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Research Article

Marketing and Process Innovation: Case Studies of Thailand's Green Social Entrepreneurs

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Abstract

Innovation or a new method of implementing things is an integral tool for every organization, including social enterprises. In developing nations, it is necessary for innovations to be integrated in the social enterprise marketing and process (Distanont et al., 2019). The study aims to investigate marketing and process innovation, key practice, and challenges. To align with this objective, the study employed a qualitative research methodology using case studies of two Thai green social entrepreneurs, which met the criteria for social enterprises (i.e., strong environmental missions, eco-friendly products and production, sales activity in a marketplace), and were relevant to the study theme, which is use of marketing and process innovation to achieve their environmental goals. Findings reveal that the cases uniquely embrace innovations in their marketing mix including product, price, place, promotions), and process. The findings add to the knowledge base in this important field and provide guidance to future green social entrepreneurs on how to embed innovation into the implementation of marketing strategy and operations.

Keywords: Marketing Innovation, Process Innovation, Bio-packaging and Products, Green Social Enterprise in Asia

Introduction

In an era when firms have faced pressures from societal and environmental problems (i.e., overabundant waste, pollution, global warming, poverty and food shortages), and disruptive business change, it is inevitable that firms seek ways to respond to such challenges. Recently, the types of entrepreneurs that rise to deal with such pressure and change are social entrepreneurs. Based on Mair and Rathert (2021), social entrepreneurs are hybrid organizations with principal societal and environmental objectives and conduct entrepreneurial activities and profitability to support such social or environmental aims. Green social entrepreneurs, in particular, address diverse environmental issues, such as sustainable farming, waste management, renewable energy, and conservation (Williams & Gurtoo, 2017). Social Enterprises UK (2021) noted that 20 percent of social entrepreneurs in the United Kingdom are addressing the climate emergency as part of their core environment vision. The number of green social entrepreneurs, in general, is predicted to grow due to the intensity of the problems and increased

interest in (1) the Sustainable Development Goals (Moon, 2018), which are 17 global priorities for development to be achieved by 2030 (Apostolopoulos et al, 2018), (2) the circular economy (Lane & Gumley, 2018), which relies on the efficient use of goods to attain environmental benefits through eco-designing, repair, reuse, refurbishment, remanufacture, product sharing, waste prevention, and waste recycling (Crecente et al., 2021), and (3) the international climate change awareness campaign, such as COP26 (Social Enterprise UK, 2021). In Thailand, 25.3 percent (37 social entrepreneurs) directly address environmental problems relating to forestry, agriculture, environmental protection, and waste management (British Council, 2020).

Like mainstream entrepreneurs, social entrepreneurs also embrace innovation for both their marketing mix and process operations to increase sustainability and their competitive advantage in the marketplace. These two types of innovation allow a company to surpass 'all-too-common generalities' or stereotyped firm perception of achieving innovation, such as 'innovating to grow' or 'innovating to create value' (Pisano, 2015), and to create a sustainable competitive advantage. Additionally, innovation enables the enterprise to create, capture, and even scale social value for society as well

There are various definitions of innovation. According to De Chollet et al. (2021), innovation is the creation or implementation of something novel in terms of its new product features (Tohidi & Jabbari, 2012; Spychalska-Wojtkiewicz, 2017), sources (De Chollet et al., 2021), production methods (Ganzer et al., 2017), or trading system (De Chollet et al., 2021). There are also diverse forms of innovation, such as business model innovation and organizational innovation (Wang & Feng, 2020). Using green social entrepreneurs as the backdrop of the study, this study focuses on the implementation of marketing and process innovations as a tool for social entrepreneurs.

Given the context of social entrepreneurship with a focus on green industry, this study's main research questions are: "Which dimensions of marketing and process innovations were adopted by bio-focused social entrepreneurs? and "What are the key practices and challenges for implementing such innovations?" Using case study research, the study brings an in-depth description of the theoretical constructs about marketing and process innovation.

The study provides major contributions to both academic and business practice. For academic practice, it generates a new knowledge base in marketing and process innovations, specially tailored to social enterprise organizations. Beyond this, it also contributes to business practice through insights gained from the social entrepreneur on key practices and solutions when they face challenges and obstacles after implementing marketing and process innovations.

Accordingly, the major purpose of this paper is to investigate marketing and process innovation implementation, its key practices and challenges practiced by green social entrepreneurs.

