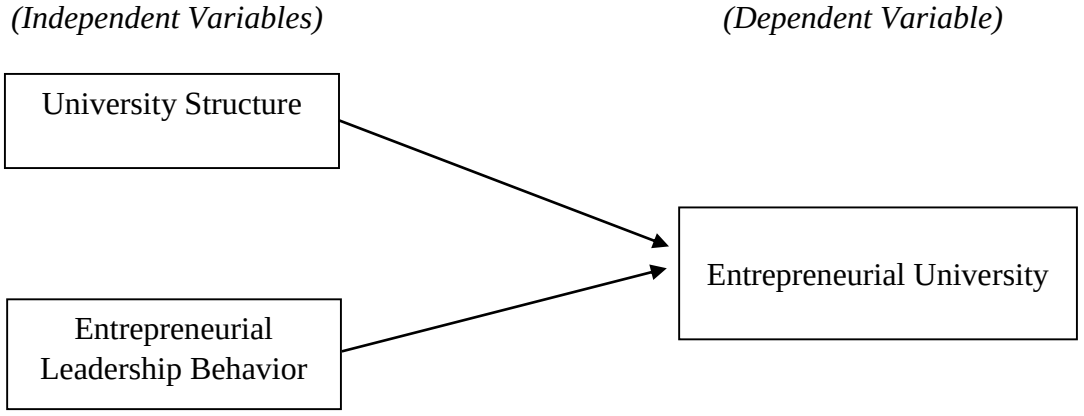

Figure 01: Conceptual Framework of the Study

4. Data

The conceptual framework presented shows the impact of internal governance on creating entrepreneurial universities in Sri Lanka. In this framework university structure and entrepreneurial leadership is considered as the internal governance factors and consider as the independent variables of the research framework. Further, to identify the entrepreneurial university the study used different entrepreneurship strategies such as organizational creation, renewal and innovation process and it's consider as the dependent variables in the study.

The study obtained statistical, quantitative results from a sample of 100 academicians from four public universities in Western province of Sri Lanka namely, University of Kelaniya, University of Sri Jayewardenepura, University of Colombo and University of Moratuwa. The target population frame consisted of academic staff categorized as professors, associate professors, senior lecturers and lecturers. The sample was selected by following judgmental sampling method. A common questionnaire was administered to all respondents in the four public universities in the data collection process. Linear Regression analysis was carried out to predict the value of the dependent variable based on independent variables.

5. Demographic Profile of the Respondents

The demographic profile of the respondents in this study consisted of gender, age, working status, highest academic qualification and current academic designation. Respondents were asked to provide their background information by answering multiple-choice questions that were designed in the form of nominal scale and recoded into nominal values. A summary of the respondents' demographic characteristics is presented in Table 01.

Table 01: 1Demographic Characteristics and Frequency Distributions of Sample

Demographic	Frequency N=100
Gender	
Male	43
Female	57
Age	
39 or below	72
40 to 44	12
45 to 49	10
50 or above	6
Working Status	
Permanent	79
Contract	12
Other	9
Highest Academic Qualification	
PhD	33
Master	41
Bachelor	25
Other	1
Academic Designation	
Professor	1
Associate Professor	1
Senior Lecturer	43
Lecturer	39
Other	16

6. Data Analysis and Results

6.1. Pilot Study

A set of the preliminary questionnaire was pilot tested in order to confirm that the variables fit into the framework, thereby, establishing validity and reliability. The survey instrument which used was the same instrument that has used by Mohar Yusof, et al., (2012). Focally, the pilot study was carried out to recognize whether it is fitted to the Sri Lankan university context because the questionnaire used for the survey has created to suite for foreign countries. Table 2 demonstrates the internal reliability of the scales used in the questionnaire. The Cronbach's Alpha Values are above 0.7 in most of the variables and very much closer to it under organizational structure. This prove the validity of the questioner being used for the study.

