

Prioritizing Factors of Entrepreneurial University to Inculcate Enterprise Formation Pursuit Among University Graduates Using Analytical Hierarchical Process

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Abstract: The objective of this paper is to prioritize entrepreneurial activities in higher education institutions to inculcate enterprise development pursuit among university graduates. Various phases of enterprise development process are determined along with prominent activities of entrepreneurial universities through literature review. Problem formulation is done by structuring goal, objectives and alternatives into a hierarchical model in order to prioritize factors with the help of Analytical Hierarchical Process (AHP). Experts of academic entrepreneurship are approached for pairwise comparison of factors on the preference scale of nine levels with the help of software tool Expert Choice 11. After recording judgments, preferences of all experts are combined in order to get overall priorities of objectives and alternatives. Results show that Internal Motivation has highest and Business Growth and Sustainability have lowest priority along with priorities of all other objectives of enterprise formation process falling between both. Moreover, University Incubation Center is prioritized among alternatives in order to achieve objectives. Sensitivity analysis of results is carried out with the help of Expert Choice in which weight of a single objective is varied to observe effect on hierarchical model. Research presents a complete picture to academicians and policy makers to determine role of universities for entrepreneurship development in country. It will also help government officials to allocate resources in a prioritized way in order to achieve specific objectives.

Keywords: Enterprise Formation Process, Internal Motivation, Analytical Hierarchical Process, Entrepreneurial University, Expert Choice.

INTRODUCTION

Higher educational Institutions must play a vital role for socio-economic development of country. Entrepreneurship development through higher educational Institutions could be a potential way for universities to effectively cooperate in development of country. In line with latest literature [1] entrepreneurial courses and activities within academia are being responsible for commercial linkage between academic institution and external environment. Thus, economic and social benefits are derived from this link for external environment i.e. society as well as academia which is the prime actor in this relationship. Assessing the need, entrepreneurship and small business management courses are the part of curriculum in major universities of country as per Higher Education Commission (HEC) guidelines. Higher Education commission is considered as official organization which is monitoring and regulating university settings within country [29]. Economic development is passing through an adverse period in the country. It has been mentioned in World Development Indicator (WDI) 2015 report by world bank that 50.7% population of the country is earning less than 2\$ per day i.e. below

international poverty line for the reference year 2010 [30]. It has been continuously mentioned in the literature that Entrepreneurship can be the remedy to these wounds and it will lessen poverty rate [2].

Impact of entrepreneurial education on economy and society can be divided into three frontiers. Firstly, Entrepreneurial orientation and awareness programs that focus on general information about entrepreneurship and encourage participants to think in terms of entrepreneurship as a career path. This includes activities carried out in entrepreneurial universities ranging from class room lectures to different seminars and training sessions. Secondly, new enterprise creation programs are designed to develop capabilities that lead to self-employment, economic self-sufficiency or employment generation. This phase incorporates different business incubation centers in the country which are administered by universities, government institutions and private organizations. These centers can also be termed as university incubation centers (UIC). A recent research article [3] regarding entrepreneurship promotion centers and university incubation centers (UIC) in country provides us with some facts and figures. The author observed that out of 140 state and private higher education institutions in the country only nine universities had established entrepreneurship promotion centers. It is concluded in this article that these centers lack human resource and are financially

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under resourced as well. Programs on small business survival and growth can be considered as third phase. This phase deals with establishing government policies and regularity laws which promotes industries especially small and medium enterprises (SME's) which could be the result of entrepreneurial endeavors by individuals. State has established fully independent institution named as small and medium enterprise development authority (SMEDA) under the ministry of industries and production [32]. Small and medium enterprise development authority (SMEDA) can join hands with higher education institutions to realize the dream of economic and social development of country through entrepreneurship. The regional office of SMEDA in the most populated province of the country has taken practical steps in the direction of entrepreneurship development. SMEDA is intended to conduct seminars on the title of "Entrepreneurship as a Career Option" with the collaboration of educational institutes of the province Punjab [33].

As it is discussed with reference to the research article [3] that entrepreneurship centers in country are under resourced with respect to both human and financial capital. So, SMEDA is determined to provide support for the establishment of such centers in addition to the seminars of entrepreneurship in educational institutions. In spite of weak infrastructure and slow progress towards entrepreneurial destiny of educational institutions, state organizations like HEC and SMEDA are striving hard to achieve entrepreneurial objectives. It is with the agreement to the literature [4] that there is an evidence of entrepreneurial activities in higher educational institutions of the country. But these activities are more inclined towards soft corner of entrepreneurship that ranges from class room courses (CRC) to seminars and training sessions (STS). But the focus should be the ultimate goal which is the value creation in terms of social and economic gain. The purpose of our study is to prioritize factors of Entrepreneurial University (EU) in order to facilitate resource allocation for policy makers. Factors of Enterprise Formation Process (EFP) are also prioritized to ensure entrepreneurial pursuit among graduates. Analysis is carried out in a novel way with help of Analytical Hierarchical Process (AHP) linking factors of EFP and EU with each other through hierarchal levels.

