Entrepreneurship and Linkage between Vocational Education, Management Education, and Entrepreneurship

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Abstract

The present paper is an effort to understand the constitution of entrepreneurial brigade in India including a look at initiatives put in by government and other institutions functional in India. It includes an enquiry of different policy initiatives and training methodologies adopted in some of the other parts of the world. A high percentage of failed and unsuccessful SMEs indicate towards requirement of professional help in evaluating a project or venture, followed by guidance for getting finance and training support for viable and innovative projects. Towards the end we zero down on finding out different techniques, methods and content being used effectively or desired, and how we can better the deliverance of training for different categories of aspirants. Amongst other methods it also looks into apprentice as a method of training entrepreneurs. The author reviewed published work and analysed the issue at hand.

Keywords: Entrepreneur, Education, Management, Innovation

1. Introduction

India, an important hub of entrepreneurship historically, was once renowned for its trade and business in metals, cotton, spices, and silk. Romans were the first to start trade with India in around 1600 B.C. They were followed by the Portuguese and the British who slowly captured the Indian sea waters. Eventually by mid-nineties India was reduced into a colony of the British Empire. The lesions of this colonial rule are still evident in the changed attitudes of the people of the country. The Indian society shows preference for service/ job that provides economic security andt hepow ersr elated tot hede signation held.

A high percentage of entrepreneurs in India are there in the occupation mostly because they lack any other option due to lack of education or opportunities. Our education system is also somehow flawed as it is pro-service culture and prepares students for jobs rather entrepreneurship. These pseudo-entrepreneurs who are there due to lack of options make a swift switch to jobs as soon as they have opportunities. As of now any reference on entrepreneurship loans its data from micro- small and medium enterprises ministry. However, this reflects mostly the data of self-employed, who may or may not have the element of innovation and growth potential that is associated with widely accepted connotation of entrepreneurship. It is estimated that the non-farm unorganized sector accounts for about 89 percent of the gross value added and almost 98 percent of employment in MSMEs, of which over 64 fall in self-employed category. There are ample quality and competency issues that need to be addressed to create a sustained entrepreneurial force. For a sustained economic growth a constant supply of autonomous entrepreneur is desired, who can exploit the resources and create wealth and employment in the economy. Developing countries including India show a high ratio of industrial sickness (close to 40%) this reflects on the gaping requirement of nurturing innovation, training and skill development.

It is desirable to look at the current situation and the problems faced by entrepreneurs to enter and sustain. A study on entry barriers by scientific analysis of entrepreneurship SMEs (Netherlands' ministry of economic affairs) suggests that high risk is associated with SMEs along with the difficulty in establishing

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brand name and distribution. Another issue that hinders an entrepreneur is the lack of access to information on setting up and operating a business. Procedural hurdles, lack of startup funds, lack of a hassle free system with clear instructions and deadlines difficulty to access technology and operational difficulties (Blees et al., 2003). In an interesting study conducted by (Klapper et al., 2004) entry regulations hamper the creation of new firms, especially in industries that naturally should have high entry. Also, value added per employee in naturally "high entry" industries grows more slowly in countries with onerous regulations on entry. The consequences of regulatory barriers against entrepreneurship are seen, not in young firms, but in older firms, who grow more slowly and to a smaller size. Thus the absence of the disciplining effect of competition from new firms has real adverse effects. Interestingly, regulatory entry barriers have no adverse effect on entrepreneurship in corrupt countries, only in less corrupt ones. Taken together, the evidence suggests bureaucratic entry regulations, when effectively implemented, are neither benign nor welfare improving. Turning to financial development, it was found that the availability of both private (bank) credit and of trade credit does aid entry in financially dependent industries. Thus unlike entry regulations, regulations that improve access to finance can aid entrepreneurship.

Another issue that needs attention is technology adoption by SMEs in developing and under developed countries. Trade is listed as one of the major factors of technology adoption, specially acquisition of machinery and equipment.

