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THE IMPACT OF BUSINESS INCUBATION (BI) IN DEVELOPED AND DEVELOPING COUNTRIES

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Abstract: *The aim of this paper is to investigate, and identify the impact of incubators in developed and developing countries that facilitate the successful implementation of incubation programs. The nature of this research is mainly qualitative. This investigation uses 7 case studies and data was mainly collected by means of 2 semi-structured interviews in the United States and organizational documents. The research findings suggest that there are three key points: (1) the clear objectives of business incubation programs contributed positively on the client and graduated firms which lead to economic development, (2) the business incubation model can be helpful to generate jobs and income beyond those directly employed and paid through the incubator's tenants, and (3) the services offered by the incubation management contributed positively to the supporting and sustainability of the client and graduated firms. The authors believe that this paper will present an added value to the current literature on business incubation best practices in developed and developing countries. Also, the research will benefit organizations in the academia and practitioner as government and policymakers for future implementations.*

Keywords*: Jobs creation, developing countries, entrepreneurship, incubation program*

1. INTRODUCTION

Business incubators nurture and grow start-ups in the economy with offered services to fledgling companies in office space, funding, and basic services, such as recruiting, accounting, and legal advice-usually in exchange for equity stakes (Rice, 2002). National Business Incubation Association (NBIA) identified two principles characterize effective business incubation as a positive impact on its community's economic health by accelerating the success of start-up companies and a dynamic model of a sustainable, efficient business operation. Many studies presented the business incubation programs outcome as: (1) economic development, (2) entrepreneurship, (3) innovation, (4) acceleration of business growth, (5) job creation, and (6) technology transfer and commercialization (NBIA, 2006).

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The objective of this paper is to explore, investigate, and identify the impact of incubators in developed and developing countries. The identification is based on seven successful implementations of case studies in developing countries and two interviews based in the United States.

The structure of this paper is as follows: Section 2 provides a literature review of the business incubation (BI). In section 3, the research methodology includes the evidence from the literature review and seven successful case studies to illustrate different key performance dimensions of the business incubation with two real interviews of business incubation programs located in the United States. In section 4, the authors briefly discuss the finding of the study drawn from qualitative approaches to incubators. Section 5 concludes with implications of the business incubators drawn from successful program in developed and developing countries.

2. RELATED LITERATURE REVIEW OF BUSINESS INCUBATION

Schwartz (2009) in his study findings suggested three points: (1) the graduation causes an immediate negative effect on survivability that lasts up to 3 years after leaving the incubators, (2) observed the heterogeneous patterns of post-graduation exit dynamics between the BIs and, (3) the performance during the incubation period is an indicator of the propensity of business closure after graduation. Another study (Schwartz and Hornych, 2008) indicated that the survival of media firms depended on the availability of specialized equipment and facilities including knowledge and know-how. Furthermore, the competition of the companies in the same sectors led to limitations in networking.

Chandra and Fealey (2009) discussed the incubation landscapes of the United States, China and Brazil, noting the similarities and differences in incubation approaches among the three countries. The comparison was based on the key performance indicators including incubators sponsorship/financial model and its impact on strategy, service mix with an emphasis on financial services along with key environmental/contextual influences.

Akçomak (2009) presented lessons from country experiences as a tool for entrepreneurship promotion in developing countries. Four weaknesses of incubators in developing countries were shown: (1) the services focus on tangible services rather than intangible services, (2) government as main parties, (3) lack of management and qualified personnel, (4) lack of solving problems.In another study, Akçomak and Taymaz (2007) identified the incubator management offered the tangible services and funding.

McAdam and McAdam (2008) discussed that the important element of incubators in the early stages is tangible incubator services. In addition, the networking and clustering are the most important factors behind a firm success.

Another study by McAdam and Marlow (2007) presented the importance of tenants based on the facilities served by the incubator management, networking opportunities and credible status. They noted that trust is the most critical factor that allows for information exchange.

In a recent study, Al-Mubaraki and Busler (2013a) focused on five practical case studies and their successful adaption in developing countries. Based on three key indicators for each case study: (1) founded year (2) number of client companies, and (3) number of graduated companies. The study findings stated that the entrepreneurship, incubators and innovation contribute to the international economy and play a vital role not only in the economic recovery but also in smart growth and economic development. In developing countries, the adaptation leads to the support of entrepreneurial climate, fostering the innovation to commercialise the new technologies and jobs creation.

