

Factors Influencing the Success of a Small Technology-Based Venture: The Case of Davao City, Philippines

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Abstract: Small and medium-sized enterprises (SMEs) played critical roles in both developed and developing countries' economic mobility. These new and small technology-based ventures (STBVs) employ technology graduates and have the potential to spur economic development in Davao City. Nonetheless, given the difficulties encountered by some technical entrepreneurs in the city and elsewhere, the question of how to successfully introduce and create STBVs remains unanswered. The Davao City Chamber of Commerce and Industry, Inc. (DCCCII) believed that the barriers could be overcome with the assistance of government and private institutions and foreign funding agencies. To successfully establish STBVs, DCCCII must create an army of technology entrepreneurs, evaluate, and create a healthy local business environment, and collaborate with partners, particularly the academic community, to create a culture of research and develop innovative technologies, and sell them to the appropriate market.

Keywords: SME, STBV, Barriers to Success, Determinants for Success, Entrepreneur, Innovation

1.0 Introduction

Small and medium enterprises (SMEs) played a vital role in the economic mobility of developed countries (Lee 2000) and developing economies (Krasniqi 2007). These new and small enterprises focusing on technology, called small technology-based ventures (STBVs), employed the local residents (Lee 2000). However, as Krasniqi (2007) and Lee (2000) stressed, there are potential barriers before STBVs can be successfully created. These barriers were categorized by Tambunan (2007) into three issues related to infrastructure, institutional and economic. In the Philippines, the Davao City Chamber of Commerce and Industry, Inc. (DCCCII) conceptualized a framework to encourage the creation of STBVs in the city (DCCCII Website 2008).

Nevertheless, considering the anecdotal experiences of some technical entrepreneurs in the city and experienced in other countries, there remains a question of how to introduce and create STBVs successfully. As Roure and Keeley (1990) and Eisenhardt and Schoonhoven (1990) claim, there are determinants of whether the STBVs can be successful or not. Hence, even though there are threats to establishing STBVs, it is argued in this paper that STBVs can be successfully created in Davao to provide employment to technology graduates and potentially spur economic development in the city.

2.0 STBV in Davao City

Davao City is acclaimed as one of the largest cities in the world, with a land area of 2,440 square kilometers. It is considered the capital city in South-Eastern Mindanao, Philippines (Sunstar Publishing, Inc. 2005). The city has a population of more than 1.2 million, and the economy is mobilized by businesses in agriculture (45%), industry (15%), service (35%), and other sectors (Davao City Government, n.d.). The city's economy is flourishing; in 2004, unemployment was 11.20% (Davao City Government n.d.). Though the unemployment rate in the city was relatively lower compared to the other cities in the Philippines, graduates in information technology, engineering, and other technology-related fields left the city to look for jobs in other cities.

With the observed exodus of technology graduates, DCCCII, consistent with its mission to promote enterprises and uphold the city's business interests, took action to provide a solution by conceptualizing the creation of technology-based enterprises in the city (DCCCII Website 2008). This move of DCCCII is commendable since, as Krasniqi (2007) and Lee (2000) claimed, SMEs can be the engines of economic growth. Thus, considering the potential of STBVs, more jobs can be created, and more money will flow into the city. In

the case of Indonesia, SMEs employed many of the residents, which helped expand the gross domestic product, and provided economic and social benefits to the residents (Krasniqi 2007). Lee (2000) added that small enterprises, especially technology, contributed largely to Korea's economic growth and the United States of America. Moreover, DCCCII acknowledged that setting up small technology-based ventures (STBVs), an entity within the SME group focusing on technology, needs proper planning, commitment, and execution.

3.0 DCCCII Initiatives

Realizing the need to set up STBVs in Davao successfully, DCCCII started by developing human resources in information technology (IT). With the support of the Philippine-Australia Human Resource and Organisational Development Facility (PAHRODF), a short training on "technopreneurship" or technology-based entrepreneurship was conducted last December 2006 to January 2007 (DCCCIII Website 2008). The training encouraged IT, academicians, and practitioners to create technology-based ventures in the city. In addition, the training was aimed at introducing a "technopreneurship" course and preparing IT academicians to teach the course in the university's IT programs. Menzies and Paradi (2002) clarified that introducing at least one entrepreneurship course in the technology-based curricula encourages technology graduates to establish their own enterprises after graduation.

Further, to provide the proper balance of building up the capabilities of the human resources of DCCCII and the academe, scholarships were also granted through PAHRODF by allowing DCCCII to send five scholars to study postgraduate degrees in technology and/or entrepreneurship in Australia (DCCCIII Website 2008). While the scholars in Australia are gaining knowledge and developing their skills in technology and entrepreneurship, the IT professionals who attended the short-term training in the Philippines are setting the stage by inviting experienced technology-based entrepreneurs from other cities to help and share how to establish technology-based ventures in Davao City effectively. Moreover, competitions and conferences related to technology have been conducted to motivate students, professionals, and capitalists to participate in the initiatives of DCCCII.