LITERATURE REVIEW

Dimensions of Entrepreneurship Research

Entrepreneurship research has been gaining traction progressively with the passage of time. A

Review paper [5] has mentioned various aspects of entrepreneurship research during past years. After reviewing a large amount of research articles, it is established by above mentioned research that analysis of nascent ventures has gained attention of many researchers. Entrepreneurial research has many dimensions including cognitive aspects of entrepreneurship. This cognitive perspective is discussed by article [6] in which author has described entrepreneurial thinking and its psychological aspects. It is concluded by the research [7] that motivational theories such as Maslow theory of hierarchy are affecting educational activities positively. Research discoveries of [8] has discussed two opposite aspects namely motivation level and fear of failure. When it comes to risk taking, it is level of motivation which can break the barrier of fear and let an entrepreneur to take a calculated risk. [9] has discussed stress level and fear among university graduates which can be overturned with motivation. The research [10] has identified two perspectives which are effectuate and causal process. Effectuate process is to start your venture with whatever resources you have and focus on what you can achieve with these available resources. Causal process is setting goals and striving to gather resources needed to start your venture. Sarasvathy has argued that effectuate process is more vibrant and it enables an individual to pursue his motivation. Leadership is also closely associated with entrepreneurial life in the background of opportunity recognition and exploitation. Because after deciding to start a business venture or pursue a social mission, the subject arises where to start from. Research work [11] has established the concept of entrepreneurial leadership and its various aspects after an extensive literature review. The research under discussion has identified team work, opportunity recognition (OR) and right time to exploit a given opportunity as entrepreneurial leadership aspects. Case studies of entrepreneurs have also described the vital role of distinct aspects of leadership and internal aspiration. The research [12] has explained entrepreneurial story of the master graduates of business field from Indian Institute of Management Ahmedabad (IIMA). The research conducted under the title of "Study of Accidental Entrepreneurs: Case study of 'Kwench Library Solutions'" has emphasized inevitable role of various aspects of leadership and motivation. This case study has also endorsed the results of above mentioned research [8] that decision to pursue a business or initiate a startup is accidental. Such a decision is taken in just few moments but its impact is everlasting in life.

Economic Development

Entrepreneurship is quite capable of tackling poverty settings in underdeveloped economies. Authors of study [2] have also mentioned that most of the entrepreneurship researchers come from Global North which consist of economically developed states of Europe, North America, Australia, Israel, South Africa etc. whereas the Global South consists of the economically undeveloped or developing countries of Africa, India, China, Brazil, Mexico etc. Global North is already economically developed and rarely facing any problem of poverty [2]. Article has recommended that researchers from Global south must add in entrepreneurship literature in perspective of their domestic environment. As, entrepreneurship is of paramount value for economic and social development but resources are needed to carry out internal motivation by exploiting a business opportunity. It is discussed in the study [13] that institution which has provided small loans to tourism industry are proved to be effective for development-led tourism. Limitation of this study is that author has studied success stories only. Resources also include inner capabilities, expert guidance and external environment around an enterprise in addition to financial resources. It is explained in this research [14] that vocational training, entrepreneurial seminars and training sessions have been vital for self-employment and boosting entrepreneurship. This research has reiterated that business capital (BC) is one of the decisive factors to work on a startup [13].

Entrepreneurial University

The term entrepreneurial university is closely linked with the concept of entrepreneurship and associated activities of entrepreneurship. Entrepreneurial university or institution is an entirely different academic arrangement as compared to conventional university settings. Entrepreneurial university administers entrepreneurial activities ranging from academic entrepreneurship to creation of business ventures and commercialization of research for economic benefits and social betterment within society. Entrepreneurial university is widely mentioned term in literature such as in this study [15], it is discussed that entrepreneurial university has the special role of academic entrepreneurship along with conventional duties of education and research. It is further elaborated in above mentioned research study [15] that teaching staff of entrepreneurial university is committed to deliver economic and social benefits to the

surroundings. So, it is the much-needed step to align and orient our higher education institutions to the entrepreneurial path. The key attributes regarding entrepreneurial university (EU) are mentioned in the paper i.e. technology parks, spin-off companies (SOC), university commercialization centers, university-industry linkage, research based university incubation centers (UIC), research grants, publishing academic results and producing well qualified technical graduates. Class room courses (CRC) of entrepreneurship are of primary significance for producing qualified graduates who are well equipped with entrepreneurial skills along with technical skill.[16]. All these activities can be started within universities just like world renowned institutions e.g. Massachusetts Institute of Technology (MIT) and Stanford university. These institutions can be called as “Entrepreneurial Universities” in true spirit.