Table 02: Internal Reliability Score of the Scales Based on the Pilot Test

Variable	Reliability- Cronbach's Alpha Value
Organizational Structure	0.699
Entrepreneurial Leadership Behavior	0.869
Entrepreneurial University	0.931
• Organizational Innovation	0.909
• Organizational Creation	0.938
• Organizational Renewal	0.834

6.2. Descriptive Analysis of Measurement Scales

In this section, the descriptive results of the measurement scale for each of the variables of the study are presented. Detailed descriptions of the items or questions, means, standard deviations, skewness and kurtosis are reported in table form. In a quantitative study, to test research hypotheses, normality testing is important, as violation of this assumption could invalidate statistical hypothesis testing. The normality of variables can be tested by skewness and kurtosis (Hair, et al., 2009)

6.3. Organizational Structure

The results of the descriptive statistics are shown in table 3. A total of 7 items were measured by a five-point Likert scale on agreement levels, similar to control systems. 4 of the items (OS1, OS3, OS5 and OS7) were reverse-coded. This measurement scale contains the explanation of the academicians' evaluations of their universities' organizational structures and whether they are flexible thereby encourages entrepreneurship and experimentation of new ideas. According to the results of mean

scores, the respondents in this study expressed agreement that there were many levels of management in their universities (M=2.14, SD=0.865) and that they were not organized in a way that encouraged them to independently manage their research projects (M=2.52, SD=1.014). Further, the academicians perceived that the organizational structure was clearly defined (M=2.09, SD=0.975), agreed that red-tape was a problem (M=2.49, SD=1.000) and that administrators believed in delegating decision making responsibility (M=3.17, SD=0.933). However, they were uncertain of the flexibility of the organizational structure (M=3.14, SD=1.178). The responses also indicated that the universities' bureaucratic structure did not take away the ability to be entrepreneurial (M=2.59, SD=1.161) Overall, the responses demonstrate that even though the organizational structure may not be truly accommodative of entrepreneurship within the universities, it has not hindered the ability of these universities to be entrepreneurial and innovative.

Table 03: Measures of Organizational Structure

	Items **In Our University….**	**Scale Descriptive**			
		Mean	**Standard Deviation**	**Skewness**	**Kurtosis**
OS1	The bureaucratic structure takes away our ability to be entrepreneurial.*	2.59	1.161	0.347	-0.581
OS2	We are organized in a way that encourages us to independently manage our research projects.	2.52	1.014	0.498	-0.619
OS3	There are many levels of management.*	2.14	0.865	0.775	0.668
OS4	The organizational structure is flexible.	3.14	1.178	-0.166	-1.042
OS5	Red-tape is a problem. (This includes processes that involve duplication, difficult timeframes, unnecessary steps and multiple sign-offs.)*	2.49	1.000	0.306	-0.255
OS6	Administrators believe in delegating decision making responsibility.	3.17	0.933	-0.196	-0.193
OS7	The organizational structure is clearly defined.*	2.09	0.975	0.616	-0.551

Note: Responses to all items were on Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5); *Item was reverse-coded.

6.4. Entrepreneurial Leadership Behavior

According to the scale of entrepreneurial leadership behavior, it consisted of 9 items adopted from Thornberry's (2006) General Entrepreneurial Leadership scale to measure the perception of entrepreneurial leadership behavior among academic leaders at various levels in the four designated public universities. In table 4, the results of the descriptive analysis of the entrepreneurial leadership behavior variable are presented. Respondents were asked to indicate their agreement with each item, measured by a five-point Likert scale. There was an agreement in the item, to get things done even if it meant going around the system (M=3.42, SD=0.867). Low to moderate mean scores seems to indicate that respondents were quite uncertain about the level of entrepreneurial leadership behavior among their universities' academic leaders. Among the items with moderate mean scores include the willingness of academic leaders to move ahead with a promising new approach when others might hold back (M=3.24, SD=0.818), the willingness of academic leaders to listen to suggestions from others about how to do things differently (M=3.33, SD=0.933) and whether academic leaders demonstrated entrepreneurial orientation at work (M=3.17, SD=0.911).

