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## Scalable Start-up Entrepreneurship and Local Economic Development in Emerging Economies

Donny Susilo\*

Department of Business Administration, Asia University, Taiwan

### Abstract

Scalable start-up entrepreneurs work closely with technological innovation in order to improve people's welfare and provide solutions to current issues. Despite the high risk inherent in start-ups, they have become a trending type of business in the world and therefore deserve adequate attention from scholars. This study aims to explore barriers to scalable start-up entrepreneurship. It further explores their contribution to local economic development in emerging economies by reviewing secondary data and existing literature. The lack of financial resources, government support, opportunity awareness role models, and managerial skills, in addition to the fear of failure, family pressure, and ineffective entrepreneurship training, are common barriers to creating start-ups. Nevertheless, their contribution to local economic development is noteworthy. Scalable start-up entrepreneurs attract local and foreign investment and regenerate income, positively contributing to GDP per capita. They also play a role in job creation, helping governments to reduce poverty and increase the welfare of their citizens. Start-ups also create efficiency through e-commerce, helping local products to become more competitive in both local and global markets. By collaborating with governments, scalable start-ups can foster technological developments and become strategic partners of larger corporations. Start-ups can even increase people's welfare by

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\*Corresponding Author, Address: Asia University, Taiwan No. 500 Liufeng Road, Wufeng District, Taichung City, Taiwan 41354. E-mail: Donnysusilo777@gmail.com

providing solutions to environmental issues that are a consequence of substantial development in emerging economies.

Keywords: scalable start-up, entrepreneurship, local economic development, emerging economies

JEL Classification: F63, 010

## 1. Introduction

Entrepreneurship promotion has long been a strategic program in both developed and developing countries. Entrepreneurs are expected to spur innovation and technological development, increase gender equality and prosperity, and stimulate economic growth that eventually can eliminate unemployment and various social problems (Ozaralli & Rivenburgh, 2016). The support of start-up entrepreneurial activities leads to the identification of economic development opportunities (Hefferan & Fern, 2018). Unfortunately, compared to the number of growing start-up companies, there are many more start-up businesses that fail to maintain continuous operations. This creates investor pessimism in start-up investments as they are considered to be very high risk. It was shown that in Southeast Asia, about 70% of start-up companies fail within 20 months of receiving their initial round of financing (CB Insight, 2020). This problem needs to have sufficient attention and be examined carefully so that an impactful solution can be found. A solution should be proposed that not only builds up interest in entrepreneurship but also makes start-up businesses more resilient. Despite the high failure rate, there is still limited research in this specific area. Emerging economies do not have enough basic information to formulate effective programs and policies to address this issue.

Another important element to better understand start-up entrepreneurship is its contribution to local economic development. Only a few studies discuss the true effect of entrepreneurial activity on local and regional economies (Lupiañez, Priede & Lopez-Cozar, 2014). Limited data for local economic development indicators have long been barriers to finding conclusive information. The explanation of how start-up businesses develop local economies is still lacking in clarity and is hard to measure, therefore leaving a gap of knowledge in the field for years (Gonzalez-Sanchez, 2015). The contribution of entrepreneurship is hypothetical and lacks a critical analysis of the current situation. It has attracted scholars' attention to figure out how start-up

businesses contribute to local economic development, especially because they are booming in emerging economies where they play a critical role in entrepreneurship ecosystems (Salamzadeh, 2018).

This research aims to explore barriers to start-up entrepreneurship and its contribution to local economic development in emerging economies based on previous literature and surveying credible secondary data. This study is useful for governments, start-up companies, economists, investors, and stakeholders who have an interest in helping with start-up business development in order to aid local economic development. This study can serve as data for a baseline to formulate appropriate and impactful strategies for governments to increase the effectiveness of local economic development policies and programs by supporting start-up companies around the world. This study enriches the literature about scalable start-ups and local economic development, especially in emerging economies. The following sections presented are the literature review, methods, a discussion of start-up barriers, the contribution of start-ups to local economic development, and the conclusion.