How does absorption occur? It requires dense linkages to the global knowledge economy, human capital, and a learning-by-doing process, among other factors. Trade flows, FDI, R&D, labor mobility, and training are among the best conduits—in effect "channels of absorption."- Kurikose

80 percent of the firms in South Africa (NIS) cite acquisition of machinery, equipment, and software as their primary channel by which they acquire new technology. Firms also seem to learn from exporting as increased global competition increases firm incentives to invest in technology absorption. Firms exporting to advanced economies were found to invest in new machinery and equipments as compared to those exporting to the less developed region. Strong correlation between exporting and investing in innovation and technology absorption was reported. It was emphasized that FDI results in positive spillovers, e.g. access to foreign technologies and management practices. They found some evidence to show greater investment in training and technology absorption in South Africa. Trade in knowledge i.e. licensing of technology acquired from the trading is also seen. There is acquisition of technology and know-how from their suppliers of materials and equipment, foreign or domestic. Another way of transfer of knowledge is through skills transfer technical consulting services provided by equipment suppliers. Industry research linkages showed limited impact in transfer of technology. It brings to front that institutions are not succeeding as much as desired to help adoption of new technologies. Rather it is the alternative methods and industrial practices that help in adoption of technologies. (Kurikose, 2011)

A study by (Allen et al., 2011) with extensive cross-country datasets and India firm samples, as well surveys of small and medium firms, examining the legal and business environments, financing channels, and growth patterns of different types of firms in India are referred here. They found out Indian firms face weak investor protection in practice and poor institutions characterized by corruption and inefficiency. Alternative finance, including financing from all non-bank, non-market sources, and generally backed by non-legal mechanisms, constitutes the most important form of *external* finance. Bank loans provide the second most important external financing source. Firms with access to bank or market finance are *not* associated with higher growth rates. Their results indicate that bank and market finance is not superior to alternative finance in fast-growing economies such as India.

Entrepreneurship education is often confused with conventional business management education and therefore the emphasis that is desired on negotiation, leadership, new product development, creative thinking, and exposure to technology innovation is often overlooked .The difference between business management and entrepreneur learning needs is wide. Where plethora of data is churned before making a decision as per conventional business management education approach an entrepreneur often needs to make decision with limited information at hand. The entrepreneur might not recall all the information verbatim but he looks for the innate values of the channel/source. Rather than the assumption of commonality of goal taught by conventional management education an entrepreneur recognizes that different stake holders have different goals. The decision making

approach taught in conventional management education is impersonal while an entrepreneur needs to make decisions on the basis of judgment of trust and competence of people. Entrepreneurs are time pressed and need to go for appropriate solution within short notice, where as business education teaches to take 'correct' choice within enough time. An entrepreneur has to learn while and through doing compared to classroom learning approach of conventional management education. Conventional management education often looks for experts and authoritative source of information while entrepreneur gathers information from everywhere and everybody and evaluates its practical use. Business schools judge more on written assessments and passing of knowledge based exams, whereas entrepreneur needs to learn from judgment of people and events through direct feedback, success here is to be measured by solving problems and learning from failures, providing useful services. To be precise entrepreneurship is more trial and error based (Adaptation of works of Gibb, 1998; Cotton and Gibb, 1992, Manimala, 2008).

A glance at Indian entrepreneurial scenario puts across the question of training first generation entrepreneurs who may be brimming with ideas but need support in technical, financial, marketing, and other soft skills or the capital to start, expand, reshape their business. In contrast there are the knowledge gaps of second, third or fourth generations of business families who wish to expand their business from being small family-run enterprises to big businesses who have a rich bank of in-house knowledge about nuances of the business that have been downloaded from one generation to other. On a much wider landscape it also needs to look at the educational system from the very beginning to inculcate an entrepreneurial inclination in our children and youth.