Meaning of Entrepreneurship

It is also necessary to investigate the meaning and the origin of the word ‘entrepreneurship’ and ‘entrepreneur’. According to oxford dictionary, entrepreneurship can be defined as “The activity of setting up a business or businesses, taking on financial risks in the hope of profit”. This word is originated in early 19th century. It is basically derived from French word “entreprendre” which means “undertake” and the word “enterprise” is also originated from the same basic word “entreprendre” [31]. There is not complete agreement on meaning of entrepreneurship in literature but there are some attributes which can be associated with entrepreneurship. These attributes are opportunity identifying, performing activities of value addition, assessing the needs, assembling & organizing financial and human resources, actively leading one’s team, learning from success and failure, managing & tolerating the risk and last but not the least having a goal for personal as well as organizational growth [17]. After studying literature in detail, it can be concluded that if entrepreneurship is to be defined in a single word then it is “independence”.

Enterprise Formation Process

This research is intended to observe the effect of entrepreneurial education on industry or enterprise formation process (EFM) more specifically small and medium enterprises (SME’s) formation in Pakistani environment. Because SME’s are mostly results of entrepreneurial activities. Pakistani small and medium enterprises (SME’s) have been closely studied by the

authors [18] to observe aspirations, success factors, challenges and opportunities in Pakistani environment. Author considers Business Capital (BC) as a prominent challenge faced by entrepreneurs in nascent phase of their enterprise. Unlike other researchers, author has conducted in depth interviews of micro entrepreneurs for data collection. It is a major limitation of this study as we cannot overlook bias factor in case of in-depth interviews. Other factors of EFM are Internal Motivation (IM), Opportunity Recognition (OR), Business Model (BM), Business Execution (BE) and Business Growth & Sustainability (BGS) which are widely discussed in various articles mentioned earlier in similar way as [8] and [11]. The article [19] evaluate entrepreneurial characteristics among the students of a state university in Pakistan. Research has shown that entrepreneurial courses are being taught to commerce and business management students only. Another research article [20] has also listed down entrepreneurial attributes among university students by conducting a research survey in another higher education public sector institution of Pakistan. This research has concluded that students are being attracted towards entrepreneurial carrier due to different educational programs within universities.

Link of Enterprise Formation Process with Entrepreneurial University

In research [4], author has classified several different categories and sub categories of entrepreneurial engagements in universities. Entrepreneurial university consists of these major four categories named by the author as 'Training and consultancy', 'The formation of companies by the university', 'The formation of your own companies in which university has no shares', and 'Academic entrepreneurial activities of basic research and teaching'. Sub categories regarding entrepreneurial university attributes are training sessions, consultancy services, university incubation centers (UIC), university industry joint ventures, spin-off companies (SOC) along with total 16 other activities. Author has carried out self-administered survey among six public sector universities to evaluate participation of higher education institutes in above mentioned 16 sub-categories under four major categories. In line with survey results, Entrepreneurship researchers [4] explain that Pakistani universities have been showing some signs of entrepreneurial engagements. But universities are more inclined to soft form of entrepreneurship which are seminar & training

sessions (STS) and class room courses (CRC) of entrepreneurship. But entrepreneurship education is not the ultimate goal to be achieved. Rather, entrepreneurship is promised to be a field which is responsible for value addition in terms economic and social development. Factors of Entrepreneurial University (EU) are Class Room Courses (CRC), Seminars and Training Sessions (STS), University Incubation Center (UIC) and Spin-off Companies (SOC) as mentioned by [21]. There is need to connect different sections of entrepreneurial university (EU) with enterprise formation process (EFP) to ensure a right step toward hard side of entrepreneurship i.e. execution of business practically. AHP is used to get priorities of the factor which can help in resource allocation. Previous literature [22] has also listed these factors and analyzed them through structural equation modelling which does not clarify priorities among factors. Novelty of this article is establishing a prioritized relation between the factors of EFP and EU. Research is also innovative in using Expert Choice for AHP through which sensitivity analysis is performed to predict priorities of future due to changing environment.

RESEARCH METHODOLOGY

Research Frame Work

This research aims to study the priority values of alternatives of entrepreneurial university (EU) and objectives of enterprise formation process (EFP). It is the main goal to be achieved for entrepreneurship development in higher education institutions by focusing on prioritized factors. The alternatives of entrepreneurial university (EU) and objectives of enterprise formation process (EFP) are given below. Our basic goal is Linking Entrepreneurial University with Enterprise Formation Process. Objectives are set as six factors or processes involved in enterprise formation process (EFP) which are; Internal Motivation (IM), Opportunity Recognition (OR), Business Model (BM), Business Capital (BC), Business Execution (BE) and Business Growth & Sustainability (BGS).