## **2. Definitions and Brief Background**

### **2.1. Start-up Companies**

Numerous studies have come up with their analyses on what factors contribute to entrepreneurship success and failure (Abd Rani & Hashim, 2017; Duchek, 2018; Hsu, Wiklund, & Cotton, 2017). However, start-ups are considered as different from companies in general. Blank and Euchner (2018) suggested that there are actually six types of start-ups: lifestyle, small business, scalable, buyable, social, and inside a large company (Abdelnour, 2020). This study focuses on scalable start-ups, which have been defined by Blank as start-up companies that are established not merely for the purpose of earning a living, but rather in order to create brand equity, generate significant income, and eventually be publicly traded or acquired when the valuation has increased. He further stated that scalable start-ups are the types of start-ups that are primarily discussed in the literature.

Other researchers, Kolosok and Koniukh (2017), defined scalable start-ups as companies that have an accumulation of resources and that are newly established to introduce new technological developments as their market entry strategy. Start-ups are at early stage of business so they need substantial support due to their having a relatively high risk of failure. The authors

conclude that scalable start-ups can be defined as start-ups that are potentially and intentionally established to become large corporations by introducing an innovation to the market. According to the Indonesia Digital Creative Industry Community (2018), there are six stages of start-up growth, defined by valuation. Table 1 summarizes the classification of start-up companies based on their valuation.

Table 1: Classification of start-ups by valuation

| Stage     | Criteria                                |
|-----------|---|
| Hectocorn | Reaching valuation of USD \$100 billion |
| Decacorn  | Reaching valuation of USD \$10 billion  |
| Unicorn   | Reaching valuation of USD \$1 billion   |
| Centaur   | Reaching valuation of USD \$100 million |
| Ponies    | Reaching valuation of USD \$10 million  |
| Cockroach | The earliest start-up stage             |

Source: Indonesia Digital Creative Industry Community (2018)

## 2.2. Local Economic Development

Local economic development is a development of capacity that expands economic actors' capacity (Feldman, Hadjimichael, Lanahan, & Kemeny, 2016). Furthermore, it is explained that locals and governments must work together in order to achieve sustainable economic development. This fosters economic benefits and improves living standards. Local economic development aims to utilize existing local resources, namely physical, human, and institutional resources.

Van Holm (2017) explained that the core of local economic development is based on increasingly developing local capabilities or endogenous development. In other words, it is the utilization of local factors for locally based development. On the paradigm of thinking and acting, local economic development is positioned as a community-based planning with the aim of empowering, reducing state interference, and planning in favor of the local people's interests. The outcome of economic development can be measured quantitatively and qualitatively. Economic development is considered more as a long-term investment that will positively affect income per capita and distribution of income as well as quality of life and environment.

## 2.3. Emerging Economies

Emerging economies are defined as countries that adopt economic liberalization as the main engine for rapid economic growth and have institutional voids that increase the risk of doing business (Banalieva, Tihanyi, Devinney, & Pedersen, 2015). Emerging economies primarily refers to rapidly growing developing countries that are believed to soon be joining the group of developed countries. Based on their latest economic track records, emerging market economies in 2019 included the following countries:



Figure 1: Emerging market economies in 2019

Source: Focus Economics (2019)

Figure 1 shows that emerging economies are mostly found in Latin America, Eastern Europe, Sub-Saharan Africa, Asia, and MENA (Middle East and North Africa). It also shows predicted GDP growth rate by emerging countries, where India, the Philippines, and China have become the best three performing emerging countries based on GDP growth. There are many versions of emerging economies lists developed by institutions such as the International Monetary Fund (IMF), Dow Jones, FTSE Russell, and Colombia University EMGP.

### 3. Barrier of Scalable Start-up Entrepreneurs

Kolosok and Koniukh (2017) also conducted a similar study using Ukrainian start-up companies funded by the Kraft Stock Company as research subjects. The research aimed to

understand barriers of start-up companies in the country and their analysis showed that Ukrainian start-ups did not receive any support from their government. This lack of government support caused start-up companies in the country to seek start-up facilities in other countries to incubate their start-ups. In the end, they relocated their businesses to other countries. This phenomenon is known as business migration. Ukrainian start-up entrepreneurs migrated to other countries because they provided them with business incubation facilities that included free office space, mentoring, opportunities to meet investors, R&D funding, and visas, thus increasing their start-up competitiveness. Meanwhile, the sponsoring country gained benefits from investment opportunities, taxes, and jobs for their citizens. Start-up companies in Ukraine also faced the problem of high taxes. Small start-ups had limited ability to pay taxes but the government did not provide incentives and treated them the same as larger companies. This left them without the ability to pay taxes. Another problem of start-up development in the country was the lack of venture capital firms. Because VC firms did not have analysts with sufficient ability to evaluate start-up business plans, entrepreneurs were less motivated to introduce their ideas to the market due to the difficulty in finding investments.