This paper focuses on following issues related to entrepreneurship

a. Understanding the constitution of entrepreneurial brigade in India, current efforts being put in by government and other institutions
b. Study of different policy initiatives and training methodologies adopted in some of the other parts of the world
c. Incorporation of apprenticeship in vocational education
d. Necessity of professional help in evaluating a project/venture
e. Guidance for getting finance and training support for viable and innovative projects
f. The aim is to find out different techniques, methods and content being used or desired, also what is desired of the tutor for different categories of aspirants.

2. Global Entrepreneurship Monitor on India (GEM)

The GEM research was undertaken in India for all the years except for the years 1999, 2004, and 2009. Most of the starts-up were for self-employment creation.(Awasthi, 2011) "Very few firms anticipate any growth; the average number of employees expected in five years by startup is 1.42 and by owner-managed firms is 3.21" (Manimala et al., 2002)

There were, however, important differences. In a marked contrast to pattern in developed countries, income and education were inversely related to entrepreneurship. Also over a brief time span, the nature of entrepreneurship (opportunity-based and necessity-based) and Total Early-Stage Activities (TEA) showed dramatic shifts. TEA also does not seem to be affected or affect overall growth (lagged by a year). However, more recent GEM Reports indicate that India is emerging as a major economy in the world. For example, the estimates of the GEM Report 2007 of perceptions about entrepreneurship among even the non-entrepreneurially active population in the age group of 18-64 years are quite positive. On potential entrepreneurship activity India scores 52% compared to 17% in China, 4% in Russia and 25% in Brazil. The high income countries are way behind. Almost similar relative position of India is seen in the cases of perceived opportunities (70%), perceived capabilities (69%) and 50% on entrepreneurial intentions (Bosma, et al., 2008, p.36).

3. Government and other Institutions Supported Initiatives in India

Taking in account contribution that entrepreneurs have on development and growth of the country and reduction of unemployment government of India has been calibrating its efforts to create and nurture entrepreneurs. The efforts are being done not only to promote exiting SMEs but also to divert the capital in more productive uses such as promoting entry and startups. As noted, young firms do account for a sizable share of net job creation and

productivity growth. In addition, the density of start-ups is a major source of growth. Regions with more startups relative to the working age population in Mexico, India and the US create more jobs and grow faster. Ensuring ease of entry to start a business and access to finance for entrepreneurs is therefore likely to prove more valuable than providing access to finance for mature SMEs (Freund , 2011).

There is a long list of policies such as micro, small and medium enterprise policy, manufacturing policy, competition policy, industrial policy, science and technology policy, national design policy that have impact on entrepreneurship. It is felt that these efforts are too sporadic, repetitive, at times contradictory and confusing. A brief listing and review of entrepreneurship education programs run by Indian government will help in understanding of the efforts done so far and their areas of concern.

3.1 National Institute for Entrepreneurship and Small Business Development (NIESBUD)

NIESBUD is an apex body under the Ministry of Micro, Small & Medium Enterprises. It is registered as a Society under Societies Registration Act of 1860 started functioning from the 6th of July 1983. The most important objective of this organization is to sustain entrepreneurship in the MSME sector. For this NIESBUD organizes Continuing Education Programs for SSI Entrepreneurs, and also provides counseling and consultancy. Short Duration training programs on Working Capital Management, Marketing, Project Identification, Accounting etc. are conducted on campus, while counseling and consultancy is done off and on campus.

3.2 National Institute for Micro, Small and Medium Enterprises (NI-MSME): Established in 1960,

NI-MSME was set up as Central Industrial Extension Training Institute (CIETI) under Ministry of Industry and Commerce, Government of India. It was set up with an objective to provide training to the personnel of the Central Small Industries Organizations along with Department of Industries of the State Government. (http://www.nimsme.org/page.php?id=32)

3.3 Rural Development and Self-Employment Training Institute (RUDSETI)

It is an initiative by Ministry of Rural Development, Government of India to tackle rural and semi urban unemployment in the age band of 18 to 45 years. It has trained 2.41 lac youths out of which 1.69 lac trainees have settled their self-employment ventures. This accounts for 70 percent settlement rate.