Four factors or major constituents of entrepreneurial university are set as alternatives under each objective. These alternatives are Class Room Courses (CRC), Seminars and Training Sessions (STS), University Incubation Center (UIC) and Spin-off Companies (SOC). It is shown in Figure 1 of hierarchal structural model that main goal has six objectives to achieve and for each objective there are same four alternatives.

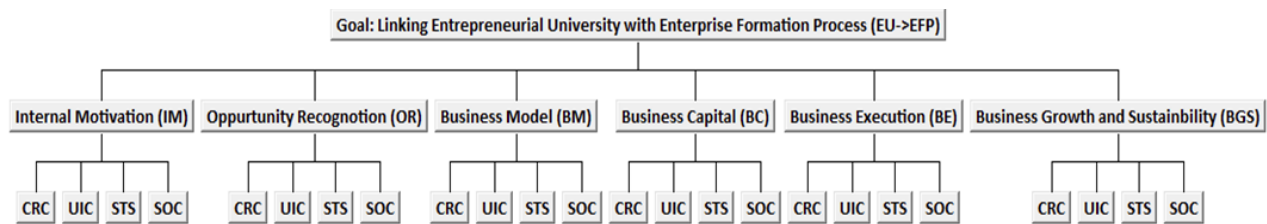


Figure 1: Hierarchical model of goal, objectives and alternatives.

Definition of Objectives and Alternatives

Goal of the research is already discussed in detail with its substantial implications on socio-economic condition of the country. After discussing this paramount importance of goal, it is necessary to give a brief description of proposed objectives and their respective alternatives. The brief definition of objectives are as follows, 'Internal Motivation (IM)' means an internal belief, spark or passion in a person regarding any idea. 'Opportunity Recognition (OR)' is defined as transforming any idea into business opportunity. 'Business Model (BM)' is considered in this article as the complete frame work for starting a business including aspects of financial management, marketing management, risk management etc. "Business Capital (BC)" is defined in this research as the minimum amount of money needed to start a business or exploit a business opportunity. "Business Execution (BE)" is termed as practically initiating your small business in front of risk and uncertainty by investing financial and human capital. "Business Growth & Sustainability (BGS)" means sustaining your business in changing environment and focusing on continuous growth. A short account on alternatives is also described as follows. "Class Room Courses (CRC)" means small business management and entrepreneurship courses in specific and all other courses in general which are being taught in class room. 'Seminars & Training Sessions (STS)' means lectures and vocational training from experts emphasizing on importance of entrepreneurship as a career path and skills needed to pursue such an endeavor. 'University Incubation Centre (UIC)' is defined in this research as complete working environment provided to entrepreneurs for the growth of their business in nascent phase. 'Spin off Companies (SOC)' is considered as carrying out commercial activities along with academic practices using university infrastructure e.g. manufacturing products, testing standards, solving business problems etc.

Analytical Hierarchical Process (AHP)

Analytical hierarchical process is mainly used for benchmarking and analysis of distinct factors in order

to get a detailed priority list. It has made decision making far more systematic and less troublesome. It involves very complex calculations in order to find aggregated weights for various priorities and decisions. It is very interesting to observe that AHP is being used in each and every discipline in order to take well calculated decisions. The research article [23] has carried out a detailed review regarding applications of AHP in various fields which sums up the discussion regarding utility of AHP as an decision making technique. Above mentioned research is mainly concerned about decision making for medical equipment purchase by carefully evaluating the merits and demerits. Management of any organization is always concerned with decision making for different initiatives. In this context research work [24] has developed a hierarchical model for best contractor selection for projects. Author has used group decision making using software package "Expert Choice" and performed sensitivity analysis as well. Expert Choice is a software tool used for implementing hierarchical model. It has been explained in research article [25] that how AHP has been implemented in expert choice along with its merits and potential limitations. It has used a practical example explaining each step for performing AHP through expert choice from pairwise comparisons (numerical, verbal, graphical) to final results and their sensitivity analysis. As it is evident from literature that AHP is being used as a technique in various fields and it can be used for analyzing link between enterprise formation process and entrepreneurial university. In AHP, we divide model in various hierarchical levels. These hierarchical levels are interlinked with each other in a vertical orientation. As shown in Figure 1 that hierarchical model has three phases or levels in this case.

