Exploring key success factors of sustainable start-up business

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\begin{abstract}
This research aims at exploring key success factors of local start-ups in transforming social and environmental problems into opportunities to develop sustainable start-up business. To address the research objective, case study was conducted on two local start-ups that have successfully attracted the attention of large investors, namely Bukaloka and Gringgo. In-depth interviews were conducted with two start-up’s leaders/founders, four start-up’s consumers, and three co-working space managers. Several documents were also collected directly from the informants to support and validate the results of the interviews. Codes and
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themes were identified from the interview transcripts analysis, some significant quotes were then taken to support the analysis. The results show that there are five factors explaining local start-ups’ ability to transform social and environmental problems into business opportunities, namely: first, strong internal motivation of the founders to address social and environmental problems; second, founders’ experience; third, sound understanding of market responses; fourth, effective design thinking; and finally, effective product co-creation strategy. The five factors are interrelated, with the founder’s motivation factor being the foundation of the start-ups’ building block.

INTRODUCTION

The very fast penetration of information and communication technology (ICT), especially the internet, has an important role in changing business activities today (Kasali, 2019). Referring to the data presented by Internet World Stats (2021) on June 30, 2021, recorded internet users in Indonesia reached 212,354,070. With this number, internet users in Indonesia are in the third-largest position in Asia after China and India. Internet penetration rate reached 76.8% of total Indonesia population (Internet World Stats, 2021).

The high number of internet users and the level of internet penetration in Indonesia are supporting conditions for the development of various digital businesses. It is not surprising that quite a number of businesses are transforming from conventional businesses to digital businesses. Especially during the Covid-19 pandemic, where there are restrictions on human movement, a digital transformation is no longer an option, but a prerequisite to be able to adapt (Mahyuni, 2020; Rizhaldi & Mahyuni, 2021).

In addition to the transformation from conventional to digital businesses, we are also witnessing the emergence of quite a number of new start-ups. Start-ups are information technology-based companies that provide their services or products offline or online (Arjanti & Mosal, 2021). Until October 17, 2021, the number of start-ups in Indonesia reached 5,122 (Tracxn, 2021). When compared with the number of start-ups owned by various countries in the world, Indonesia ranks 5th country with the highest number of start-ups, after America, India, Britain, and Canada. (Startup Ranking, 2021).

The development of these start-ups occurs not only in big cities in Indonesia, but also in several other areas such as Makassar, Medan, Pontianak, and Bali. Bali has several start-ups that are developing, including Bukaloka, Bamboo Media, Medicall, and Gringgo.

Significant development of new start-ups from year to year is not without challenges. Quite a lot of start-ups have failed. According to Cbinside data published in 2017, nearly 70% of established start-ups failed. Cbinside also explained that 42% of the causes of start-up failures are that the start-up products are not needed by the market (CB Insight, 2018).
History has recorded that one of the companies that had been the market leader in the mobile phone industry for a long time, namely Nokia, ultimately collapsed due to failure to read and accurately meet market needs (Jia & Yin, 2015). The role of human resources is very vital in determining the ability of start-ups to understand market needs and offer products/services that meet market expectation (Tanjung & Pranatasari, 2018).

Failure to understand market expectations and deliver a product that is accepted by the market is a marketing problem that requires proper marketing strategy. Marketing strategy is a marketing mindset to achieve marketing objectives (Kotler & Keller, 2004). Marketing strategies in the current digital era have shifted, adjusting to market expectations. Kotler et al. (2016) argue that in the digital age, the marketing mix 4P (Product, Price, Place, Promotion) need to be redefined to 4C (co-creation, currency, communal activation, conversation), in order to produce products that consumers want and deliver them appropriately.

Given the huge potential for the development of start-ups in Indonesia and the challenges faced in being able to grow sustainably, research is needed to reveal the keys to success and causes of failure of start-ups in Indonesia. Studies related to the determinants of the success of start-ups have been carried out quite a lot in various countries (i.e. Abou-Moghli & Al-kasasbeh, 2012; Balboni et al., 2014; Dautzenberg & Reger, 2010; Groenewegen & De Langen, 2012). However, in the Indonesian context, not many scientific publications (i.e. Anggara & Anggadwita, 2018; Jaya et al., 2017; Ryan & Kodrat, 2018; Sari & Sitepu, 2016; Sitinjak & Sinaga, 2019) investigated the determinants of success/failure of start-ups as well as start-up strategies to be able to develop sustainably. The key to success for start-ups operating
in certain countries is not necessarily the same as those operating in Indonesia, given the differences in culture and market tastes. Indonesia still needs in-depth studies regarding the key to successful start-ups.