3.4 Entrepreneurship Development Institute of India (EDII)

Establishment of EDII, an autonomous and not-for-profit institute in 1983 promoted by all-India financial institutions viz., IDBI bank ltd., ICICI bank ltd., IFCI ltd. and SBI with support from the govt. of Gujarat was a move to promote entrepreneurs, fill the knowledge gap and help entrepreneurs with desired skill set and financial help. It is registered under the Societies Registration Act 1860 and public trust act 1950. It was set up with a vision to become a catalyst in facilitating emergence of competent first generation entrepreneurs and transition of existing SMEs into growth-oriented enterprises through entrepreneurship education, training, research, and institution building. It also has supported Entrepreneurship Development initiatives in 70 countries including Asia (17), Africa (28), Arab (8), Europe (7) and other regions (7).

3.5 Bhartiya Yuva Shakti Trust (BYST)

BYST was founded in 1992 under the chairmanship of Mr. J.R.D .Tata with an objective to nurture entrepreneurship at grassroots level. BYST works with young people in the age group of 18 - 35, who are either unemployed or underemployed. They invite individuals with sound imaginative business ideas, along with the will and determination to succeed. It helps disadvantaged Indian youth to develop their business ideas into viable MSMEs. Till now it has counseled 65000 entrepreneurs, generated almost 25000 jobs and provided almost $ 3 million in funding to around 1700 entrepreneurs.

3.6 National Enterprise Network (NEN)

The non-profit National Entrepreneurship Network was established in 2003 with a mission to create and

support high-growth entrepreneurs, driving job-creation and economic growth in India. NEN was co-founded by IIT Bombay, IIM Ahmedabad, BITS Pilani, SP Jain Institute of Management & Research, Mumbai, Institute of Bioinformatics and Applied Biotechnology, Bangalore. It is primarily supported by the Wadhwani Foundation, a philanthropic initiative of Dr. Romesh Wadhwani, Chairman of the Symphony Technology Group, and has offices in Bangalore and Mumbai. NEN represents India's largest and most dynamic community of new and future high-growth entrepreneurs, with over 70,000 members in 30 cities. It provides critical support to start-ups and early-stage entrepreneurs through high-impact entrepreneurship education; access to mentors and experts; fast-track access to incubation and funding; and learning tools and materials. It partners with over 470 top-tier academic institutes in India to help them develop vibrant entrepreneurship ecosystems on campus, which develop and support new and future entrepreneurs. In addition, it runs Entrepreneurship Week India, the country's largest entrepreneurship-awareness campaign. In 2009, E Week India featured over 3500 events with more than 350,000 participants. (http://nenonline.org/aboutnen/about_nen)

3.7 Marketplace Literacy

The mission of this non-profit organization is to enable marketplace literacy among low-literate, low-income individuals through educational programs and through dissemination of educational materials to improve the practices of businesses, governments, not-for-profit organizations, and educators. Whereas micro financing and vocational literacy have been emphasized in recent decades, its emphasis on generic consumer and entrepreneurial literacy supplements these very important efforts in the economic realm and addresses a central need. In India, the organization aims to provide education to enable entrepreneurial and consumer literacy among low-literate, low-income buyers and sellers. They have developed an innovative consumer and entrepreneurial literacy educational program for individuals with low literacy. They use a variety of methods such as picture sorting and role play to teach individuals basic concepts for being informed consumers, and for starting a very small business. Education is provided in Chennai and nearby rural areas in Tamil Nadu, India, through their local partner, Marketplace Literacy Communities (MLC Trust). Educational programs are used to evaluate and modify the curriculum and educational materials. They have documented this program in a book published by Springer in an education series in alliance with UNESCO. (http://www.marketplaceliteracy.org/)

