The Similarities and Differences Between Entrepreneurship Education in Taiwan, Europe, and China: A Preliminary Study

Ming-Shun Tang[1], Wen-Hsiang Lai[2], Ying-Chyi Chou[3], Chu-Sheng Chen[4]
[1]Feng Chia University, Taichung, Taiwan, ROC
[2]Graduate Institute of Management of Technology, Feng Chia University, Taichung, Taiwan, ROC.
[3]Department of Business Administration, Tunghai University, Taichung, Taiwan, R.O.C.
[4]College of Business Administration, Huaqiao University, Quanzhou, Fujian, China.

***Abstract*--Examine the factors affecting economic growth in the United States, emphasizing the importance of education, technological innovation, and perceived competence for national competitiveness. However, to enhance the country's competitiveness, the innovations and technological improvements, and stressed that the entrepreneur is an important factor affecting national competitiveness. Thus , this study investigated how entrepreneurship education affects national competitiveness by analyzing and comparing entrepreneurship education and investments in Taiwan, Europe, and China.**

The cross-national differences examined in this study were government or industry support and the entrepreneurial atmosphere. The research architecture was confirmed with the assistance of cross-national experts. In this study, a literature analysis was conducted using secondary data and, based on expert interviews, the dimensions of entrepreneurship education inputs and output were generalized. The input items comprised entrepreneurship curriculum design, mentors, entrepreneurship competitions, and entrepreneurship forums. The output items comprised the industrial pattern of student employment, enterprise popularity, salary standards, and promotion status.

Entrepreneurs are rarely innately successful; most entrepreneurs mature gradually and harmoniously through education and training. The results of this study should serve as a reference to national education units when drafting directions for entrepreneurship education and resource distribution.

I. INTRODUCTION

The relation between entrepreneurship activities and national economic development is inseparable. The concept of national competitiveness was developed based on corporate operations and management, trade flows, financial systems, and investigations of the factors facilitating national economic growth. Reference[1] [7] pointed out that innovative inventions and technological improvements elevate national competitiveness, emphasizing that entrepreneurship critically affects this national competitiveness. From 1948 to 1982, Studied the factors affecting economic growth in the United States, emphasizing the critical effects of education, technological innovation, and perceived competence on national competitiveness[2] [8].

The International Institute for Management Development (IMD) in Lausanne, Switzerland is a credible international institution that establishes competitive rankings. IMD studies have shown that entrepreneurship education also affects national competitiveness. Thus, this study investigated how entrepreneurship education affects national competitiveness, analyzing and comparing entrepreneurship education and investments in Taiwan, Europe, and China.

Current assessments of economic competitiveness focus on three key factors: knowledge, innovation, and entrepreneurship. In a knowledge-based economy, education is the only way to develop entrepreneurship, increase national competitiveness, and improve welfare [7]. Entrepreneurs are rarely born successful, rather, most mature gradually through education and training. This study should serve as a reference to national education units when drafting directions for entrepreneurship education and resource distribution.

II. LITERATURES REVIEW

A. Entrepreneurship Education

The United Nations Educational, Scientific and Cultural Organization's (UNESCO) definition of entrepreneurship education is the cultivation of creative people. Entrepreneurship education allows educated people to conduct innovative behaviors, and open new or expand existing fields for development in various economic, cultural, and political contexts. These behaviors provide others and society with educational activities promoting opportunistic and exploratory behavior [3] [11].

The earliest entrepreneurship curriculum was implemented in Japan in the 1930s . Babson College established the first American entrepreneurship research center in 1978, leading entrepreneurship education research and curriculum development. In China, an entrepreneurship education plan began at the grounded level in April 2002. Nine experimental universities were selected to promulgate their theoretical research and practice regarding entrepreneurship. Furthermore, entrepreneurship education was listed as a top priority of higher education in the 2003–2007 Educational Revitalization Action Plan [5].

Entrepreneurship education can elevate national entrepreneurship standards and innovative abilities, promote educational–industrial collaborations, and solve the employment problems for college graduates. UNESCO proposed the third educational passport at the World Conference on Higher Education: Towards an *Agenda 21* for Higher Education. Subsequently, entrepreneurship education was elevated to a critical status similar to that of academic education and vocational education [11].