Awatara, Hamdani, Fatonah, Susila, and Gunardi (2018) conducted a study on the internal problems of start-up entrepreneurs in Indonesia through a questionnaire, documentation, and interviews. Financial issues were reported as the main problem for start-up companies. It was a significant cause of frustration for start-up entrepreneurs regardless of the source and amount of financing required. Scalable start-ups in Indonesia lacked assets. They were unable to apply for bank loans because they did not have collateral. Despite the fact that the Indonesian government had grants and funding programs for start-up companies, they were highly selective and needed a long time to liquidate due to complicated bureaucracy. This led start-ups to the only funding solution which was personal loans. Many start-up companies put up their home mortgage as collateral to fund their start-ups, creating immense psychological pressure and jeopardizing their families' financial security. Lack of managerial experience also contributed to negative cash flow in start-up operations. This happened because their distribution systems were not strong enough to achieve the companies' targets, they had poor sales performance, and late payment from customers made start-up operations unstable, and it was hard for them to grow. Respondents from the study suggested that government grant information should be widely available and clearly communicated to the public. The limited transparency and information about when and how

government grants are accessed was blamed as negatively affecting start-up development in the country.

Lack of funding and government support was again found to be the most significant barrier to start-up entrepreneurs in Ghana (Enniful, Boakye-Amponsah, & Nduro, 2016). The research utilized a survey as a data collection method, obtaining information that 62% of graduates from the graphic design faculty at Takoradi Polytechnic did not seek jobs after they graduated and were highly motivated to start their own business. However, some hurdles remain. Besides the lack of funding and government support, the respondents also believed that lack of awareness about opportunities, lack of managerial skill, fear of failure, inappropriate training, family pressure, non-existence of role models in the industry, and finally lack of exposure were also barriers to start-ups in their country.

Table 2: Perceived barriers to start-up business

| Statements                                  | Rating  |      |                  |      |             |      |
|---|---------|------|------------------|------|-------------|------|
|   | Barrier |      | Somewhat Barrier |      | Non-Barrier |      |
|   | Freq.   | %    | Freq.            | %    | Freq.       | %    |
| Lack of funding                             | 84      | 62.7 | 32               | 23.9 | 18          | 13.4 |
| Lack of awareness about opportunity         | 35      | 26.1 | 58               | 43.3 | 41          | 30.6 |
| Lack of government support                  | 66      | 49.3 | 37               | 27.6 | 31          | 23.1 |
| Lack of managerial skill                    | 39      | 29.1 | 52               | 38.8 | 43          | 32.1 |
| Fear of failure                             | 45      | 33.6 | 39               | 29.1 | 50          | 37.3 |
| Inappropriate teaching in the course        | 25      | 18.7 | 53               | 39.6 | 48          | 35.8 |
| Fear of losing investment                   | 38      | 28.4 | 48               | 35.8 | 48          | 35.8 |
| Family pressure                             | 13      | 9.7  | 50               | 37.3 | 71          | 53.0 |
| Non-existence of role model in the industry | 16      | 11.9 | 39               | 29.1 | 79          | 59.0 |
| Lack of exposure                            | 28      | 20.9 | 53               | 39.6 | 54          | 40.3 |

Source: Enniful et al. (2016)

Another study by Hazudin, Kader, Tarmuji, Ishak, and Ali (2015) on small business start-up motives, success factors, and barriers also revealed several barriers faced by scalable start-up entrepreneurs in Pahang, Malaysia. A Chi-square test was used to analyze responses from 150 start-up entrepreneur respondents. The research revealed that barriers to operating start-up



companies include business malpractice, corruption, and lack of experience and skill competence in running a business. It was therefore difficult for them to build their company. Governments should support the development of start-up companies, mainly because technology development is costly and requires government assistance for enhancing the financial and technical ability of industry.