3.8 Centre for Social Initiative and Management (CSIM)

CSIM is a project of Manava Seva Dharma Samvardhini Trust, a registered Public Charitable Trust established in 1999. Its mission is to promote social consciousness amongst people, and nurtures the passion of existing pioneers in the social work sector. CSIM is a pioneer in offering social entrepreneurship training programs in India that ensures, and enhances the quality of delivery in social change agents. CSIM pursues this mission by offering a wide range of training programs that advocates the principles and practices of social entrepreneurship. Thus, CSIM steps in with Social Entrepreneurship to enroll, discover, and shape Social Entrepreneurs early in their life cycle support the process of Social Entrepreneurship in small and medium NGOs, provide a volunteer constituency to Social Entrepreneurs and NGOs. (http://csim.in/csim-genesis.php)

A pilot project on creation of innovation ecosystem for Creating Innovation Ecosystems has been designed. MSME Industry Clusters have been formed where it is possible for MSMEs to collaborate & partner for innovation with respect to R&D, financing, updating of schemes, industry knowledge and skill enhancement. It helps in getting Cluster to act as one entity to attract interest & economies of scale. It aims at facilitating growth of industry via new products, processes, common centers, startups creation.(EDII)

6 Industry Pilots

Cluster	Innovations in	Cluster	Innovations in
Krishnagiri	Agriculture	Agartala	Handicrafts
(Food Processing)		(Bamboo)	
Thrissur	Health	Ernakulam	Forest Based Products
(Ayurveda)		(Furniture)	
Moradabad (Brassware)	Handicrafts	Faridabad (AutoComponents)	Automobiles

2 University Pilots

Cluster	Innovations in
Delhi University	Education, Mathematics and IT
MS University Vadodara	Microbiology and Biotechnology

3.9 Cluster Innovation Centre

It is a small group of people developing the ecosystem as an arm of the cluster association there is a networking and sharing hub for the people involved. The innovator manages innovation initiatives within/ for the cluster and the channel facilitates in-bound and out-bound innovation activities. There are a few challenges ahead for consideration like Cluster Organizational Readiness. The Representation readiness is poles apart for example if we talk about Moradabad vs. Faridabad. Innovation Program Execution is also another challenge. Funding disbursements & procedures make it difficult to execute on-time. It is felt that there is lack of ministry support/ interest. There are no "innovation" schemes and at the field-level people are unable to grasp essence of program. The bandwidth to engage State-level participants is seemingly quite low. The skills at striking & maintaining a win-win partnership is tough to find in the field and hence presents the problem of proper utilization of the project. Although the project of cluster innovation centers is on the right lines it would be too early to comment on its degree of success.

Another highly ambitious effort on the part of the government is the TOD FOD JOD initiative of getting the children inculcated to entrepreneurship culture and aptitude right from the childhood. This project concentrates on "Tinkering", "Discovery" and "Experimentation" which are strong forms of learning. The focus is to start early towards building a nation of creators not just consumers of products. (EDII)

As evident from the efforts cited above many efforts have been planned and executed in India on these lines. Rather than looking at India in isolation it is felt it would serve some good purpose to find out what and how some other countries are handling this issue.

4. Kenya

Kenya has been tackling unemployment, rural-urban balance, entrepreneurship education, capital formation, industrialization and labour utilization. In the past, a widespread approach to the problem of limited job opportunities was through the establishment of large industrial complexes that were expected to provide many jobs and enhance the economic situation of the local area. This approach has been largely unsuccessful because it required high capital investment in a country that was already squeezed of capital. As this approach failed self-employed was the only other option available. As a result, much of the growth of private enterprise in the informal sector in Kenya has been spontaneous rather than a result of deliberate strategies within an overall government policy framework. So, though large numbers of small enterprises may be created, their prospect for growth into medium-sized enterprises is limited. It is due to over-supply of similar goods in the marketplace, lack of management and technical skills, limited capital, and low product quality. In addition, many of these small enterprises are owned by "first generation" entrepreneurs who have limited experience and are unwilling to take the necessary risks to expand their businesses. Also, technology which is a primary factor in economic development had a limited impact on the growth of small enterprises because of socio-political environment, high capital investment, low education and outdated technological infrastructures (Nelson and Johnson, 1997). One of the earliest steps taken to address this was inclusion of entrepreneurship in all vocational and technical institutions. Entrepreneurship education is now a required course (154 hours of instruction) in technical training institutions that are supported through the Ministry of Research, Technical Training and Technology (MRTT&T)