Although, Al-Mubaraki and Busler's (2013b) research findings indicate the similarities of incubators programs as: (1) creating jobs, (2) enhancing community's entrepreneurial climate, and (3) tangible services, and the differences were: (a) Incubators type, (2) finical status, and (3) incubators age. The research added value to current literature on new visions for sustainability of incubators best practice models for the coming year. Finally, it provided useful guidelines for implementation to both academia and practitioners involved with incubators worldwide.

Another study by Al-Mubaraki and Busler (2013c) described the incubators model in developing countries. They concluded that the positive impact of business incubators leads to economic development and an effective tool for economic development. The study supported previous work that suggested that quality initiatives and careful planning of incubators may present a pathway to stimulate an economy, in particular in the developing countries.

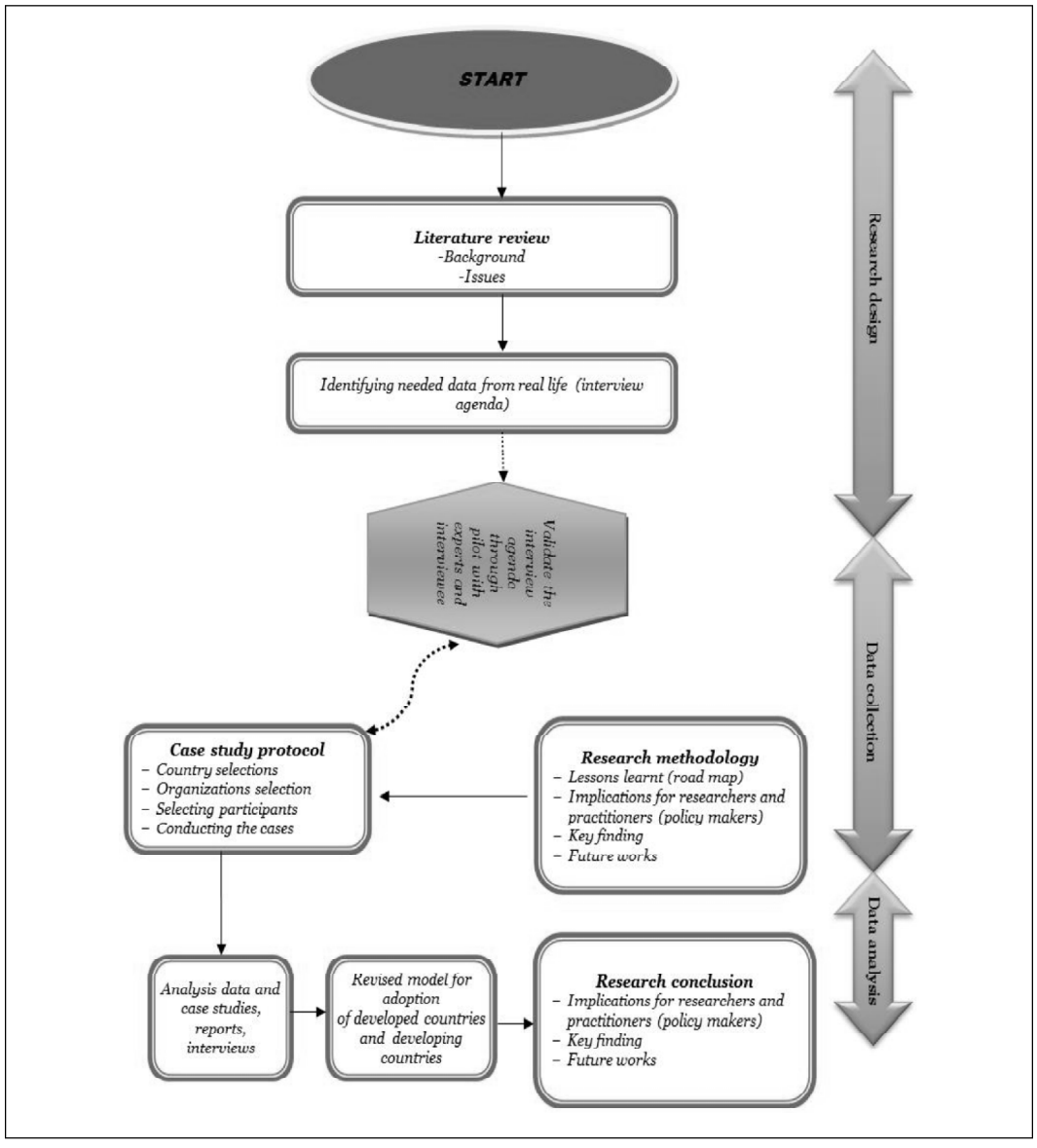
Al-Mubaraki and Busler (2012a) concluded: (1) the total number of graduate firms that have emerged from incubator models in Europe and the Middle East was 832 and 43 respectively. This difference reflects a high rate of start-up companies inside the incubators that graduate a high number of companies. Second, incubators goals focus on fostering entrepreneurship, jobs creation and technology commercialization. Third, incubators services, tangible and intangible, are stronger in European models than in Middle East models (medium).