B. National Competitiveness

The IMD defined national competitiveness as the ability of a nation to (a) manage and establish processes that add value to its economy and social structure; (b) create an attractive internal environment and an external capacity for expansion; and (c) increase this added value, enhancing national wealth through international and proximal economies. The World Economic Forum (WEF, 1996) defined national competiveness as the ability of a country to maintain high economic growth levels (i.e., a high living standard). By this definition, national competitiveness can be considered the ability to increase national wealth.

Numerous crucial factors affect national competitiveness, including the products offered, enterprise and industry competiveness, the overall effect of economic, political, and educational influences, individual industry and overall industries management ability, technological strength, infrastructure, capital, and technical talent.

IMD investigations of national competitiveness have emphasized how national policies foster medium- to long-term economic development, strengthening corporate competitiveness in enterprise management environments. Enterprises are the primary source of national wealth and their relation to the social economic environment is primarily based on the interactions among four competitive elements: economic performance, government efficiency, enterprise efficiency, and infrastructure.

C. Correlation between Entrepreneurship Education and National Competitiveness

Current assessments of economic competitiveness focus on three key factors: knowledge, innovation, and entrepreneurship. In a knowledge-based economy, education is the only way to develop entrepreneurship, increase competitiveness, and improve welfare [6].

According to a study by the Organization for Economic Co-operation and Development (OECD), national economic growth and entrepreneurship activities demonstrate an 89% correlation; thus, countries are increasingly committing to promoting entrepreneurship education and activities to build a foundation for continuing economic development.

Reference [7] indicated that innovative inventions and technological improvements elevate national competitiveness, emphasizing that entrepreneurs critically affect national competitiveness. From 1948 to 1982, studied the factors affecting economic growth in the United States, emphasizing the critical effects of education, technological innovation, and perceived competence on national competitiveness [4][5][6] .

III. RESEARCH METHODS

A. Questionnaire Design

The questionnaire was designed to turn abstract concepts into concrete measurable indices and the process is called operationalization. The developed questionnaire referenced entrepreneurship education studies from European institutions of higher learning; the Eurydice network released a report titled *Survey of Entrepreneurship in Higher Education in Europe* [10], elucidating the status of entrepreneurship education in European institutions. Of the 77 items highlighted in the report, 63 items were selected as questionnaire data for use in the expert interviews. This study should elucidate the differences between Taiwan, China, and Europe regarding governmental and industrial support for entrepreneurship education. The primarily dimensions of the questionnaire (Table. 1) were generalized following expert interviews that addressed entrepreneurship education inputs and outputs (e.g., entrepreneurship curricula, instructors, and funding) and the status of national entrepreneurship (e.g., industrial pattern of student employment after graduation and startup enterprises).

TABLE 1 THE ENTREPRENEURSHIP EDUCATION QUESTIONNAIRE DESIGN DIMENSIONS AND DESCRIPTIONS

Primary questionnaire dimensions	Dimension contents	Note
(1) Policy dimension	(a) The emphasized phase of entrepreneurship (b) The spirit of entrepreneurship in addressed in the school mission (c) The disciplines in which entrepreneurship policies, action plans, and models are considered (d) The research goal for institutional entrepreneurship education	
(2) Input dimension	(a) The time invested in entrepreneurship education (b) The entrepreneurial experience of instructors (c) Curriculum planning and design (d) Funding sources for entrepreneurship activities	
(3) Output dimension	The ratio of graduates who are experienced in entrepreneurship practice, business plan and entrepreneurship competitions, and startup enterprises	
(4) Process dimension	The primary obstacles to promoting entrepreneurship education: (a) Limited academic expertise among faculty (no entrepreneurship experience) (b) Faculty members lack sufficient time to invest in entrepreneurship education (c) Entrepreneurship education lacks support (d) In-school entrepreneurship programs rely on the abilities of a few personnel	

Data source: organized in this study

B. Interview Participants

The interviewees in this study were those engaged in entrepreneurship education in higher education settings in Taiwan and China. These interviewees were commissioner directors or deputy commissioners of student education, heads of College of Business, professors or assistant professors of entrepreneurship, and directors or managers of innovation and incubation center. The inclusion criteria included a minimum of a master's degree and with work experience with professors or students of entrepreneurship or entrepreneurship counseling professionals. In Taiwan, the interviews represented the National Chin-Yi University of Technology, the National Central University, the Feng Chia University, and the Chaoyang University of Technology; In Chinese interviewees represented the Peking University, the Tsinghua University, the Xi'an Jiaotong University, the Xiamen University, the Huaqiao University, the Jilin University, the South China University of Technology, and the University of Electronic Science and Technology.