4.0 Barriers to the Growth of STBVs

Establishing STBVs is invigorating, but there are challenges as well. For STBVs to successfully develop and distribute products or goods to the domestic and international markets, it is crucial to recognize and identify potential barriers to growth and, if possible, formulate ways to overcome them. DCCCII, as the embodiment of the business groups in Davao City, was mindful of the threat to the creation of STBVs. In the analyses of Krasniqi (2007), there are three critical barriers to the growth of small and medium enterprises: unfair competition, tax burden, and external financing. Tambunan (2007) also included these three barriers in the infrastructure, institution, and economics issues.

Firstly, on infrastructure, it deals with issues related to government facilities (roads, storage, and ports) and supplies of water, power, and telecommunication (Tambunan 2007). In Davao City, infrastructure is not an issue. Davao has good facilities and adequate water, energy, and telecommunication supplies. However, as a neophyte in technology enterprises, Davao City has limited working premises and a physical market for technology-based entrepreneurs to develop, produce and distribute their technological products. To address this issue, discussions on establishing economic zone or industrial parks were conducted with private groups and the government to encourage local and foreign capitalists to invest in the city. Thus, the first infrastructure issue can be overcome by STBVs in Davao City.

Secondly, Tambunan (2007) stresses the institutional issues of lack of formal training for potential entrepreneurs, limited access to financial and banking institutions, and unnecessary government regulations are also experienced in Davao City. In 2000, Lee identified the same issues in Korea: deficient technical and management skills, capital resources scarcity, and high government bureaucracy. Moreover, in the analysis made by Krasniqi (2007), he found that the tax burden, which is related to government regulations, is one of the crucial barriers to the growth of STBVs. Krasniqi (2007) also noted that unfair competition, which is also one of the barriers to growth, occurs due to a lack of training the entrepreneurs. Hence, for Davao City, DCCCII ensures that formal training should be provided to technical entrepreneurs by involving the academe and other technology professionals. Likewise, DCCCII is lobbying the City Government of Davao on the provision of incentives and improved services to the newly created STBVs.

Finally, on the economic issues, Tambunan (2007) noted that small enterprises had problems acquiring materials in bulk due to a lack of working capital or insufficient funds, limited access to technology or

machines, and high transaction costs. It was emphasized by Lee, Lee, and Pennings (2001) that financial resources are vital to the success of an STBV in the early stage. However, as Mason and Harrison (2004) noted, raising funds in the early stage of STBVs operation is hard since technology-based ventures are risky. Supposedly, Oakey (2003) claimed that if the venture capitalists only invest in the early stage of STBVs operation, they can impact the performance of newly established technology-based firms since, according to Krasniqi (2006), small enterprises are flexible and grow faster. Moreover, Krasniqi (2007) mentioned that limited financing is a crucial barrier to the growth of STBVs. In Davao City, DCCCII and other organizations are still looking at and enticing potential capitalists and banking institutions to invest in the city, especially in the STBVs.

5.0 Determinants for a Successful Creation of STBVs

While it is true that there are barriers to the growth of STBVs, there are also three prerequisites to be followed for a technology venture to become successful. For DCCCII, it is necessary to consider these determinants for the successful creation of STBVs so that plans can be readied and executed effectively. According to Roure and Keeley (1990) and Eisenhardt and Schoonhoven (1990), there are determinants of whether STBVs can be successfully created or not; they are the capability of the entrepreneur, the conduciveness of the business environment; and the strategy to be used in technological innovations and commercialization.

The first step to becoming successful in creating STBVs is to provide training to augment the capabilities of technology entrepreneurs. Technical entrepreneurs should be knowledgeable in technology and business management (Jones-Evans 1997). Likewise, as Menzies and Paradi (2002) suggested, entrepreneurship is important for technology-based programs to encourage students to engage in business after graduation. Davao City is already working on improving the skills of (would-be) technical entrepreneurs by providing training and integration of "technopreneurship" courses in the IT curricula. If the entrepreneur lacks the expertise to manage the enterprise, problems may occur in the future, especially if the enterprise grows; this will, in Jones-Evans's (1997) view, lead to crises in leadership. To become successful in technology-based ventures, entrepreneurs need to acquire knowledge or expertise in business management. In Korea, successful small technology-based ventures were founded and operated by scientists and engineers (Lee, 2000). In addition, as noticed by Jones-Evans (2007), most successful entrepreneurs in technology ventures succeeded since the businesses they created were closely related to their previous jobs. These reflect that technical entrepreneurs should be trained or have working experience running a technology venture before successfully setting up their businesses.

The second important aspect for the successful creation of STBV is the aptness of the business environment (Roure and Keeley 1990). Krasniqi (2007) and Tambunan (2007) claimed that barriers to the growth of enterprises focused mainly on the business environment except for the technology entrepreneur. Government regulations and policies and the availability of financial institutions can be addressed with the cooperation of the City government and other financial organizations. At this point, DCCCII has started preparing the business environment by encouraging the creation of technology parks and inviting capitalists. At the same time, DCCCII has been lobbying the City government to create government policies that are friendly to the creation of small enterprises (Davao City Government, undated).