In a study based on a mixed-method approach, using both qualitative and quantitative methods, the survey results of 100 incubators programs led to the adaptation of incubators programs and as a tool for fostering the innovation and entrepreneurial climate with technology transfer (Al-Mubaraki and Busler, 2012c). Although, other study indicated that the incubators are supporting entrepreneurship and innovation to lead jobs creation and economic development with the smart generation. Al-Mubaraki and Busler (2012b).

3. RESEARCH METHODOLOGY

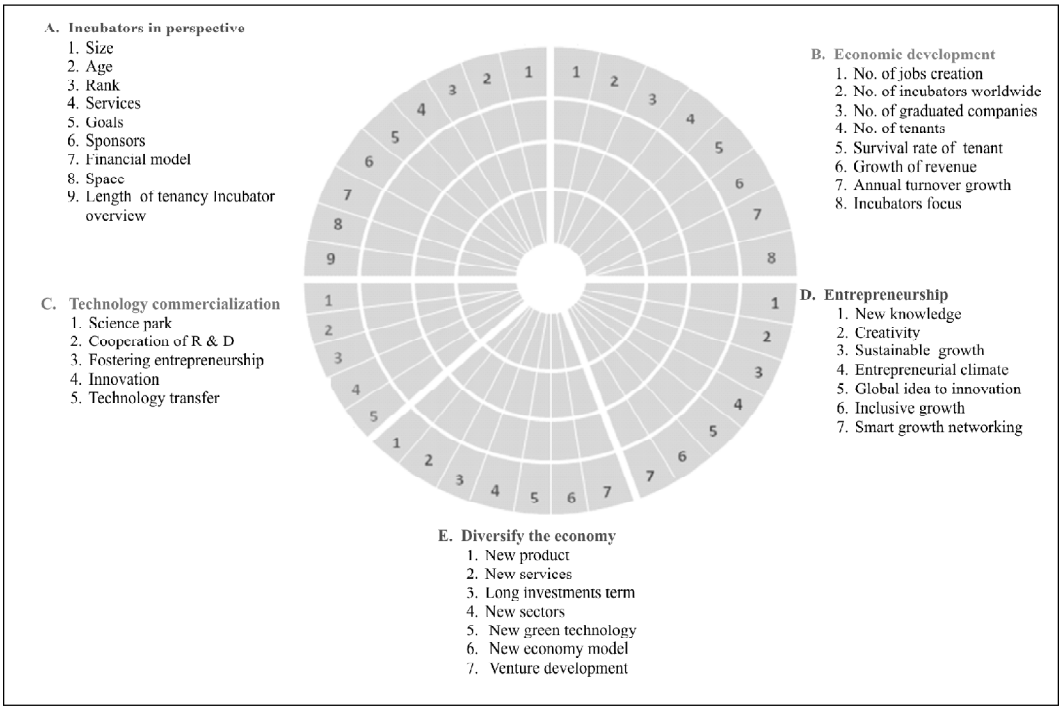
The research methodology used in this research study is compromised of desk-research, interviews and case studies of 7 incubator organisations in the developing countries. In addition, the case study method is recognized as the most effective research strategy to capture the rich experience of complex projects (Eisenhardt, 1989; Yin, 1994; 2004; 2009). See Chart 1.