This research, therefore, fills the gap in the limited literature regarding the key to successful start-ups in winning the Indonesian market. While some of the previous studies focused on one of the critical success elements, such as the human resources factor alone, or conducted empirical testing of the impact of several factors on the success of start-ups, this research contributes to the literature and the world of practice by conducting an in-depth and thorough exploration of various factors explaining the success of start-ups in Indonesia. A qualitative approach allows obtaining a more comprehensive and in-depth picture of a phenomenon. In addition, this research also contributes to the literature by revealing how start-ups can build success by addressing socio-environmental problems. Thus, this study aims to explore the key factors determining the success of start-ups in transforming social-environmental issues into business opportunities.

LITERATURE REVIEW

Digital Marketing Strategy

Referring to the American Marketing Association's (2013) industry-centric definition, digital marketing can be viewed as the activities, institutions, and processes facilitated by digital technologies to create, communicate and deliver value for customers and other stakeholders. Kannan & Li (2017) argue that digital marketing is the process of adapting technology that enables companies to work with customers and partners to jointly create, communicate, deliver and maintain value for all stakeholders.

Along with the development of the business world in the digital era, digital marketing strategies also undergo changes and adjustments. Kotler et al. (2016) suggest changing the marketing mix strategy, from previously using 4P to 4C. The following is a further description of each of the 4C elements.

1. Co-creation

In the digital economy era, co-creation is a new strategy in product development. Through co-creation, customers are involved early in the design phase. Thus, the company can increase the chances of the success of a new product development. The co-creation concept also provides an opportunity for customers to customize and personalize products and services, so as to provide more value for customers (Kotler et al., 2016).

This co-creation concept is derived from the concept of value co-creation that has been developed previously in the business literature (Ranjan & Read, 2016). Value co-creation is defined slightly differently by various experts, but in general value co-creation means joint value creation efforts between consumers and companies, at various stages of production to consumption (Kohler et al., 2011). Ranjan & Read (2016) further identify two sub-dimensions of value co-creation, namely co-
production and value-in-use, which represent two important stages in which co-creation occurs, namely from the planning stage to production (co-production) and at the consumption stage (value-in-use).

2. Currency

The concept of pricing has also changed in the era of the digital economy, from standard prices to dynamic prices. With dynamic pricing, prices are set flexibly, depending on market demand. Dynamic pricing is nothing new in some industries, such as hospitals and airlines. However, as technology develops, dynamic pricing has been brought to other industries, such as online retailers who utilize big data analytics technology to offer customized prices for each of their customers. With the application of dynamic pricing, companies can optimize profits by charging different fees to customers based on purchasing patterns, needs, and other aspects of the customer profile.

3. Communal Activation

In the current era of the sharing economy, the concept of distribution has changed, from company-customer distribution to peer-to-peer distribution. This new type of distribution mode provides customers with much easier and faster access to products or services. Companies can facilitate access to the use of products or services that are not owned by the company, but are owned by other consumers. In this interconnected world, customers demand instant access to products or services. This can only be met appropriately and quickly by colleagues or people around the customer. This is the essence of communal or joint activation, where the needs of others can be met by the people around them.

4. Conversation

The concept of promotion has also undergone changes in recent years. In the past, the concept of promotion only applied in one direction, where the company conveyed a promotional message to customers as spectators. But with the presence of social media, customers can respond to promotions or advertisements that are displayed. Social media also allows customers to communicate with each other and discuss promotional messages or advertisements that are displayed to other customers. Customer feedback is very important. Some companies, such as TripAdvisor and Yelp provide a medium for customers to communicate about a brand, as well as provide an assessment and evaluation of the brands they have used.

Start-up

Ries (2017) defines start-up as “a human-made institution designed to create a new product or service in the midst of extreme uncertainty”. In contrast to small or micro-enterprises, start-ups tend to look for markets that do not yet exist, because they focus on problems that have not been solved or are not even realized by the community itself. The solutions provided by start-ups should have a big impact on society, so that these start-ups can grow rapidly in a short time.
Start-ups are closely related to innovation and risk. To solve the problems that have been happening, start-ups must make an innovation that can be accepted by the market or society. Milstein (2014) groups several risks faced by start-ups, namely: technical risk – related to product, customer risk – related to market, and business model risk.

In order to increase the chances of success of a start-up, Ries (2017) created a method called “Lean Start-Up”. The basic principle of the “Lean Start-Up” method is to optimize or utilize the available resources to produce products that are acceptable to the market. This can be achieved by conducting continuous product testing and improvement. Product testing provides more accurate information about customers’ expectations and evaluations of the products. The feedback obtained from product testing is then used as an input to further refine the product design.