RESULTS AND DISCUSSIONS

Judgements on Expert Choice

Expert Choice 11 is used as software tool for implementation of our problem. First of all, structuring of problem has been done. It will decide priorities of

Table 1: Combined Values of Inconsistencies

PID	Name	Overall	EU->EFP	IM	OR	BM	BC	BE	BGS
No. of Factors:		6		4 Alts	4 Alts	4 Alts	4 Alts	4 Alts	4 Alts
1	Combined	.0648	.0912	.0104	.0400	.0392	.0510	.0253	.0204
2	P2	.0759	.0859	.0539	.0329	.0329	.0919	.0690	.0446
3	P3	.0776	.0933	.0539	.0580	.0765	.0707	.0659	.0213
4	P4	.0989	.1400	.0171	.0810	.0573	.0483	.0444	.0058

alternatives of EU for the objectives of EFP. The complete structure is divided into three levels while analyzing a problem with expert choice i.e. goal, objectives and alternatives. Goal of research is connecting EU with EFP. Objectives are six processes of EFP i.e. IM, OR, BM, BC, BE and BGS. Alternatives are four constituents of EU i.e. CRC, STS, UIC and SOC. AHP structure of goals, objectives and alternatives are shown above in hierarchal model (Figure 1).

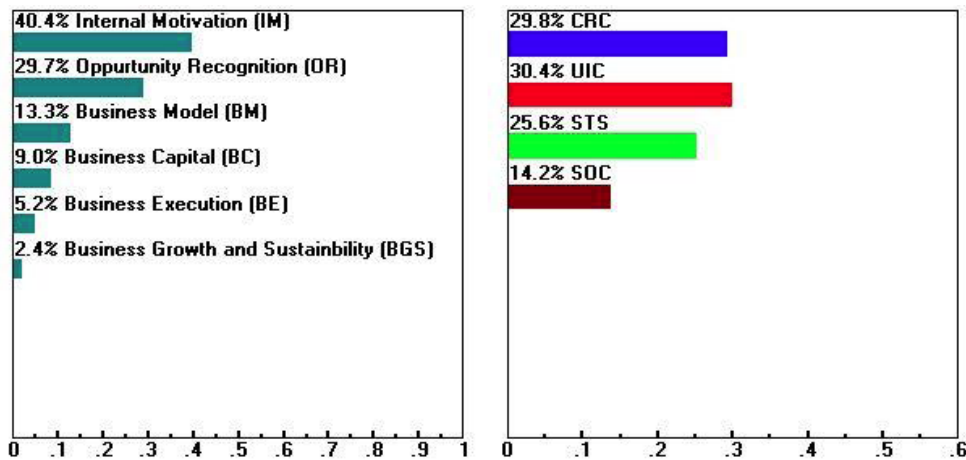
Pair wise comparison of the whole model has been carried out with the help of experts of academic entrepreneurship. These experts are decision makers for deciding priority of objectives and alternatives considering the main goal. Decision makers have decided values of objectives for attaining main goal. After that preference values are decided for alternatives for each objective separately on the same preference scale of nine levels. These nine levels can be numerical, verbal or graphical. Numerical scale is used in this research. During all these judgements, decision matrices are filled. All these judgments are made by experts (P2, P3, P4) individually directly on software in order to avoid any discrepancy in results.

Value of inconsistencies are given in Table 1 clearly shows that inconsistencies are of very low level and acceptable. These are basically inconsistencies found in priority matrix and they have a foremost importance while deciding validity of any AHP model. If consistencies do not fall under permissible limits then AHP model will not be valid.

Priorities Derivation

Experts complete the judgments by filling comparisons matrices. Over all priorities for objectives and alternatives are shown in Figure 2. According to results of these percentage priorities, objectives can be listed down in following priority order to achieve the goal.

- Internal Motivation (IM)
- Opportunity Recognition (OR)
- Business Model (BM)
- Business Capital (BC)
- Business Execution (BE)
- Business Growth & Sustainability (BGS).



Sensitivity w.r.t.: Goal: Linking Entrepreneurial University with Enterprise Formation Proces Ideal Mode

Figure 2: Overall Priorities of Objectives and Alternatives.