Chart 1: Research Methodology



Interviews were conducted with senior executives of 2 case studies in developed countries such as United States. Interview design is based on five categories: (1) incubators overview; (2) economic development; (3) technology commercialization; (4) entrepreneurship; and (5) diversification of economy. See Chart 2.

Chart 2: Interview Chart



Incubators in developing countries present different sets of objectives : (1) entrepreneurship, (2) export revenues, (3) job creation, (4) policy impact, (5) profitable enterprises, and (6) research commercialization. Business incubation programs provide the start-up companies with a set of services as: (1) incubators facilities, (2) incubators finance, (3) incubators business information, (4) incubators advisory services, (5) virtual incubation, (6) incubators international business services, (7) incubators networking, and (8) incubators commercializing technology. See Table 1.

Table 2 demonstrates the four key performance dimensions of developing countries: 1) key performance dimension of incubators types (KPD1), 2) key performance dimension of incubators year of establishment (KPD2), 3) key performance dimension of clients firms (KPD3), and 4) key performance dimension of graduated firms (KPD4).

Table 1
Goals and Services of Incubators in Developing Countries

Developing countries	*Goals*	*Services*
1-Bahrain 2-Saudi Arabia 2 3-Morocco 4-China 1 5-China 2 6-Indonesia 7-India 1	1) Entrepreneurship awareness, 2) Export revenues, 3) Job creation, 4) Policy impact, 5) Profitable enterprises, 6) Research commercialization	1) Incubators Facilities, 2) Incubators Finance, 3) Incubators Business information, 4) Incubators Advisory services, 5) Virtual incubation, 6) Incubators International business services, 7) Incubators Networking, 8) Incubators Commercializing technology

Table 2
Key Performance Dimensions (KPD)

Case studies	*Key performance dimensions(KPD)*			
	KPD1	*KPD2*	*KPD3*	*KPD4*
	Incubators Types	*Years*	*Client Firms*	*Graduate Firms*
1-Bahrain	Government	2003	35	30
2-Saudi Arabia 2	Government	2008	12	0
3-Morocco	Private sector	2005	8	4
4-China 1	Government	1998	186	45
5-China 2	Non-Government organization	2000	70	37
6-Indonesia	Not-for-profit	1995	9	11
7-India 1	Private sector	2001	18	11

4. FINDINGS AND DISCUSSION

From the current literature, it is evident (see Section 2 above) that the strategic benefits of incubators foster technological innovation and industrial renewal, support the regional development through jobs creation and dynamic processes to support young firms to survive and grow during the start-up period (Allen and Rahman, 1985; Smilor and Gill, 1986; Allen and McCluskey, 1990; Mian, 1996; Allen and Levine 1986, Mian, 1997, Thierstein and Wilhelm, 2001; Roper, 1999; Campbell, 1989; Petree, Petkov and Spiro, 1997).

The developing countries case studies were divided in to three groups based on the key performance dimensions of incubators sponsors (KPD1): (1) government sponsorship, (2) private sector sponsorship, (3) not-for-profit sponsorship, and (4) non-government organization sponsorship. First, Table 3 presents three case studies of government incubators sponsorship including Bahrain, Saudi Arabia2

and China1. The oldest establishment program (KPD2)is in China1 (1998), the highest KPD3,186; and KPD4,45. Second, Table 4 demonstrates two developing countries of private sector incubators type, Morocco and India1.The oldest established program (KPD2) is in India1 (2001), the highest KPD3, 18; and KPD4,11. Third, Table 5 shows the non-government organization incubators type in China2. Fourth, able 6 presents the not-for-profit incubators type in Indonesia. Overall, incubators can play an active role in local and regional economic development based on the growth of KPD3 and KPD4.