C. Expert Interview Methods

An expert interview is a particular form of the semi-structured interview, which is conducted to emphasize the expert ability of the interviewee in his or her field. This type of interview yields the objective and relevant information required for analysis in studies. Therefore, expert interviews were adopted as a research tool for assessing the status of entrepreneurship education in Taiwan and China institutes of higher learning based on the opinions of Taiwanese and Chinese experts. These interviews elucidated the status of entrepreneurship education promotion in Taiwan and China.

IV. RESEARCH RESULTS

A. Disseminate and Return of Questionnaires

The developed questionnaires were distributed to four and eight (n = 12) institutes of higher education in Taiwan and China, respectively. Twelve questionnaires were gathered from the professors and relevant authorities, yielding a 100% return rate. The questionnaires were distributed on November 22, 2013 and the returns were completed on December 15, 2013. No null questionnaires were no found and the result indicated satisfactory quality of the responses.

B. Findings

The expert interviews yielded various highlights and differences regarding the dimensions of policy, input, output, and process.

(1) Policy dimension:

(a) The emphasized phase of entrepreneurship: In Taiwan and China, the preliminary and startup stages of entrepreneurship were emphasized, whereas in Europe, entrepreneurship curricula equally addressed all stages of entrepreneurship; this is because European institutions have advanced entrepreneurship education programs.

(b) The spirit of entrepreneurship addressed in the school mission: The missions of most In Taiwan and China schools was not mentioned the spirit of entrepreneurship; by contrast, this spirit was mentioned in the missions of 71% of European schools.

(c) The department of schools in which entrepreneurship policies, action plans, and models are considered: Schools in Taiwan, China, and Europe all concentrated on the commerce and technology disciplines when implementing entrepreneurship policies, action plans, and models.

(d) The goal of institutional entrepreneurship research: Schools in Taiwan and China primarily focused on conducting internal assessments and understanding market trends and demands; by contrast, schools in Europe have advanced to developing entrepreneurship education.

(2) Input dimension:

(a) The time invested in entrepreneurship education: The schools had established entrepreneurship programs for 4–8 years, 8–12 years, and 8–12 years in Taiwan, China, and Europe, respectively.

(b) The entrepreneurial experience of instructors: Less than 10% of instructors in Taiwan and China possessed had experience in entrepreneurship practice, whereas greater than 30% of instructors in Europe possessed prior entrepreneurship experience.

(c) Curriculum planning and design: Entrepreneurship was primarily integrated in existing curricula and opened in professional courses or modules in Taiwan, China, and Europe.

(d) Funding sources for entrepreneurship activities: Schools in Taiwan and China were primarily externally funding, particularly from state or local governments. By contrast, greater than half of the funding in European schools was internal. In contrast to Taiwanese and Chinese schools, European schools had more varied external funding sources, receiving large investments from industries rather than the state or local government.

(3) Output dimension:

Regarding graduates, 2%–4% of students in Taiwan and China and 15%–20% of students in Europe had experience in entrepreneurship practice, including business plan competitions and startup enterprises.

(4) Process dimension:

The findings showed that following factors were the primary obstacles to promoting entrepreneurship education:

(a) Limited faculty expertise (no entrepreneurship experience)

(b) Faculty members lack time to invest in entrepreneurship education

(c) Insufficient funding support for entrepreneurship

education

(d) In-school entrepreneurship programs rely only on the abilities of a few personnel

C. Summary

The European Union (EU), WEF, World Bank, and OECD have firmly established the spirit of entrepreneurship as a universal principle. The Centre for Entrepreneurship, Small and Medium Enterprises and Local Development was subsequently established by the OECD in July 2004. This study conducted a cross-national comparative analysis of Taiwan, China, and Europe, emphasizing the crucial similarities and differences regarding the dimensions of policy, input, output, and process. The findings indicate that European institutions of higher education invest the most time into entrepreneurship, followed by Taiwan and China. European institutions have promoted entrepreneurship for an average of 10 years or longer. Compared with 2%–4% of graduates in Taiwan and China, 15%–20% of graduates in Europe were experienced in entrepreneurial practice.