Youth Polytechnics (YP) and Technical Training Institutes (TTIs) and Institutes of Technology (TIs) provide training at craft level. YP are there to create self-employment in small enterprises at rural areas .TTIs and TIs are focusing at preparing people for employment in local business and industry. For them too entrepreneurial education helps when they want to enter self employment.

National Polytechnics (NP) offer technician courses for both diploma and higher diploma levels. Most students (except those pursuing business studies courses) are sponsored by their employer. To train the trainers Kenya Technical Teachers College (KTTC) is the only college in the country where technical and business teachers are trained for secondary schools and technical training institution. At the graduate level, 34 vocational educators completed a Master's Degree program that was offered by the University of Illinois through Kenya Technical Teachers College in Nairobi. This group has become a cadre of national experts who are positioned to provide leadership for the development of entrepreneurship education in Kenya over the next 20 years. With the help of

University of Illinois a second program was conducted to institutionalize the program at Jomo Kenyatta University of Agriculture and Technology in Nairobi, Kenya. This was accomplished by pairing Illinois faculty with Kenyan professors so they could assume the responsibility for the program in the future.

5. Nigeria

The present situation in Nigeria poses serious threats and challenges to both government and well meaning citizens. The problems facing the country centers on high rate of poverty; youth and graduate unemployment; over-dependence on foreign goods and technology; low economic growth and development. In the mid 80s, the Nigeria`s economy collapsed while youth and graduate unemployment hit the roof. It was a period of large scale layoff of workers and early retirements as a result of structural adjustment policies and bad economic trends in the country. For a deeper understanding of the Nigerian situation we have a description by Callaway of a 'typical' school leaver who goes to search for work in Ibadan, Western Nigeria. After exhausting the limited options for entry into the 'modern' sector, he then roams the streets, sauntering past the mechanic workshops and the small craft industries - the carpenters, tailors, sandal-makers. If his parents can afford the fees, he can compete to become an apprentice, perhaps to a motor mechanic (Callaway, 1963). Callaway is talking here, in 1963, of "traditional apprenticeship" training or what is now also termed informal sector training. This on one hand and a number of graduate unemployed on the other hand increased the gravity of the situation. In the face of this situation, entrepreneurship education that was then part of tertiary education has not properly included philosophy of self reliance .The youths and graduates from tertiary institutions are not well equipped with the skill with which to exploit the natural resources that abound in Nigeria. All these factors have rendered the pursuit of self-reliance among youths and graduates difficult to attain. The perception of non conducive political environment scares away the investors that are planning to start on entrepreneurial activities. There is a general fear of failure by the people to take risk on entrepreneurial activities. In addition, the government programs are not designed to promote entrepreneurship. In Nigeria, the level of infrastructural development provided by the government is still very low and this has been affecting to a very large extent the level of productivity and entrepreneurial activities in the country. It is felt by policy makers that there is strong need for entrepreneurship education, yet much is desired at present to be done on the front of educational initiatives at all levels and creating a conducive environment for creation of enterprises (Ossai and Nwalado 2012).

6. Israel

Since the 1990's Israel has been the most vibrant high technology cluster outside the US. Several complementary factors have contributed to this; a highly adaptive innovative entrepreneurial culture, significant defense R&D spending and training of personnel; the highly skilled immigration wave from the former U.S.S.R since 1989; prestigious high education and academic institutions; pro-active government policy for the promotion of civilian R&D spending since the 1980s; and the presence of many technology multi-national corporation and a locally managed venture capital industry that was boosted by the Israeli government in 1992 and that by adopting the US Venture Capital model and business culture grew remarkably fast since (http://sc-israel.org/israel/).