Table 3
Case Studies of Government Incubators Type

Case studies	*Key performance dimensions (KPD)*			
	KPD1	*KPD2*	*KPD3*	*KPD4*
	Incubators sponsors	*Years*	*Client Firms*	*Graduate Firms*
1-Bahrain	Government	2003	35	30
2-Saudi Arabia 2	Government	2008	12	0
3-China 1	Government	1998	186	45

Table 4
Case Studies of Private Sector Incubators Type

Case studies	*Key performance dimensions (KPD)*			
	KPD1	*KPD2*	*KPD3*	*KPD4*
	Incubators Types	*Years*	*Client Firms*	*Graduate Firms*
1-Morocco	Private sector	2005	8	4
2-India 1	Private sector	2001	18	11

Table 5
Case Studies of Non-government Organization Incubators Type

Case studies	*Key performance dimensions (KPD)*			
	KPD1	*KPD2*	*KPD3*	*KPD4*
	Incubators Types	*Years*	*Client Firms*	*Graduate Firms*
China 2	Non-Government Organization	2000	70	37

Table 6
Case Studies of Not-for-profit Incubators Type

Case studies	*Key performance dimensions (KPD)*			
	KPD1	*KPD2*	*KPD3*	*KPD4*
	Incubators Types	*Years*	*Client Firms*	*Graduate Firms*
Indonesia	Not-for-profit	1995	9	11

Chart 3 shows the five categories of interview questions respondents answered high indicators for all categories. Only two indicators answered low growth of revenue and venture development. Overall, all categories presented high indicators which reflect positive potential outcomes of incubators in developed counties and the US.

Chart 3: Radar Chart of NYU Incubator, NY, US

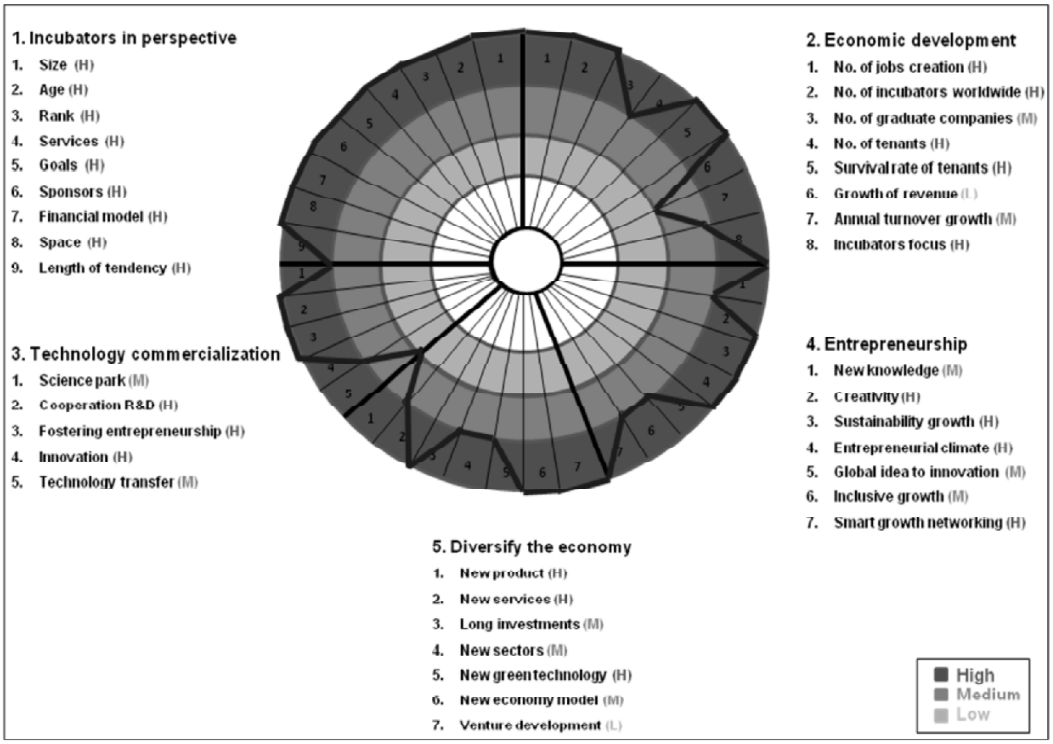
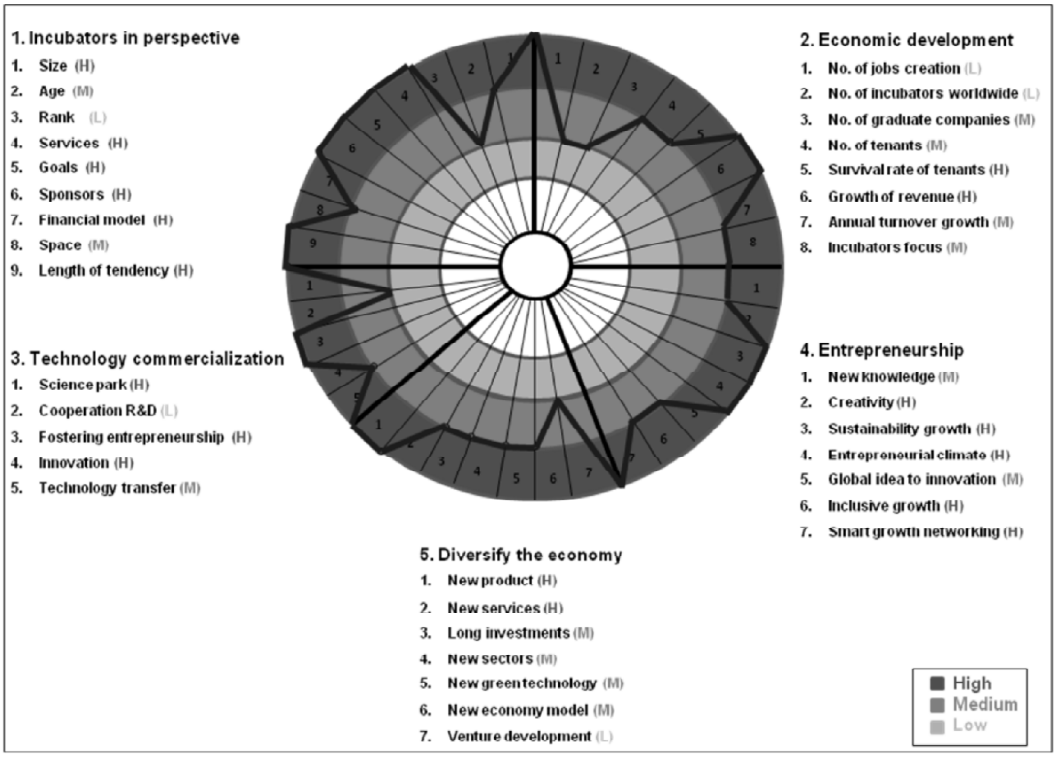