The feedback cycle begins with initiating an idea to solve a problem. Before entering the production stage, the idea must first be tested to find out whether it is really needed and can solve the problem identified in the first step. Testing is carried out on potential users or early adopters who are expected to use a product or service. To carry out product testing, start-ups create prototypes that have the main facilities of the product or service they want to offer, often called the Minimum Viable Product (MVP).

The feedback obtained from MVP testing is then analyzed. Ries (2017) suggests the use the concept of “Innovative Accounting” measurement to measure start-up products. “Innovative Accounting” is carried out in three stages. First, using MVP to conduct product testing and obtain feedback data to assess the perceived benefits of the product. Second, start-ups make product or service improvements according to the feedback data they have received in the testing process. Third, start-ups make a decision on whether to continue with the improved product or taking a pivot. When a start-up has to choose a pivot, this indicates that the basic idea that has been tested with MVP has reached a point where there is no longer achievable growth on target. Therefore, start-ups must change their basic idea, so that their products become better and acceptable to the market.

RESEARCH METHODS

This research was conducted on start-ups in Bali that have been successful in attracting investors to provide funding. The research uses qualitative methods through in-depth interviews with relevant informants and documentation studies.

Interview recording data that has been obtained from informants was converted into transcripts to facilitate the process of summarizing/coding and categorizing/themeing (Saldana, 2015). Coding was done to reduce and select the data obtained into more concise and clear information. Each related code obtained was
grouped into one theme. Some relevant quotations were then taken to support the analysis.

The triangulation technique was applied to test the validity of the analysis results (Patton, 2014). This study used source triangulation, by comparing information from various informants, namely the startup’s CEO/co-founders, customers, and co-working space managers, as well as by comparing the information with relevant documentation.

ANALYSIS AND DISCUSSION

Description of Research Informants

This research was conducted on two different start-up companies operating in Bali, namely Bukaloka and Gringgo. Bukaloka is a start-up that integrates the marketplace with online store site creation services for MSMEs. In addition, Bukaloka also helps MSMEs in developing their digital business. Meanwhile, Gringgo is a start-up that focuses on efforts to address waste management issue in Bali.

The target informants in this study are the CEO or co-founder of each company, customers of each start-up and managers of supporting ecosystems, such as incubators, co-working spaces, and others. The duration of the interview was between 15 minutes to 1.5 hours.

The principle of anonymity was applied to this study, namely the principle that maintains the confidentiality of the identity of the informants who have participated. This was done to avoid bias due to informants’ doubt to provide sensitive information, or informants’ tendency to exaggerate information to create a positive impression (Rubin & Rubin, 2011).

To make it easier to process and recognize data from each informant, each informant is assigned a unique code. The following is the codes assigned for each informant:

<table>
<thead>
<tr>
<th>Code of informant</th>
<th>Code of research location</th>
<th>Code of informant type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK</td>
<td>Bukaloka</td>
<td>CEO/co-founder</td>
</tr>
<tr>
<td>GG</td>
<td>Gringgo</td>
<td>Customer</td>
</tr>
<tr>
<td></td>
<td>KM</td>
<td>Management</td>
</tr>
</tbody>
</table>

Here is how to understand the codes assigned to each informant, for example if the code is BKB1, BKB2, then the informant is customer (B) 1 and 2 of the Bukaloka startup (BK). To assist effective and efficient coding and themeing analysis, data was processed using MS Excel application.
Determinants of Start-up Success

This study indicates that there are five determining factors that influence the success of a start-up, namely strong internal motivation of the founder/co-founder of a start-up, experience of the founder/co-founder, sound understanding of market response, implementation of effective design thinking, and implementation of an effective product co-creation strategy.

Start-Ups Founder/Co-Founder Motivation

This study found that start-up’s founders have strong motivation to set up a start-up. Sardiman (2004) explains that motivation is a change in energy in a person which is characterized by the emergence of strong enthusiasm and is preceded by a response to the existence of a situation or goal. Start-up founders in this study acknowledged that their concern for the social and environmental problems they encountered drive their strong motivation to establish a start-up.

"We helped a lot of MSMEs to create websites. I identified a problem here. The website that we have created for them has never lasted more than a year, because they don’t know how to manage the website and they don’t have any idea about digital marketing" (BKA).

"The idea initially came from co-founder who has about 25 years experience in waste management. He invited me to join his waste recycle initiative. I agreed. Why we decided to address waste management issue? We see that this is a big industry and is definitely needed but people don’t see it" (GGA).

Start-up founders observe dan experience the social and environmental problems directly, and this drives their motivation to address the problems by setting up a start-up.