Entrepreneurial culture: Data for the last decade show that the number of entrepreneurs in Israel has been exceeded 8,100 and that about 20% of them were and still are serial entrepreneurs. There are evident and findings that serial entrepreneurs have higher probabilities of success and that there are significantly more founding involvements of serial entrepreneurs culminated on exit (IPO or M&A) than those of one-timers. **Significant R&D spending:** The highly trained graduates of the Israel Defense Forces as well as the defense industries have spearheaded the high-tech boom; adapting cutting edge defense technologies to civilian applications. Since then Israel's business R&D personnel climbed at a very fast pace until the dot com bubble, resided in the aftermath but almost recovered to 2000 levels by 2009. The significant growth in business R&D personnel demonstrates Israel's wealth in human capital where short to medium terms gains can be made - close to the market. During the early 90s, Israel enjoyed a major influx of immigration of close to one million people from the former Soviet Union, increasing the overall population by 20%. Nearly 40% of these immigrants hold academic degrees, many of whom are scientists, engineers and specialized technicians. More than 25% of the workforce holds

university degrees; Israel has world class universities and research institutions - the Technion, Weizman Institute, Tel Aviv University, Hebrew University of Jerusalem, Ben Gurion University and more. Israel ranked above Asia and Europe in R&D personnel per million capita through since 1997. It also has long been known that Israel ranks among the leading countries in patent applications per capita. Government has, over the years, established many incentives to encourage and support investment in technology-oriented companies and projects. These included tax relief, Government grants (through the Office of the Chief Scientist), the establishment of technological incubators, the Yozma Program and others. There is strong evidence of the multi-national corporations' recognition of Israel's R&D excellence is R&D employment and entrepreneurship. International data on corporate Venture Capital acquisitions by type of entity, normalized to account for the difference in the size of the economies, show that the levels of acquisitions and their distribution by entity (corporate development, corporate VC, other corporate entity) in Israel are close to those of the US. Data on corporate VC acquisition by acquirer's country/ region (also normalized) show US corporate VC acquisitions of Israeli hi-tech companies has been significantly higher than US acquisitions of European companies. Also comparative data for selected countries and years show that for Israel in years 2002-2005, about 43-44% of employees in R&D companies worked in subsidiaries owned by foreign MNCs. The shares in the UK, Sweden, Italy, France, and Finland were less than half those in Israel. The formation of the Yozma Program, with its mission to create a viable venture capital industry, resulted in a dramatically positive change in the perception of foreign VC investors and their attitude towards investing in Israel. In the years since 1993, the Israeli VC industry has flourished and gained a leading position in the world, second only to the U.S. with the total capital raised to date in excess of $10 billion. (http://bestkindoflife.com/why-israels-economy-is-successful/)

In Israel army plays a unique role in creating a pool of highly trained and solution driven entrepreneurial work force. Israel's army encourages creativity. It is "highly acceptable" for soldiers to point out problems and pitch ideas to superiors. That is why veterans are snapped up by start-ups, says Alan Baker, president of the Israel-Canada Chamber of Commerce in Tel Aviv. They also do well raising money, he says, because investors assume the IDF has already weeded out the dishonest and irresponsible. In other countries, employers rely on the college-entry obstacle course to select the brightest and best. In Israel, thanks to conscription, most job applicants have tackled real obstacle courses.