#### 4. Scalable Start-Ups' Contribution to Local Economic Development

There are several ways scalable start-up entrepreneurs contribute to local economic development in emerging economies: through development of financial measures, local labor markets, local businesses, local economic cooperation, and environmental sustainability.

##### 4.1 Development of Financial Measures

Scalable start-ups need investment to scale up. As previously explained, they are typically established for such a purpose. They are therefore prone to becoming an investment opportunity for venture capital firms to generate income. They receive increased investment and finally become a main contributor for economic growth and development. Figure 2 shows details of venture capital investment in emerging economies by sub-region in 2017-2018. Based on a survey by Preqin (2018), since 2017, emerging countries successfully secured 1,168 deals with venture capital firms. The total investment value had reached an aggregate value of US \$13 billion. The largest portion went into the South Asian region (including Southeast Asia).

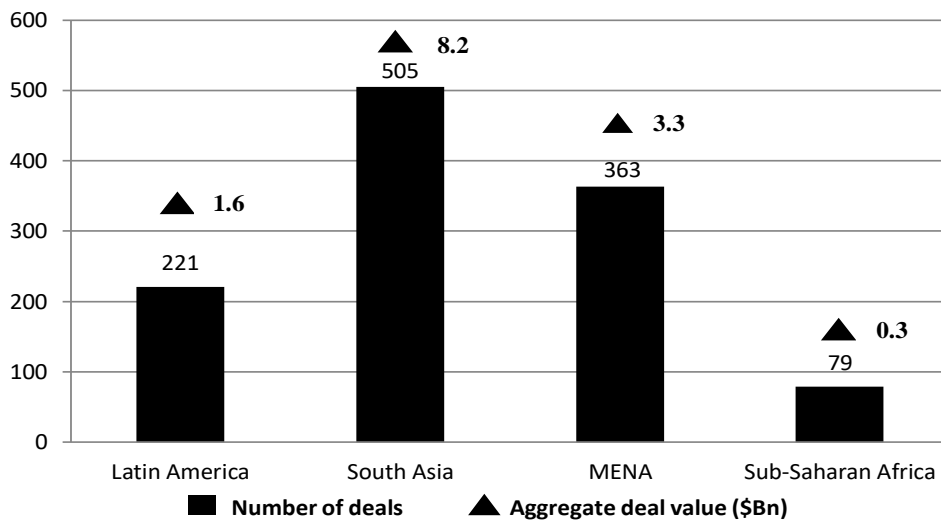


Figure 2: Venture capital deals in emerging economies by sub region, 2017-2018

Source: Preqin (2018)

Start-ups contribute by increasing regional investments that eventually lead to an increase of GDP per capita. Gregova and Dengov (2016) explained that Slovakia—as one of the most attractive emerging economies in Europe—supported start-up development, helping the country to recover its economy. Start-up companies that come up with innovations and plan to go global, becoming behemoths like Google or Microsoft, eventually want to act as global change makers. This is beneficial to elevate a country's economy to the global scale and ultimately attract more foreign exchange, strengthening the local currency's value in the global financial market.

The same phenomenon occurs in Indonesia, the biggest sharia market in the world. Barata (2019) figured out that IDR 3.90 trillion investment in sharia E-commerce start-ups could increase national economic growth by 0.048%, or IDR 5.08 trillion. Based on the latest e-Economy South East Asia (SEA) report released by Google, Temasek, and Bain & Company (2019), Indonesia's Digital Economy reached US \$40 billion (IDR 560 trillion). The figure increased more than five times from US \$8 billion in 2015. The largest contributor to e-economy in Indonesia came from Indonesian start-ups. The Minister of Communication and Information Rudiantara said that the start-up economy in Indonesia would reach US \$130 billion in 2020. This means that the start-up economy would contribute 11% of Indonesia's GDP (Rahman, 2019).