Start-Up Founders’/Co-Founders’ Experience

The ability to observe and identify social and environmental problems needs to be complemented with sufficient entrepreneurship experience so that the problems identified can be transformed into business opportunities. Kartajaya & Musrry (2018) argue that the competency to transform social and environmental problems into business opportunities is acquired through certain experiences in doing relevant business. Both of the start-up leaders interviewed have experience in running a business prior to establishing the start-up they currently manage.

"... from freelancer, finally making a small company with friends focusing on web design and development. We identified some problems experienced by our clients, then we decided to establish Bukaloka to address these problems and turn these into business opportunities " (BKA).
Experience in running a business is an important capital in designing and running a start-up. Wibowo (2012) suggest that experience is one of the factors that influences a person's performance in carrying out tasks in order to achieve organizational goals. Pramana & Mahyuni (2021) found that founder's business experience and competence play important role in developing innovative and creative culture and atmosphere of a start-up.

Without the entrepreneurial spirit, the company will not survive (Kartajaya, 2018). In 2007, there were about 637,100 new companies established in the United States, and as many as 560,300 companies closed their company operations, of which 28,322 of them went bankrupt due to the lack of entrepreneurial skills possessed (Hirai, 2010). This lack of entrepreneurial skills and experience is one of the explanatory factors why only a few start-ups are able to survive and thrive, while others die. Business experience and in-depth knowledge in a field are important enabling factors for a start-up founder to transform problems into business solution that meets market needs and expectations.

**Market Response**

All start-ups participating in this research are local start-ups operating in Bali and interact intensively with the Balinese people. The results of the analysis from interviews reveal that the characteristics of the Balinese people are recognized as quite unique and slightly different from other regions in Indonesia. Characteristics or people's mindsets that are different from those expected by start-ups are a challenge for start-ups. As revealed in the following interview excerpt.

"We interact directly with Balinese people. We understand their mindset. They want to be as successful as people living outside Bali, acquire hundreds of million rupiahs from the internet. However, they have ‘nak mula keto’ mindset. It's a kind of mindset that just follow the things that have been practiced from generation to generation. It's hard to push you to learn something new with this kind of mindset" (BKA).

"We offered some gifts to support this initiative, no one interested. Explaining to people about Gringgo and the waste recycling program is a bit difficult” (GGA).

The participants of this study have been trying to understand well the market response to the products/services they offer. Efforts made include direct interaction, communication and providing various incentives such as gifts. Even though they still face relatively low community support and enthusiasm, with a good understanding of the characteristics of the target market, efforts to overcome these challenges can be identified relatively well.

A sound understanding of the characteristics of the target market is very important in product design and manufacture. Product trials in the local market are needed to find out the market response. Start-ups must be able to analyze existing
problems and come up with ideas to provide solutions to these problems. One approach that can be applied by start-ups to address identified problems is design thinking method.

**Design Thinking**

Ramdhan (2017) explains there are five stages in applying design thinking, namely empathize, define, ideate, prototype, and test stages. Design thinking is applied to stimulate a way of thinking that inspires the emergence of new innovations in dealing with problems.

When the market response is different from what is expected, empathy is needed to be able to understand what a potential customer or user needs. The development of empathy in design thinking is needed to properly identify who the target of the start-up design is, what their problems are and how to solve their problems (Ramdhan, 2017). Observing what and how they do something, as well as how they interact will provide insights and clues as to what they really think and feel.

“We never know if we don't go to the field. To validate the market, we have to go directly. We'll see what the field looks like. We survey and we see” (GGA).

After gaining understanding of market desires and problems to be addressed, start-ups then need to formulate some solution ideas to overcome these problems. These ideas must be validated first. Start-ups generally create prototype of the solutions they want to offer. This prototype is then used as a testing tool to find out whether the market really needs the solution offered or not. As explained by one of the informants,

“We develop the software first, then distribute a survey to prospective users to get their feedback. We stop the software development if we don’t get any positive feedback” (GGA).

Product tests are carried out to assess perceived advantages and disadvantages of the solutions offered by start-ups, so that start-ups can create even better solutions. When the solution is not well received in the market, start-ups can minimize the expenditure of funds for product development and can use these funds for the development of other products that are actually needed by the market.

Product design is continuously refined until it is ready to be launched to the market. Appropriate strategy is needed to successfully enter the targeted market. Informants of this study have various strategies to introduce their products to potential users and customers, such as finding as many early users as possible and promoting the success of their products in overcoming problems faced by early users.