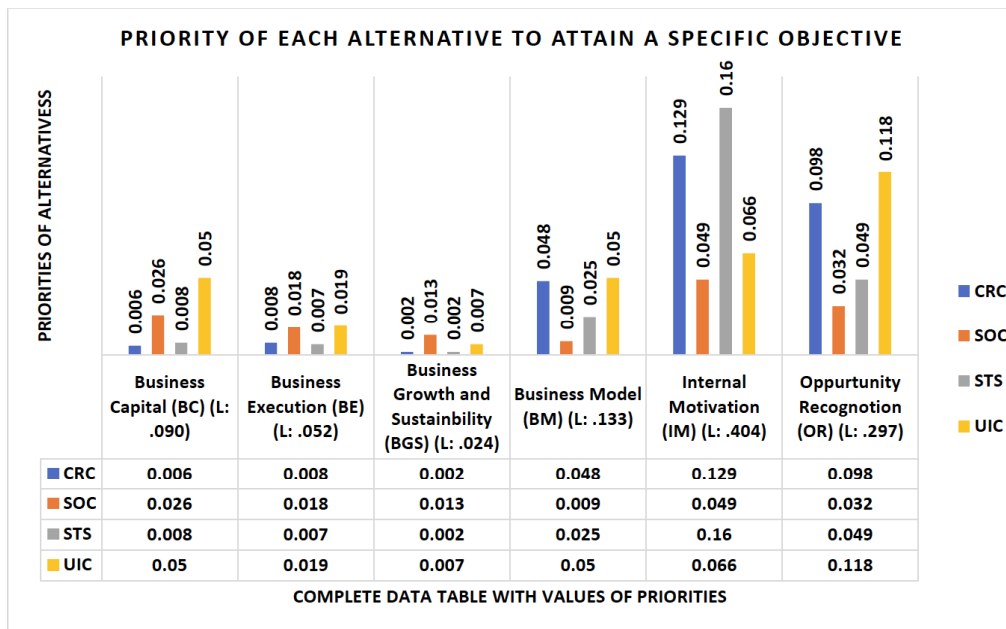


Figure 3: Complete data table with values of priorities.

According to AHP percentage priority results, priority order of alternatives is listed below. It is the overall results for all objectives being considered collectively.

- University Incubation Center (UIC)
- Class Room Courses (CRC)
- Seminars and Training Sessions (STS)
- Spin-off Companies (SOC).

Objective wise priority of each alternative is shown in Figure 3 which is different from overall priority list. In Figure 3, values of each priority are mentioned in decimal as revealed in appended data table. This can be helpful in case of single individual objective is focused. For the sake of example, Objective wise priority of Internal Motivation (IM) can be analyzed. The alternatives: STS, CRC, UIC, SOC of objective IM has priority 0.16, 0.129, 0.066, 0.049 respectively. If these priorities are summed up then it is the priority of IM among objectives being the highest one i.e. 0.404. Hence, STS has highest priority among alternatives considering objective IM only. It is different from overall priority list of alternatives mentioned earlier in article

Results of priorities are analyzed in another way in Figure 4 which is even more illustrative in which alternatives (Constituents or sections of entrepreneurial university) are taken on x-axis and their priorities with respect to each objective on y-axis. It can help policy makers if they are concerned about a single objective.

Sensitivity Analysis

Sensitivity analysis can be performed with Expert Choice by varying weights of objectives calculated in overall judgments of decision makers or experts. After varying weights or priority level of an objective, it can be observed what effect it has put on alternatives. Literature related to AHP has given less attention to sensitivity analysis as by [26]. It is due to the fact calculations of judgments are done manually. So, it is difficult to consider sensitivities without using a software tool like Expert Choice. It adds to many other advantages of software tool of Expert Choice for AHP analysis

Figure 5 shows sensitivity analysis window for original weights of objectives and over all priority list of alternatives in following order; UIC, SOC, CRC and STS.

The sensitivity analysis of alternatives namely IM, BC and BM is carried out with the help of Expert Choice sensitivity tool. The reason for selecting IM for sensitivity analysis is due to the fact that it has highest priority among objectives. Moreover, entrepreneurial journey starts from Internal Motivation.

So, weight of IM has been altered from 0.404 to 1.00 (Maximum priority) and the effect is observed on priority order of alternatives as shown in Figure 6. By assigning IM priority level of one, priorities of all other objectives are reduced to zero. But we have obtained a priority list of alternatives in following order;