#### 4.2 Development of Local Labor Market

Scalable start-up entrepreneurs offer a solution or innovation that attracts investors to come and invest in them. The investment is then used to build up their company and increase working capital. In order to expand their operations, scalable start-up companies increase recruitment and therefore can create jobs for local people and reduce poverty in emerging economies. In India, start-ups are expected to help governments eradicate unemployment. In 2019, the number of start-up companies in India increased by 1,300 to about 8,900-9,300 start-ups. The jobs created by start-ups there had reached an estimated 60,000 direct jobs and 130,000-180,000 indirect jobs (Nasscom, 2019). Start-ups contributed 2.64% of total jobs created in India and by the end of last year were projected to create 200,000-250,000 more jobs by next year (Santosdiaz, 2020).

The job creation of start-ups in Indonesia is not very different to that in India. A total of 55,903 jobs were created by 992 registered start-up companies in 2018 alone. Well-managed start-ups have a high opportunity to grow and therefore can be a driver of employment in emerging

economies (Indonesia Digital Creative Industry Community, 2018). Furthermore, it is stated that the Indonesian government targets the unemployment rate which is now at the level of 5% to decrease to the level of between 3% and 4% in 2024 through the development of a start-up ecosystem. Gojek is one of the most famous start-up companies in Indonesia that has now become a unicorn start-up. Established in 2010 as the first technology start-up company that provides an online transportation booking platform, Gojek employed 4,000 people in 2019, rapidly increasing from only 200 employees in 2015 (Reily, 2019).

Start-ups also play a major role in transforming the labor market, fostering technology innovations that stimulate the job market to be more effective and efficient. Start-up companies in emerging countries propose a revolutionary solution in the way people look for jobs and employees. A very good example comes from Vietnam as one of the upcoming emerging economies in Southeast Asia. JobHopin is a Vietnamese jobsite start-up with the ambition to provide solutions for Southeast Asian people to seek a matched job easily, proposing a matching platform called Bunny. It aims to help people in Vietnam to find a good job by pairing them with the best job that suits them using machine learning. Successfully raising US \$2.45 million in Series A financing in 2020, JobHopin has proved that its platform is dependable for job seekers, especially during the COVID-19 pandemic. The crisis has opened up a large opportunity for them to scale up because people are preferring to stay at home for their health and safety, therefore pushing people to adopt technology transformation in recruitment faster. About 79% of millennials apply for jobs online and about 90% of job interviews are being conducted online (Nguyen, 2020). Start-up entrepreneurs act as change makers that provide technological solutions to develop local labor markets to become more borderless. They also open the border for foreign companies and employees to enter, thus making the region more international.

#### **4.3 Development of Local Business**

The emergence of start-ups can push incumbents to become more efficient and innovative in order to survive, because start-ups usually come with new solutions to satisfy customers by evaluating gaps in needs that are not being met by other producers. Finally, start-ups can add a larger variety of products and services to the market and can accelerate structural change for the sake of regional development and competitiveness (Gregova & Dengov, 2016). When Gojek Indonesia opened its first online taxi service in 2010, incumbents such as traditional taxi providers

were not mentally ready and went on strike to demand government help in regulating their new competitors. But now all transportation providers are permitted, it somehow motivates traditional taxi providers to evaluate their business model and customer service quality (Silalahi, 2019). Start-up entrepreneurship development should be focused on innovation development and infrastructure. In support of local start-up creation, locally engaged young entrepreneurs should get training and education from the government or a relevant organization so they have the required skills to survive. This training and education can be handed down to the next generation and finally it increases human capital in the region (Martins, Abreu, & Calado, 2019).

In the most successful Asian emerging economies such as China, start-ups help the marketing of local products, even acting as the main driver of local product exports by connecting local producers to the world market. Alibaba.com became a global role model for e-commerce start-ups on how to scale up. Alibaba.com provides a marketplace platform that connects Chinese local producers to the world. Its subsidiary, Taobao.com also helped local farmers in rural villages to sell their products online during the COVID-19 lockdowns. Taobao.com has about 50,000 rural live-streamers in 2020 and plans to increase up to 200,000 within the year. Start-up video platforms have digitalized farmers' behavior; where they used to sell their product offline, now 90% of them have switched to online selling (Hao, 2020). Online trading brings more efficiency as it eliminates the expensive and time-consuming process of travelling. The digital trend, if it is well adopted by local businesses, can increase local economic competitiveness.