Literature Review

1. Marketing Innovation & Process Innovation: Overview and Key Practices Within Social Enterprise Context

As observed by Spychalska-Wojtkiewicz (2017) and the Oslo Manual of Innovation (Oslo Manual, 2005), marketing innovations have recently been classified as one cluster of innovations generating a shift of product (design, packaging), pricing, distribution (including sales distribution and logistics), and promotions

(advertising, branding). In other words, it deals with an application of finding new methods of dealing with marketing mixes, namely product (Chakravarthy & Coughlan, 2012; Distanont et al., 2019), price (Maier & Dan, 2018), place (Distanont et al., 2019), and promotions (Maier & Dan, 2018). According to Chan et al. (2021), innovation for social enterprises particularly in art needs to emphasize innovative ideas for design and continuous research for new markets, find new approaches both in the product's consumer accessibility and two-way online communications through online, social media (such as Facebook and Instagram) and offline platforms. Srivetbodee et al. (2017) also observed that social entrepreneurs determine pricing that not only reflects the value of the products (i.e., value-based pricing, price discrimination), but also focuses on the target beneficiaries' benefits (i.e., microfinance, barter and pay-what-you-what pricing).

Meanwhile, process innovation is the modification and configuration of the existing internal process operation and service delivery in order to reduce manufacturing costs, increase production efficiency and manufacturing quantity, as well as promote environmentally friendly production (Lager, 2002; Bergfors & Larsson, 2009; Thomas, 2011; Shahid et al., 2020). For instance, firms induce process innovation by integrating technology to better streamline the production line and operational process. Similarly, firms adjust product ingredients (e.g., from non-bio to biomaterial) so that either direct or hidden costs can be maximized. Moreover, green process innovation includes energy savings, pollution prevention, waste recycling, less toxicity, or even adapt components in product design and packaging to reduce unnecessary waste and ensure product lifecycle assessment practice (Huang & Li, 2017; Kuo & Smith, 2018). Yung and Zhao (2019) conducted research in Taiwanese eco-packaging manufacturers and found that they innovate their internal process by ensuring their packaging products are printed on recycled paper with low energy use.

Literatures also highlight key practices of implementing marketing and process innovation, which are the owner's knowledge, partnership, and technology adoption. First, the owners need to have a resourceful knowledge on the core product offering so that they could understand how to innovate more adeptly and efficiently (Kuo & Smith, 2018; Zhou et al., 2021). Zhou et al. (2021) found from their empirical research with Chinese green enterprises and saw the positive relationship between CEO education background and the enterprise's green innovation level. In other words, the CEO with suitable education background is inclined to move the social enterprise towards green innovation. Second, partnership is the enabler for social enterprise's innovation. Hence, sharing resources, such as skills and knowledge, among the partners and integrating the local knowledge with a novel management system is important (Huang & Li, 2017; Distanont et al., 2019; Tortia et al., 2020). Faludi (2020) and Le and Ratten (2021) also observed that digital technology, such as artificial intelligence technology and mobile application platform, enable social entrepreneurs to innovate how they develop their new product or service, expand as well as communicate to their market and the targeted beneficiaries more efficiently.

2. Challenges and Obstacles in Implementing Marketing & Process Innovation

Unanticipated external and internal events, such as resistance to change from either from employees (Abbas et al., 2017) or stakeholders

(Newth & Woods, 2014), often intervene when there is something new on organizational and technological change. Of all parties aforementioned, consumer unwillingness to change is prevalent as a key challenge in implementing marketing and process innovation. The challenge, based on the observation of Roundy (2017) lies on educating the potential users about the benefits of social enterprise's eco products and creating a demand for these products instead of non-sustainability ones. By doing this, Domegan (2021) mentioned that for wider customer engagement, digital technologies including mobile technology, text messaging and virtual reality, contribute to positive behavioral change outcome for green innovations.

Berkes and Davidson-Hunt (2007) also mentioned another challenge prevalent in community social enterprise is diversity in the interests and conflicts during the period of marketing and process innovation implementation. Particularly in the crisis such as Covid19 pandemic, the challenge will be manifold. For instance, employees and stakeholders will become more careful on reaching decisions. Other challenges found include limitation on funding capital and resources (Weerawardena & Mort, 2012), which trigger social entrepreneurs to exercise collaborations and other revenue generation, such as crowdfunding.