Chart 4 shows the results of Radar Chart. Few indicated low indicators such as rank, cooperation R&D, number of jobs creation and number of incubators worldwide most described high indicators. Overall, all categories presented high indicators which reflects the positive potential outcomes of incubators in developed counties and the US.

4. CONCLUSION AND REFLECTION

It has been widely acknowledged that business incubation programs are the most useful tools for economic development, entrepreneurship, innovation, acceleration of business growth, jobs creation, and technology transfer and commercialization. The services offered by incubation management add value to the client and graduated firms. The authors of this paper have highlighted the

Chart 4: Radar Chart of Business Incubator Association of New York State, US



importance of the incubators in developed and developing countries, as indicated specifically in Sections 1, 2, 3 and 4 of this paper.

Therefore, this paper attempts to provide a new line of thinking and further scope for researchers in the area of incubators success in developed and developing countries. The research findings suggest three points: (1) clear objectives of business incubation programs contribute positively on the client and graduated firms, which lead to economic development, (2) Business incubation model can be helpful to generate jobs and income beyond those directly employed and paid for through the incubator's tenants, and (3) the services offered by the incubation management contribute positively to the support and sustainability of the client and graduated firms. A full understanding of these three points lead to successful incubators implementation as vital elements in the number of clients and graduated firms in the market and reduce the failure of start-up firms.

This paper is based on a multi-case study that investigated developing countries, addressed and explained the key performance dimensions and two real interviews in United States. To get a clear picture of the phenomenon, further research needs to be conducted. Moreover, a mixed-method approach using both

qualitative and quantitative methods would provide a deeper insight and understanding into the phenomenon under investigation. For future research and from the findings that highlighted in this paper, the authors aim to conduct more case studies on incubators implementation in different Middle Eastern and Gulf States. Hence, the authors are planning to develop a framework for incubators model.

Finally, this study clearly concluded that incubators supporting the generation of entrepreneurship and innovation that to lead jobs creation and economic development with the smart generation.

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