Strategy is the last but most subtle determinant for successfully establishing STBVs (Roure and Keeley 1990). Baum, Locke, and Smith (2001) emphasized that targeting a particular clientele is a very effective strategy to commercialize the technology. In addition, the innovativeness of technology is very important to satisfy a customer but demands a high level of technological competence and needs substantial resources (Eisenhardt and Schoonhoven 1990). DCCCII knew the need for these technological innovations, which is one of the reasons why DCCCII focuses first on information technology, where innovative technology can be developed at a lower cost. Moreover, competitions and conferences are conducted to motivate technologists (students and professionals) to develop innovative technologies that can be potentially brought to the global market. However, in general, Davao City is yet to start developing innovative technologies; hence, DCCCII should start discussing again with the academe to intensify research and development in the area of information technology and engineering, and natural sciences.

6.0 Conclusion

Potential entrepreneurs can overcome barriers to the growth of STBVs with the help of DCCCII, the city government, and other local and foreign agencies. Moreover, based on the determinants for the successful creation of STBVs, DCCCII is still in the early stage and has to execute more planning and smart actions. It is possible that STBVs can be established successfully in Davao City in four to six years to provide employment to the technology graduates and spur economic development in the city. Nonetheless, the success of the project depends largely on how fast DCCCII and other partner organizations can prepare the business environment of the city and the adaption of the academe and the technical entrepreneurs to develop innovative technologies. This would mean that DCCCII must intensify its move to vigorously campaign for the creation of STBVs and influence the inventors and technology academicians to go into rigorous research and development. Likewise, this issue can be solved at another level where schools and universities offering IT and other Technology-based programs should be involved deeply and seriously.

7.0 References

- [1]. Baum, J.R., Locke, E.A., and Smith, K.G. (2001). A Multidimensional Model of Venture Growth. *The Academy of Management Journal*, 44:2, 292-303.
- [2]. Davao City Government (n.d.). The Economy of Davao City. Retrieved 23 March 2008 from <http://www.davaocity.gov.ph/theeconomy/overview.htm>.
- [3]. DCCCII Website (2008). Davao City Chamber of Commerce and Industry, Inc. Annual Report, 2006. Retrieved 20 March 2008 from <http://elibrary.davaochamber.org/index.html>.
- [4]. Eisenhardt, K.M., and Schoonhoven, C.B. (1990). Organizational Growth: Linking Founding Team, Environment, and Growth Among US Semiconductor Ventures, 1978-1988. *Administrative Science Quarterly*, 35:3, 504-529.
- [5]. Jones-Evans, D. (1997). Technical Entrepreneurship, Experience and the Management of Small Technology-Based Firms--Exploratory Evidence from the UK. *Entrepreneurship and Regional Development*, 9:1, 65-90.
- [6]. Krasniqi, B.A. (2007). Barriers to Entrepreneurship and SME Growth in Transition: The Case of Kosova. *Journal of Developmental Entrepreneurship*, 12:1, 71-94.
- [7]. Lee, C., Lee, K., and Pennings J.M. (2001). Internal Capabilities, External Networks, and Performance: A Study on Technology-Based Ventures. *Strategic Management Journal*, 22, 615-640.
- [8]. Lee, J. (2000). Challenges of Korean Technology-Based Ventures and Governmental Policies in the Emergent-Technology Sector. *Technovation*, 20, 489-495.
- [9]. Mason, C., and Harrison R. (2004). Does Investing in Technology-based Firms Involve Higher Risk? An Exploratory Study of the Performance of Technology and non-technology investments by Business Angels. *Venture Capital--An International Journal of Entrepreneurial Finance*, 6:4, 313-332.
- [10]. McDougall, P.P., and Oviatt, B.M. (2000). International Entrepreneurship: The Intersection of Two Research Paths. *The Academy of Management Journal*, 43:5, 902-906.
- [11]. Menzies, T.V. and Paradi, J.C. (2002). Encouraging Technology-Based Ventures: Entrepreneurship Education and Engineering Graduates. *New England of Entrepreneurship*, 5:2, 57-63.
- [12]. Oakey, R.P. (2003). Funding Innovation and Growth in UK New Technology-based Firms: Some Observations on Contributions from the Public and Private Sectors. *Venture Capital--An International Journal of Entrepreneurial Finance*, 5:2, 161-179.
- [13]. Roure, JB and Keeley, R.H. (1990). Predictors of Success in New Technology-Based Ventures. *Journal of Business Venturing*, 5:4, 201-220.
- [14]. Sunstar Publishing, Inc. (2005). Tourism Forum Puts Davao on World Map. Retrieved 20 March 2008 from <http://www.sunstar.com.ph/davao/index.html>.
- [15]. Tambunan, T. (2007). Entrepreneurship Development: SMEs in Indonesia. *Journal of Developmental Entrepreneurship*, 12:1, 95-118.