According to the British Council (2020), social enterprises in Thailand face obstacles in running their business, mainly due to poor cash flow (34.3 percent), insufficient capital (debt/equity) (23.3 percent), and a lack of understanding or awareness of social enterprise among the general public and consumers (22.6 percent).

Methods

This research employs a qualitative research methodology using case studies in an inductive inquiry and to extend the academic literature with respect to marketing and processing innovation, key practices, and the challenges faced by social entrepreneurs. A case study approach was deemed suitable because it could assess and explore contemporary issues within a real-life context (Yin, 2003). This is because few studies in the social enterprise context have examined the issues in marketing and processing innovations. Purposeful sampling, a sampling method which selects the sample based on its alignment with the characteristics of the researched topic, was done with two social entrepreneurs. Semi-structured in-depth interviews with a chief executive officer from each of the green social entrepreneurs were conducted in December 2019. The sessions lasted from 45 to 60 minutes. Interview questions cover and discuss around such topics as what their marketing and processing innovations are, whether the organizations faced any challenges in driving innovation, and what their future plans are towards achieving marketing and process innovation.

The study consists of three phases: (1) a literature review as a foundation and to guide the interview questions, (2) interviews with key executives from the two selected green social entrepreneurs, and (3) a content analysis (i.e., considering the frequency of words and phrases). The literature review phase follows Flick (2007) and Strauss and Corbin (1998). The interview compiled with the norms and procedures of qualitative research (i.e., asking for the informed consent of the interviewees, providing the research protocol, and audio-recording of the interviews if consent is obtained from the informants). In addition to the

interviews with the green social entrepreneurs, secondary data from third-party sources, such as media interviews, news coverage, trade magazine articles, documentaries, and websites, were collected to corroborate the information from the interviews. This is aligned to Leeming (2018) that stresses the importance of drawing on theoretical concepts for shaping qualitative data. Once data were compiled, the frequency of words and phrases were traced and matched with common themes in a content analysis. Insights additional to those gleaned from the literature review underwent further analysis.

Case Selection and Description

The two Thai social entrepreneurs were chosen for two reasons. First, they met the criteria for social entrepreneurship (mainly having a social mission, selling products or services in a marketplace, and using innovation to achieve their environmental goals). Second, they have a distinct focus on being environmentally friendly in their industry. The organizations were TP Packaging, which manufactures industrial biomaterial packaging, and Kid Kid Co., Ltd., which is in the product design and green consultancy industry. Brief descriptions of the two cases are given below.

TP Packaging is a social entrepreneur that manufactures packaging from biomaterials with eco-friendly production methods. It makes innovative food contact paper using new biomaterials and new product types to serve the market demand. Its current products include plates, bowls, trays, cups, and packaging components. The packaging is creatively designed in a uniquely Thai pattern with motifs such as banana leaves and chickens. The organization's production processes are certified as following Good Manufacturing Practices or GMP.

Kid Kid is a social entrepreneur that produces eco-friendly products and acts as a consultant for environmental development with respect to product and packaging design, innovation, and technology. Recently, the organization launched a digital mobile application called Ecolife to instill an understanding of environmental conservation among Thai university students through the use of cartoons and incentives from partnered vendors. The application has more than 50,000 active users from 50 universities, leading to significant reductions in carbon dioxide emissions.

Research Results

Both TP Packaging and Kid Kid innovate at various levels: marketing and process innovation. They are also exemplary social entrepreneurs in which key practices, challenges, and solutions are clearly witnessed.

1. Marketing Innovation

1.1 Marketing Innovation in Product

Findings from two cases corroborate with Chan et al. (2021) in the way that both cases have strived in product mix innovation in terms of new product development, product design and product line proliferation. In the case of TP Packaging, natural materials, such as sugar cane, banana leaf, and lotus leaf are adopted to produce bio-foam. The entrepreneur also sought ways to add value to product lines by inventing a bio-degradable rice straw and protein-enriched flavored spoons for young consumers to acquire sufficient protein nutrients. Such product innovation in the form of bio-foam packaging, as the interviewee answered, helps increase inventory space by four times compared to non-bio foam packaging. Moreover, product scopes are not limited to the food industry,

but expand to other industries, such as automobile (car assembly parts), manufacturing (air filters), agriculture (bio-degradable plant pots), and cosmetics (bio-bottles). The statement below from the founder reinstates the product mix innovation:

Bio-degradable materials are so versatile in usage and functionality. That is why we try to expand the usage of bio-degradable materials to other industries, not just the food industry, with innovation and added value to its product line.