V. CONCLUSION AND RECOMMENDATIONS

Current assessments of economic competiveness focus on three key factors: knowledge, innovation, and entrepreneurship. In a knowledge-based economy, education is the only way to develop entrepreneurship, increase competitiveness, and improve welfare [6]. Because of the trend toward globalization, countries must urgently implement entrepreneurship education programs; these programs should rely on the science and engineering resources of universities to elevate research quality, seek organizational support, and foster an entrepreneurship-oriented culture. Moreover, developing innovative talent can elevate national competitiveness.

The current findings indicated that promoting entrepreneurship education requires the following: (a) supportive policies; (b) financial expansion capability; (c) an inclusion of entrepreneurship in the institutional mission; (d) entrepreneurship-related educational goals and instructional methods; and (e) multidimensional entrepreneurship education evaluation systems. The following suggestions are provided regarding entrepreneurship education:

(1) National policies: Traditional universities that meet the requirements should be encouraged to transform into entrepreneurship-oriented universities. The government can promote developing resources for these universities by using public research funding to support the industrialization of academic knowledge, thereby promoting entrepreneurship education.

(2) School policies: Schools should commit to developing entrepreneurial talent, emphasizing the spirit of innovation and entrepreneurship and encouraging students to pursue cross-disciplinary studies and innovation.

(3) Enterprise strategies: Due to the shortage of research resources, Academic industrial cooperation should be strengthened, enabling universities to promote entrepreneurship education based on industrial internships, the influences of sponsors and alumni.

(4) The future direction of entrepreneurial education: establish on campus an environment that promotes the practice of entrepreneurial ship and a platform that nurtures the entrepreneurial spirit. At the same time, (improve/strength) curriculums that teaches entrepreneurial ideals to young people.

REFERENCES

[1] Peter Drucker .; *Innovation and entrepreneurship*, New York: Harper and Row, 1985.

[2] Peter Drucker .; *Innovation and Entrepreneurship*, Taipei：Rye Field,1998.

[3] Denis, Gregorie, and Jean-Pierre.; "Entrepreneurship Education Research Revisited: The Case of Higher Education,". *Academy of Management Learning and Education*, vol4,No 1, pp 22-43, 2005.

[4] Hsu Paul-Sc.;"Entrepreneurial behavior, entrepreneurship and entrepreneurship education research," Taipei management education seminar papers, July 1993.

[5] Liu Chang-Yong and Ru-Mei Xie "Review and Prospect Venture Management: Theory and Mode," *Journal of Entrepreneurship Research*，vol.1, No.1, 2007.

[6] Manoela Popescu and Luminiţa Cecilia Crenicean.; "Innovation and change in education economic growth goal in Romania in the context of knowledge-based economy," *Procedia - Social and Behavioral Sciences* vol.46, pp. 3982 - 3988, 2012.

[7] Joseph A.Schumpeter .; *Capitalism，socialism and democracy*, New York: Harper, 1942.

[8] Solow, Robert W. ; " Technical Change and the Aggregate Production Function," *Review of Economics and Statistics*, vol.39, pp. 312-320, 1967.

[9] Wenzhao Dong and Xieru Mei.; "Global Entrepreneurship Monitor (GEM) of the Literature Review and Future Directions" *Journal of Entrepreneurship Research*, vol. 5, No.2, pp. 27- 48, 2010.

[10] NIRAS Consultants, FORA, ECON Poyry.; "*Survey of Entrepreneurship Education in Higher Education in Europe*," working paper, October 2008.

[11] The United Nations Educational, Scientific and Cultural Organization Web, http://www.unesco.org

[12] China Education Web, http://www.moe.edu.cn

[13] Taiwan Education Web, http://www.edu.tw

[14] Council for economic planning and developmet of Taiwna Web, http://www.cepd.gov.tw