“In the first year we focus on finding as many users dan sellers as possible...then we showcase successful sellers that use Bukaloka platform so that we can convince others that Bukaloka is a very good marketplace” (BKA).
Product testing also aims to test product-market fit. Assessing product-market fit is very important to ensure that the products offered by start-ups could meet customers’ expectations (Ramdhan, 2017).

**Product Co-Creation**

To implement all the plans and strategies that have been designed, the right marketing tactics are needed. One component of marketing tactics is the marketing mix. The marketing mix in this digital era has shifted from the original 4P to 4C. There is one element in the marketing mix that has a very significant influence on the success of start-ups in realizing opportunities from social and environmental problems, namely product co-creation. This research only focuses on the product co-creation element in analyzing start-up marketing strategies.

Besides delivering useful products/services to consumers, start-ups also aim to provide solutions to consumers’ problems. Start-ups work in collaboration with their customers to create products with a higher value that meet target-market expectations.

One of the informants identified a huge market potential in the tourism sector in the Bali area. However, he realized that many of their clients find difficulties in harnessing this potential. They cannot market their products successfully in the tourism industry. To address this problem, their start-up then created a new marketplace feature that link to tourism services.

"We are still focusing on Bali to empower MSMEs in the tourism sector. Now, we create a new canal that provides tourism services" (BKA).

Informants managed to see existing opportunities and take advantage of unresolved problems, as well as provide solutions in the form of products or services. In developing new products or features that meet consumer desires, the participants admitted that it takes several times of testing and adjustments with consumers, until they finally find products or features that are really needed by consumers and could solve their problems. As revealed in the following interview excerpt.

"In developing a product, we test the product with customer A, not worthed, we test with customer B, not worthed, we refine the product and test with other customers, until we finally find a product that could meet customer expectation and could solve their problems, only then we develop a full version of the product" (GGA).

The implementation of product co-creation concept results in a product that could provide solutions to consumer problems, as well as allow consumers to create the products they want and use the features they need. Consumers can create their own products by customizing and personalizing product features. One of the informants (BKA) stated that their product can help their customers to create the website they
want in just a short time.

"The website can be made in less than 1 minute, it already has an online store system itself, complete with features, so it is very practical to manage" (BKA).

This statement is confirmed by their customers, “I’ve compared many website builders, Bukaloka is much simpler to use” (BKB3). On their start-up website, they also display several choices of types of websites that can be used by their consumers. So that consumers can use the product optimally, according to their needs.

In the VUCA (Volatility, Uncertainty, Complexity and Ambiguity) era, selling is "of the consumer, by the consumer, and for the consumer" (Kartajaya & Musrry, 2018). It is very important for start-ups to validate the relevance of the product, prepare an interesting story and let start-up’s consumers help selling it.

In addition to producing good products, start-ups must still pay attention to several other marketing elements such as price, place and promotion which shift to currency, communal activation, and communication. A good product will not be useful if there are no consumers who use it. There will be no consumers who are willing to continue using the product if it is not useful and fail to meet their expectation at an appropriate cost.

The three elements of the marketing mix other than product co-creation is beyond the scope of this research. Future research could further refine this research by including other marketing mix elements, namely price/currency, place/communal activation, and promotion/communication in investigating key success factors of sustainable start-up business.

**CONCLUSION, LIMITATIONS AND RECOMMENDATIONS**

This study aims to explore the key to successful start-ups in identifying and converting socio-environmental problems into business solutions, so as to produce products or services that are accepted by the market. Based on the results of the analysis and discussion, it can be concluded that there are five factors that explain the ability of start-ups to turn social and environmental problems into sustainable business opportunities, namely strong internal motivation from the founder/co-founder of the start-up, the experience of the founder/co-founder, sound understanding of market response, implementation of effective design thinking, and implementation of effective product co-creation strategies.

This research has practical implications for entrepreneurs. To be able to successfully establish sustainable start-ups, entrepreneurs need to have strong internal motivation to be part of the solution, entrepreneurial experience, the ability to understand social and environmental problems, and the ability to design
products/services collaboratively with consumers.

This research also has implications for the start-up business literature. To develop a more comprehensive sustainable start-up business studies, it is important to incorporate sustainable business studies and socio-environmental behaviour studies, besides technology application in business studies, into start-up business studies. This comprehensive sustainable start-up business studies could serve as a guidance for entrepreneurs in transforming socio-environmental problems into business opportunities.

This research used exploratory with a case study approach. Thus, even though this research offers an in-depth explanation of key success factors of start-ups in transforming socio-environmental problems into business opportunities, the results of this study might not be relevant to start-ups that have different nature from those investigated in this study. Future research could further explore the key success factors of various types of start-ups in capitalizing socio-environmental issues.

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