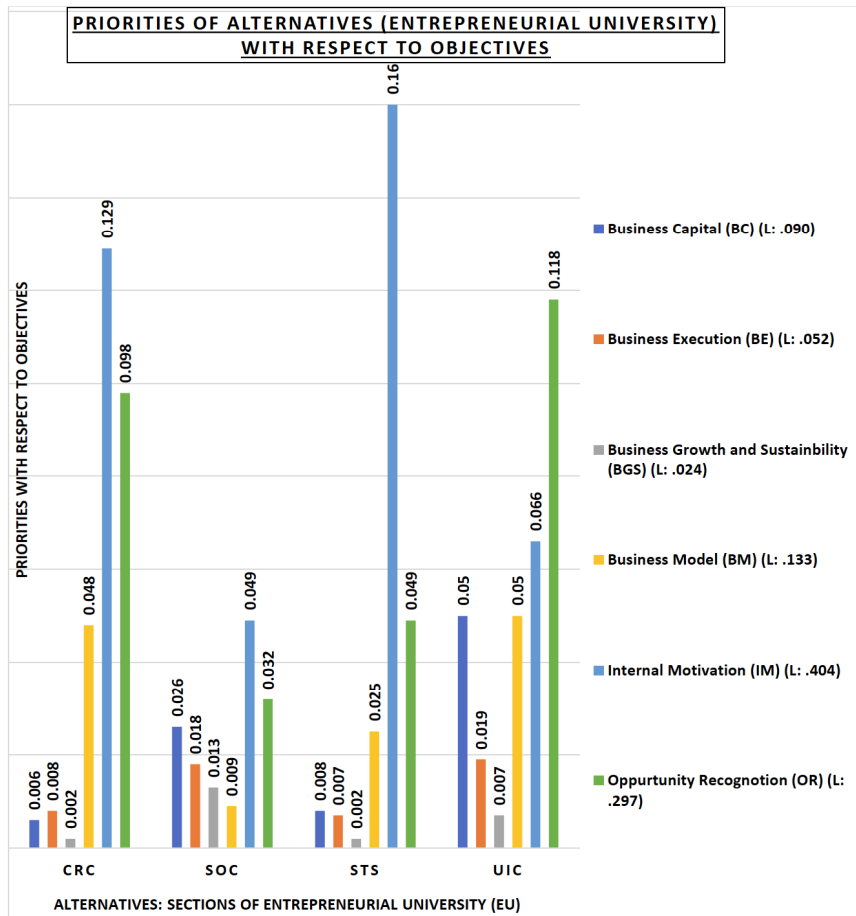


Figure 4: priorities of alternatives (entrepreneurial university) with respect to objectives.

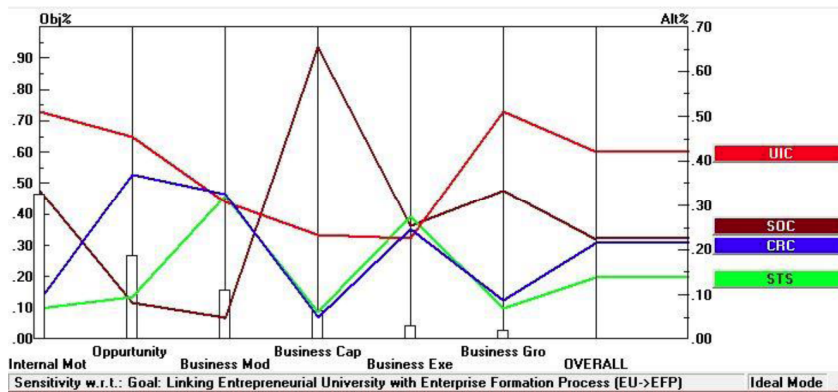


Figure 5: Sensitivity Analysis Window having Original Weights of Objectives.

UIC, SOC, CRC and STS. This priority list STS is same as original priority list.

In Figure 7, sensitivity analysis of objective Business Capital (BC) has been done by giving BC priority value of one by altering original value of 0.90. So, new priority list of alternatives is in order; SOC, UIC, STS, CRC. In this case 2nd priority for alternatives is UIC but in original priority list UIC is the first alternative.

Sensitivity Analysis of BE objective is shown Figure 8. Same procedure is adopted in this case and priority list of alternatives obtained is as follows; STS, SOC, CRC, UIC. It is also different from original priority list. Sensitivity analysis is helpful to assess a future situation when certain objective might gain more importance for example if financial resources for starting a business might not be available for an extended period then it will increase importance of objective Business Capital (BC). Business Execution

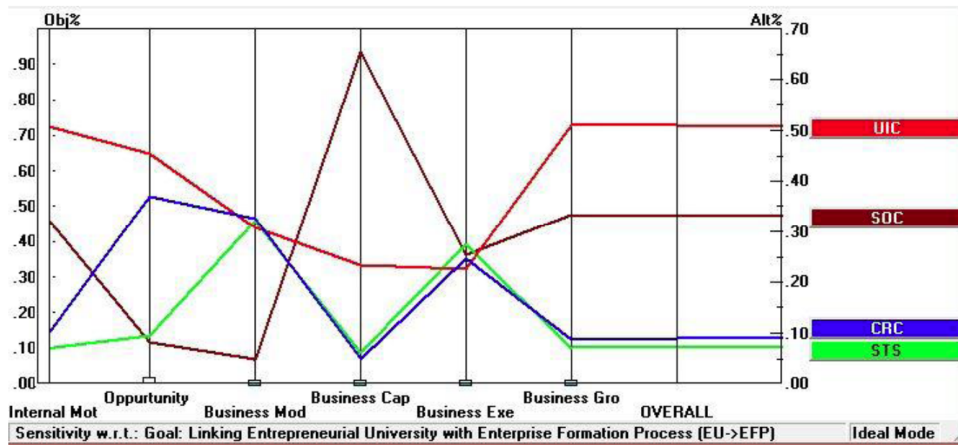


Figure 6: Sensitivity Analysis of Objective "Internal Motivation (IM)".