Kid Kid has come up with creative ideas to transform simple products, such as transforming a traditional loincloth, a Thai woven fabric inspired by Thai chess (Sadsunk, 2015), into a designed product with a more sophisticated usage. The product, called a 'loincloth lamp,' undergoes a creative idea generation and production process by laminating the cloth so that it does not burn easily when used as a lamp. This interview excerpt highlighted such issue:

Before we start any new project, we need to think of how the products solve environment and community problems. For example, our loincloth project makes our team think outside the box on how this traditional fabric could turn into a designed product with incremental value.

1.2 Marketing Innovation in Price

Both firms employ value-based pricing, in which the products are priced based on the value perception of customers. In value-based pricing, the products are priced based on the value perception of customers. Although the price is set higher than normal non-eco products, a number of customers are willing to pay for the products as they recognize the product's societal value. In the interview with TP Packaging executive, pricing model has been innovated through a credit card payment method. This method helps prevent the debt problem for distributors who want to order bio-packaging but face issues regarding investment and operational capital. This credit card payment method provides access for food retailers and stallers to purchase bio-packaging products. The participating merchants can also use this as evidence for future bank loan applications.

1.3 Marketing Innovation in Place/ Distribution

Like other business organizations, Kid Kid uses e-commerce website to sell eco-designed products to both Thai and international clients. Meanwhile, in the case of TP Packaging, the firm initiates a virtual warehouse model with a central information system to connect information to the destination hub of each distributor store. The warehouse model could detect which merchandise items run out of stock and predict the approximate merchandise number in each location for more efficient inventory management. The founder highlights the background of a virtual warehouse project:

In our distribution innovation project, we are proud of the introduction of the virtual warehouse model. We try to reduce the problem of bio-foam stock replenishment among our distributors via a peer-to-peer distribution concept. Our merchandise distributors are built as a community with information updates on stock which they can use to monitor and exchange the stocks.

1.4 Marketing Innovation in Promotions/ Communications

Promotional mix innovation is also demonstrated in the way that TP Packaging used the content and channels. Creative promotional messages, such as a carbon footprint scheme to promote eco-awareness among the public, are also disseminated in the case of TP Packaging. As for Kid Kid's innovation on communications platform, the firm pioneered in gamification using

mobile application technology in order to instill environmental consciousness in an appealing way among university students. Such communications platform is called 'Ecolife' in which consumers can build a land of their own with properties and cartoons accumulated when they can reduce plastic usage, such as a bag, straw, utensil and cup. This playing mechanism allows them to scan the eco-points at the participating supermarkets, department stores, beverage retailers, and universities and use them in the platform.

2. Process Innovation

Both firms practiced process innovation. In the case of TP Packaging, the production relies on existing the knowledge base and the technological platform to produce bio-foam. However, the founder does not limit new material usage (such as cassava, rubber, and soybean meal) and technology given that new materials and technology yield good performance and are easy to discover. Similarly, in the case of Kid Kid, production needs to respond to environmental and community concerns. For instance, product design needs to decrease natural resource usage as much as possible, reduce carbon footprint, promote streamlined logistics, aim for biodegradable disposal, recycling, maintenance, and reuse. This also allows the firm to leverage the price to be more accessible to eco-minded consumers

I always debrief with the production and the design teams on how eco-design can reduce unnecessary costs. This is important because we can reduce the price mark-up if our costs are reduced. For example, when we design wood products, we can use a mixture of wood and other natural materials so that both natural resource usage and production costs could be decreased.

Key Practices in Implementing Marketing and Process Innovation

Consistent to the literature, both owners of green social entrepreneurs possess strong knowledge which leads to the practices in implementing innovations. The CEOs exhibit strong passion in environmental fields and has an education background that is relevant to the core product offerings. For example, the CEO of Kid Kid has an educational background in product design. Thus, product design is emphasized as the firm's competitive advantage (i.e., designed product, consultancy services). The interviewees also demonstrate the daring to change and overcome failure. For example, even though the Carbon Footprint initiative was not well recognized among users and restaurant owners, the founder does not feel discouraged and strives to think of new campaigns or projects to address environmental concerns.

Both social entrepreneurs also embraced technology in innovating their marketing and process operations. Material and printing technology for bio materials are used by TP Packaging. As for Kid Kid, technology was integrated in both their product development and digital communications, as evidenced by the launch of Ecolife mobile application to raise environmental awareness among Thai university students.