In addition, the items with low mean scores seem to be related to two characteristics i.e. work environment and entrepreneurial behavior, and, behavior in confronting bureaucracy. For the former, the respondents were highly uncertain on whether academic leaders promoted an environment that encouraged risk-taking (M=2.91, SD=1.011), the ability to quickly utilize different approaches to overcome obstacles when the initial approach did not work (M=3.07, SD=0.977) and For the latter, the results seem to show that respondents were highly uncertain on whether academic leaders encouraged the bending of rules when the rules got in the way of achieving strategic initiatives (M=3.03, SD=0.870) and whether they actively fought encroachment of bureaucracy in the university (M=3.01, SD=0.827). For the item, whether academic leaders encouraged others to outwit bureaucracy (M=2.84, SD=0.950) the results a higher responses of disagreement. These findings would possibly mean that entrepreneurial leadership was not a strong characteristic for academic leaders in Sri Lankan public research universities.

Table 4: Measures of Entrepreneurial Leadership Behavior

	Items In Our University….	Scale Descriptive			
		Mean	Standard Deviation	Skewness	Kurtosis
EL1	Encourage the bending of rules when they get in the way of achieving strategic initiatives	3.03	0.870	0.035	-1.025
EL2	Get things done even if it means going around the system	3.42	0.867	-0.461	-0.828
EL3	Willingly move ahead with a promising new approach when others might hold back	3.24	0.818	-0.246	-0.472
EL4	Promote an environment where risk-taking is encouraged	2.91	1.011	0.004	-0.725
EL5	Encourage others to outwit bureaucracy	2.84	0.950	-0.104	-0.560
EL6	Quickly utilize different approaches to overcoming obstacles when the initial one does not work.	3.07	0.977	-0.142	-0.834
EL7	Demonstrate an entrepreneurial orientation at work.	3.17	0.911	-0.264	-0.474
EL8	Actively fight the encroachment of bureaucracy in the university.	3.01	0.827	-0.240	-0.413
EL9	Willingly listen to suggestions from others about how to do things differently.	3.33	0.933	-0.481	-0.291

Note: Responses to all items were on Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5); *Item was reverse-coded.

6.5. Testing Univariate Outliers

According to the SPSS output there are no any significant difference between mean and 5% trimmed mean values and no any requirement of treating outliers (table 5).

Table 05: Univariate Outliers

Variable	Mean	5% Trimmed Mean
Organizational Structure	20.91	20.94
Entrepreneurial Leadership Behavior	28.02	28.02
Entrepreneurial university	61.91	62.34
• Organizational Innovations	21.07	21.04
• Organizational Creation	21.73	21.83
• Organizational Renewal	19.11	19.21

6.6. Testing Univariate Normality

Normality is one of the assumptions that is tested to identify the nature of the data distribution. However we expect normally distributed data set without any outlier. According to the data analysis it shows that the data distribution has a tendency to be negatively skewed with slight variations (table 06). Therefore it indicates a less deviate distribution. The Kurtosis values also do not indicate a significant deviation of data.

Table 06: Univariate Normality descriptive statistics of the data

Variable	N	Min	Max	Mean	SD	Skewness		Kurtosis	
	Stat	Stat	Stat	Stat	Stat	Stat	S.E.	Stat	S. E.
Organizational Structure	100	13	28	20.91	3.028	- 0.211	0.241	- 0.283	0.478
Entrepreneurial Leadership Behavior	100	13	41	28.02	5.620	- 0.134	0.241	- 0.346	0.478

6.6. Testing Multicollinearity

The Tolerance values of independent variables are lie above the 0.1 therefore the researcher can confirm that the model corresponds with no multicollinearity. Also the VIF (Variance Inflation Factor) values lie below 10. Considering all VIF and Tolerance values of the data set, the researcher can confirm that all variables of the study act independently (table 07).