#### **4.4 Development of Local Economic Cooperation**

Start-up companies are a major source of innovation for large corporations. It is highly efficient and effective for large corporations to adopt an open innovation strategy, which provides opportunities for collaboration between start-ups and large corporations. Start-up companies have trending technology while large corporations have financial resources and market knowledge to support mass production. The collaboration helps to maintain companies' long-term growth and renewal (Kohler, 2016). Kohler further proposed the corporate accelerator concept to bridge the gap between start-ups and large corporations. The concept of the corporate accelerator refers to the idea of a program of limited duration where large corporations provide mentoring, education, and other specific resources to support a group of start-up companies. The final output of this program is to enhance innovation processes and produce impactful innovations that bring benefits

to society. Large companies take advantage of start-ups' new inventions through patents. In order to implement effective corporate acceleration programs, large corporations must align their program goals and objectives with the start-ups' expectations.

One good example of this practice is provided by Bank Rakyat Indonesia (BRI). As one of the biggest government owned Indonesian banks, BRI is committed to developing collaborations with start-up companies, especially in the financial technology industry. BRI acquired patents for an innovative product named PAYFAZZ in collaboration with PT Payfazz Teknologi Nusantara, an application that empowers smartphone users, especially in rural areas, to have easy access to BRI services. Through this application, people can register themselves as agents without an office, open basic saving accounts, withdraw money, apply for micro credit, and make multipurpose payments and transfers. The work mechanism offered by BRI has successfully attracted many positive responses from start-ups in recent years. BRI launched its annual program and competitions such as the BRI Hackathon Digital Challenge 2019. This program aimed to develop an open banking product or BRI digital platform named the BRI Application Programming Interface (BRIAPI). Start-ups were asked to submit their proposal and after a tight selection process, selected start-ups were fully accommodated and mentored to produce innovation according to their plan. BRI also launched BRI Ventures which is ready to provide funding for start-ups of up to 250 million US dollars (Desrianto, 2019).

Bruse, Böhmer, and Lindemann (2016) proposed a well-known collaboration scheme which is called the Disruptive Innovation Strategy. This idea promotes cooperation between two or more companies in the same industry. Exchange and unification of technology innovation becomes a primary motive; hence a stronger business model can be found. In order to determine a particular type of cooperation between start-ups and other companies, a strategic classification has to be made. This cooperation can be long-term and lead to the establishment of a new company. Another researcher, Klimczuk-Kochanska (2017), argued that there are three ways that start-ups can collaborate with larger corporations in the agricultural sector. Firstly, larger corporations act as accelerators, providing incubation and venture capital bridging services to develop the start-up innovation. This cooperation can lead to more long-term commitments and the development of brands in the market. The start-up founders' capacity can also be developed by mentoring and supervision. Secondly, start-up companies already hold the patents for their innovations and therefore the cooperation is in the form of co-development and co-branding. In order to do this,

start-ups must bring the solution to a certain level of technology attractiveness to satisfy the larger corporation. Thirdly, the larger corporation invests in or acquires the start-up.

Start-up companies expect access to resources such as interaction opportunities with business experts, executives, and decision makers as valuable opportunities. This helps them to acquire the required resources and complementary assets to scale up the start-up business when they join a corporate acceleration program (Vanhaverbeke, 2017). Start-up companies also believe that by joining the program, their corporate credibility and visibility is boosted. It will impact the start-up's brand image and thus it could increase customers' trust in the product. When customers trust the company, the likelihood of making purchases is higher. Trust is important because marketers usually need to educate customers when marketing new inventions and therefore, they demand higher cost and effort than marketing regular products. Market access becomes a major concern for start-ups when collaborating with larger corporations. Start-up companies also want sponsorship from corporate accelerators because they believe that they have stronger distribution channels to market their product. Lastly, they also expect a funding opportunity to expand the business. Steiber and Alänge (2020) explained that start-up companies often need more research, development budgets, and infrastructure to finalize their product invention but felt reluctant to sell their discoveries. They believed that once the product was finalized, they could gain long-term profits from the patent. Therefore, the patent approach is essential when designing collaborations between start-up companies and large corporations, as it is perceived as fair and mutually beneficial to both parties. Most start-ups expect ownership of their invention because fresh ideas are valuable assets to sustain their business model.