"Results suggest that the median successful Israeli entrepreneur is male, in his mid-forties, with technical education, a technical profession and an academic degree, who served in the army as an officer in either combat or technical position and is the first born in a small family of two or three children. The interview material revealed most poignantly the influence of service in the army on the career development of these entrepreneurs" (Ayala Malach-Pines et al., 2004)

Entrepreneurship is included in national curricula for vocational education of most of the countries at least to some extent. A report on VET (European Commission Enterprise and Industry Directorate-General, 2009) in European countries points to the gaps in education some of them are enlisted here:

1. Entrepreneurship is not included in all parts of the vocational education training system;
2. Student participation is limited;
3. Teaching methods are ineffective;
4. The practical element of entrepreneurship is missing;
5. Teachers are not fully competent;
6. Entrepreneurship is not linked to specific training subjects or professions;
7. Business people are not sufficiently involved;

7. Effectiveness of Different Training Methodologies

An overview of teaching methods for entrepreneurial learning emphasizes two approaches of learning. One is learning through experience and experimentation other is learning by observation and examples. Learning through experience and experimentation broadly includes action learning, simulation, role playing, use of personal instruction, self-directed learning, problem-based learning, distance learning, business plan competition, and group techniques to create new ideas. Whereas learning by observation and examples include business planning workshops, meetings with leading entrepreneurs, integration of works of fiction or film productions, the integration of teachers' real life experience, case studies

with discussions, study of 'live' entrepreneurial cases guest speakers – entrepreneurs as lecturers. The role of education is in promoting independent thinking as well, and therefore there is strong emphasis on the importance of critical reflection about the vision of sustainable development. The key deliverables of education are to enable the learner to (1) think about their own situation and the situation of others recognizing their interdependence, (2) critically assess situations, (3) self-reflect about the role, possibilities and limitations of personal and collective responsibility, and (4) make responsible decisions and take actions at both personal and societal level. (Dermol)

8. Conclusion

It is felt that there is a partial lack of competence in teachers, at least with regards to practical aspect of entrepreneurship. This aspect happens to be one of the most important traits required to groom or produce an entrepreneur. Same can be addressed by offering capacity building programs, which should be short in duration but precisely focused on addressing the lack of practical aspect of entrepreneurship. The curriculum development also requires a reorientation. Simply lecturing in class room supported by text book reading alone is not enough to meet the skill sets and exposure required to be a successful entrepreneur. Besides vocational training, the much needed intervention is to expose the students through practical projects and activities. This can be achieved only by creating a linkage amongst all the stakeholders of entrepreneurial ecosystem. The institutions offering the program with an intention or objective of producing an entrepreneur need create an Academia-Entrepreneurs-Small and Medium Enterprises- Financial Institution interface.

Problem-driven and experience-oriented education is essential to fostering entrepreneurial mindset and activities. For this it is required to make sure that there is compulsory experience of running an enterprise, whether retail, consultancy or service based that require little capital to start up and run. Another way is to get NGOs and SHGs involved with the students providing training and marketing guidance to them as an extension of professional courses that will cater to people with scanty resources and who need skill enhancement and timely information. The concept of mini companies has been adopted in many countries. A student company is a pedagogical tool based on practical experience by means of running a complete enterprise project, and on interaction with the external environment. In most cases student company programs are driven by external organizations (e.g. NGOs) rather than by the education system itself, although they may receive significant support from the public sector. For this reason, and because sometimes they take place outside the official school curriculum, these programs generally suffer from insufficient financial resources. Student company activities are very often based on strong participation from the private sector, taking the form of funding or of contributions in kind. Depending on the countries and specific programs, in some cases the financial resources available are predominantly of a public nature (this is for instance the case in Austria, France and Norway); in other cases they are mostly provided by the private sector (for instance in the Czech Republic, Latvia the Netherlands and Poland) (European Commission Enterprise and Industry Directorate-General 2005).The corporate initiative and intervention in such courses would certainly add to the present success rate such programs. The question here is not if it would be effective (Styrdom & Adams, 2008) but why should these businesses get involved in the first place.

It will hold any value for businesses if they can use these initiatives in real life pilot projects, they can use it for testing new business models, products, distribution channels and get people who can carry on these initiatives for them during the course and even after that. For this interdisciplinary coordination is of utmost importance for a seam less solution to industry. The success story of Israel suggests that there is no dearth of funds if it makes sound business sense to the investors there is only a dearth of well managed projects on these lines.

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