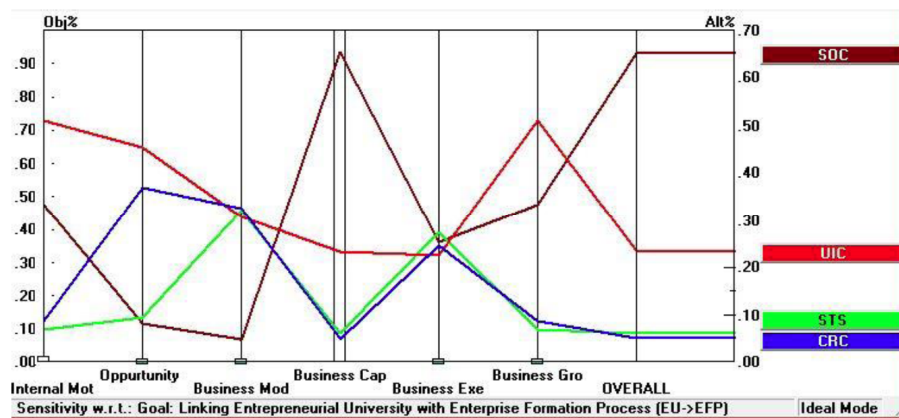


Figure 7: Sensitivity Analysis of Objective "Business Capital (BC)".

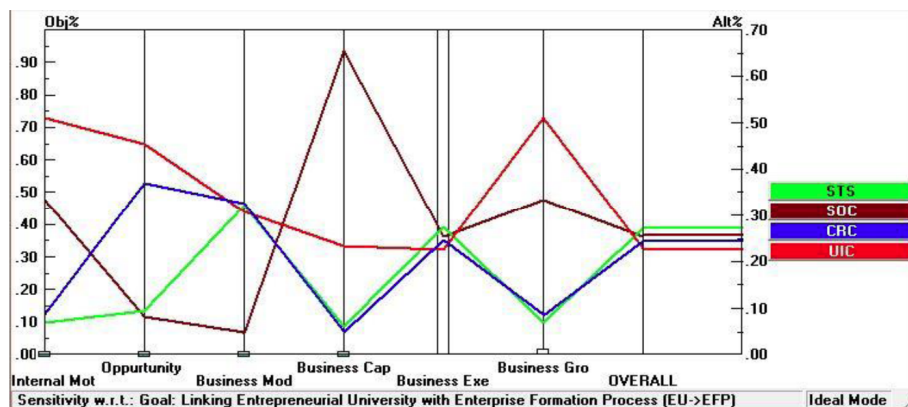


Figure 8: Sensitivity Analysis of Objective "Business Execution (BE)".

(BE) might be difficult for certain sections of community in Pakistani culture for example for women.

CONCLUSIONS

The research has provided a vigorous understanding of enterprise development steps in light of previous literature. It is discussed in this research

about the benefits of fostering entrepreneurial culture among university graduate in terms of socio-economic development of the country. The concept of entrepreneurial university has been established by determining its main constituents from diversified literature and it is linked with steps of enterprise formation process. Experts of entrepreneurship field have been involved in decision making process for

prioritizing steps of enterprise formation process using Analytical Hierarchical Process (AHP). Their judgments are sought with the help of Expert Choice software. Results show that, Internal Motivation (IM) has the highest priority which is consistent with research findings of [8]. Other objectives are prioritized in following order Opportunity Recognition (OR), Business Model (BM), Business Capital (BC), Business Execution (BE) and Business Growth & Sustainability (BGS) which is a logical order. In order to achieve these objectives, subsequent sections of entrepreneurial university are promised to play their role in following order; University Incubation Center (UIC), Class Room Courses (CRC), Seminars and Training Sessions (STS), and Spin-off Companies (SOC). University Incubation Center (UIC) has the highest priority among alternatives which is quite acceptable as UIC provides a shelter to the businesses in nascent phase.

PRACTICAL IMPLICATIONS AND FUTURE RECOMMENDATIONS

This research has added into existing body of knowledge by relating a proposed enterprise formation process with entrepreneurial activities in higher education institutions in context of developing economies. It has also concluded the priorities for objectives and alternatives in various situations with the of help sensitivity analysis. This research also has many practical implications for various entrepreneurial organizations. Research will surely be useful for policy makers who are focusing to foster entrepreneurship culture in Pakistan with present situation of unemployment in country. This research could also be benefitted by other developing economies suffering from similar circumstances like Pakistan. It will help to allocate resources in more prioritized sections identified in research. This research has discussed multiple objectives with respect to single goal. But in future researchers could analyze multiple goals relating to entrepreneurship with help of AHP like the research work [27] has analyzed for various goals of whole business process of manufacturing industry.

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is also influenced by the concepts of 20th century philosopher and idealist Dr. Allama M. Iqbal about human ability of self-reliance [28].

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