Local economic development not only requires the involvement of private companies but also necessitates government support. Start-ups can cooperate with governments to foster digital development in a country. A good example is Omise, the premier online payment provider start-up in Thailand. The company collaborates closely with the Bank of Thailand as a primary regulator for payment gateways. The collaboration supports Thailand 4.0, a new value based economic model that emphasizes R&D, information communication and technology development, creative thinking and innovation. An Omise product, called E-wallets, has replaced card transactions and has now become the 4<sup>th</sup> most popular payment method in Thailand (Hicks, 2018).

#### **4.5 Development of Environmental Sustainability**

As the economies of emerging countries continue to expand, dealing with the classical issue of emissions control becomes a must. Environmental pollution has drawn global attention since it is heavily related to global warming that is ultimately disruptive to countries around the world. Emerging economies require specific attention from scholars because they are responsible for more than half of global emissions (Li, Xue, Truong, & Xiong, 2018). Honored as the biggest emerging economy in the world, China is also mentioned as the world's largest emitter of carbon dioxide (Zheng, Mi, Coffman, Shan, Guan, & Wang, 2019). However, China's government cooperates with both large corporations and scalable start-ups to push green innovation in order to cope with serious environmental damage. One of the initiatives is the Green Start-ups Accelerator, a Beijing-based environmental non-profit organization that aims to foster green entrepreneurship in China. Today, the Green Start-ups Accelerator has cooperated with more than 2,100 green start-up entrepreneurs in China, where 200 of them were mentored, representing 25 different provinces and autonomous regions in China. An investment of about 1 billion RMB has so far resulted in the reduction of 13 million tons CO<sub>2</sub>.

A hidden potential collaboration between countries and start-ups in dealing with environmental problems lies in the use of advanced technology. Collaborations between start-ups and large corporations are also possible to reduce the environmental risk from unstoppable manufacturing activities. This has been demonstrated by Jejak.in, a new Indonesian environmental start-up that successfully combined advanced technology, including drones, satellites, and artificial intelligence (AI) to monitor the environment. This invention is very beneficial for many businesses, for example providing reclamation guarantee in order to reduce carbon emissions in mining industry. Another project that has been successfully carried out by Jejak.in was planting trees in the upper reaches of the Citarum River. In collaboration with Danone Aqua, a large water bottle producer in the country, Jejak.in used new media to make the recording and processing of plant data more efficient. Danone Aqua now uses the Jejak.in platform for all of its factory locations in Indonesia. In business, any field that requires efficiency and sustainability can be worked on. By using Jejak.in, carbon emissions can be recorded, and then recommendations are made for reducing emissions in certain sectors using artificial intelligence. One policy that has potential is carbon credits. Carbon credits are a permit that allows countries or companies to emit a certain amount of carbon, but they can trade their credits if the allowable limit is not reached. Reducing

carbon emissions is important for cities that contribute high emissions, especially metropolitan areas like Jakarta (Aryanto, 2019).

## 5. Conclusion

Scalable start-ups have advantages and disadvantages. Judged as vulnerable types of business entities due to business failure rates, start-ups spur innovation. Their core value is to scale up and contribute to local economic development. The lack of financial resources, government support, opportunity awareness role models, and managerial skills, in addition to the fear of failure, family pressure, and ineffective entrepreneurship training, are common barriers to scaling up start-ups. Nevertheless, fostering scalable start-up entrepreneurship is strategically important for local economic development in emerging economies. Scalable start-ups can improve the financial condition of emerging economies by attracting local and foreign investment, as well as increasing consumption that will lead to an increase in GDP per capita.

Along with the growth of start-up companies, job creation is increased, improving the labor market. This is why governments in emerging economies are focusing on start-ups in order to reduce poverty and unemployment. Start-ups also change the way that job seekers and companies meet by introducing online recruitment and selection trends that are increasing in society. The existence of start-up companies also motivates incumbents to be more efficient and innovative. Furthermore, it helps traditional producers to sell their product to wider markets by offering platforms that can increase their competitiveness. The existence of start-ups is important because they act as potential strategic partners for large corporations and governments. Start-ups offer the infrastructure and innovation that bridges the gap between the country and the people. Moreover, start-ups are also able to help stakeholders deal with environmental issues by introducing technological innovations that can reduce emissions and waste, as well as inventing and commercializing sources of renewable energy.

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