Table 07: Multicollinearity Test of the predictors of the study

Variable	Tolerance	VIF
Organizational Structure	0.977	1.023
Entrepreneurial Leadership Behavior	0.479	2.087

6.7. Testing for Autocorrelation

According to the value generated by SPSS statistics the researcher can conclude that there is no autocorrelation because the Durbin- Watson value is 1.563 which is very much close to 2. Meaning there is no autocorrelation (table 08).

Table 08: Model Summary

Variable	Durbin-Watson
Entrepreneurial universities (Dependent Variable)	1.563

6.8. Regression Analysis and Hypothesis Testing

The Regression analysis conducted to test the two hypotheses found that university structure has a significant negative influence in creating entrepreneurial universities and entrepreneurial leadership behavior variable is insignificant at 5 percent level in the four public universities (table 9). According to the P values generated only organizational structure represented a relationship between dependent variable and independent variables and hypothesis was accepted. However, entrepreneurial leadership behavior variables were rejected as they are insignificant at the 5 percent level.

Table 09: Statement of Hypotheses and P-Values

Independent Variables	Sig.	Correlations		
		Zero-order	Partial	Part
Organizational Structure	.002	-.290	-.307	-.268
Entrepreneurial Leadership Behavior	.552	.353	.061	.051

Where; Significant at ***p<0.05

Hence, the results suggest that though the organizational/university structure has an influence on creating entrepreneurial university it is still rigid. These universities need to improve and design their university structure to be able to further stimulate, support, facilitate, nurture and cultivate more entrepreneurial activities among their academicians. With regards to entrepreneurial leadership behavior still Sri Lankan public universities lack the leadership that is needed to foster the entrepreneurial initiatives according to the outcomes of the analysis.

7. Conclusion

The study conducted was interested upon identifying how organizational structure and entrepreneurial leadership behavior support Sri Lanka public universities to become entrepreneurial universities. This is a timely study because becoming an entrepreneurial university plays an important role as both a knowledge-producer and a disseminating institution. That is an entrepreneurial university is a survivor of competitive environments with a common strategy oriented to being the best in all its activities (e.g., having good finances, selecting good students and teachers, producing quality research) and tries to be more productive and creative in establishing links between education and research (Kirby 2005).

When a university becoming an entrepreneurial university there should be an internal transformation. Specially entrepreneurial organizations needs to have a strong bottom-up development and initiative focus, empowering individuals at all levels of the organization to enjoy freedom for action. The dominant controlling and motivating parameter is not systems but shared mission, values and culture, and trust (Davies 2001; Daumard 2001). Thus, a major challenge and opportunity to universities is to build entrepreneurship upon the considerable freedom enjoyed by departments and individuals. Apart from the university structural change their

should be a 'transformational leadership.' Intellectual and visionary leadership is needed in this transformation for two major reasons: first to remove ideological and 'concept of a university' barriers associated with the entrepreneurial paradigm; and second to carry this through in the particular context of the nature of the university itself and its existing culture, mission, and strategy.

The outcomes of the analysis identified that the organizational structure is still not flexible enough to help the transformation process but has significant impact on the entrepreneurial initiatives taken by these universities. To become more towards entrepreneurial university authorities need to improve and design their university structure to be able to further stimulate, support, facilitate, nurture and cultivate more entrepreneurial activities among their academicians. The visionary leadership that is expected to make entrepreneurial university is lacking in Sri Lankan universities. The key support that is required for the transformation is hindered due to this reason. Higher education authorities and universities needs to build 'leading innovation from the bottom', where creating leaders and empowering academics to take risks and build rewards around new ways of doing things. A key component is network and relationship management and building trust based relationships with the local, regional, national, and international environment.

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