Key practices also include partnership with stakeholders such as media, private firms, universities, and vendors. Both green social entrepreneurs have given media interviews (i.e., local newspapers, magazine articles, TV documentaries, and social media) to disseminate their background, the environmental problem they are tackling with, their solutions, and their future plans.

In addition to what was found in the literature, another influencing factor that drive innovation is to determine the target customers and understand what they truly want. This is particularly true in social enterprise context in which their products are sold in the market with other market players. The entrepreneur from TP Packaging observed:

We need to present the clear benefits that our customers will get from buying our packaging, such as an increased sales volume from health-conscious consumers who prefer to buy food in biomaterial packaging rather than plastic foam packaging. Just informing people about how packaging is good for the environment is not enough to convince them to buy biomaterial packaging.

Challenges and Obstacles in Implementing Marketing and Process Innovation

Customer perception is what the interviewees viewed as the key challenge. In the case of TP Packaging, the challenge is the mindset of merchants, who at the beginning, are concerned with profitability and are unsure of the bio-foam benefits. The concrete solution is to offer them clear benefits of bio-foams that the bio-foams increase sales volumes of food dishes sold in their restaurant. The vendors could understand that paying for bio-foam carton at the price of 4 baht is of better value than paying for traditional foam carton at the price of 0.50 baht.

I believe that food merchants/stallers are the major segments of bio-foam users. If this group could shift from plastic foam to bio-degradable foam, the rest of the users and consumers would change. Consumers, such as office workers, might not have the choice of bio-foam because of the lack of accessibility created by the merchants/food retailers that they buy food from.

As for the challenge in Kid Kid, customer perception hinders the innovation implementation. This was expressed by the executive mentioning. As he informed, Thai customers often perceive those eco-products as more expensive than non eco-ones. The underlying challenge is how to make the customers realize the value of eco products. He, however, noted that this situation has been better at the time being when customers have become more conscious on environmental issues and most of them are willing to pay a premium to buy green products.

I think communications is very important in instilling a sense of environmental awareness to people. We always use publicity to promote the message of eco-awareness directly to people who are our TV fan clubs.

Implementation of marketing and process innovation is not a bed of roses. The obstacles as shown in the two cases and literature review include access to resources (i.e., production planning knowledge, communications tactics to the target market and investments) compared to mainstream business organizations.

Table 1 A summary of findings

	TP Packaging	Kid Kid
Marketing innovation		
Innovation in product	-Innovative bio-packaging materials, such as sugar cane, banana leaf, and lotus leaf -Adding value to product lines (e.g. bio-degradable rice straw and protein-enriched flavored spoons for young consumers to acquire sufficient protein nutrients)	-Creative ideas to transform simple products to a sophisticated value-added product (e.g. a lamp made from loincloth, a Thai woven fabric inspired by Thai chess (Sadsunk, 2015)
Innovation in pricing	Credit card payment method	Value-based pricing (setting the price based on customer perception of value, which is rather different from green social entrepreneurs dealt with designed products
Innovation in distributions	A virtual warehouse model (a central information hub for vendors to check the stock lists)	E-commerce website
Innovation in communications	Creative promotional messages in its carbon footprint scheme	Gamification in Ecolife mobile application
Process innovation	Not limited to new material usage (such as cassava, rubber, and soybean meal) and technology	Product design needs to decrease natural resource usage (e.g. biodegradable disposal, recycling, maintenance, and reuse
Key success practices	-Strong passion and education relevance of an owner -Daring to change and accept failure -Applying technology and innovation in its bio packaging materials and printing technology -Understanding the target customers -Partnership with stakeholders (media, food vendors)	-Strong passion and education relevance of an owner -Daring to change and accept failure -Applying technology and innovation in its communication (Ecolife mobile application) -Partnership with stakeholders (media, vendors, universities)
Challenges and obstacles	Customer perceptions (the mindset of the food vendors) Access to knowledge resources (i.e., production planning, communications tactics to the target media)	Customer perceptions Access to resources compared to mainstream business organizations

Finally, the results from this research have similarities with the findings from other studies on green social entrepreneurs. For instance, Charles (2019) found that five green social entrepreneurs in Tanzania in the waste industry relied on marketing, networking, and appropriate technology. Similarly, the key challenges were the negative perceptions of their stakeholders. Other good practices incongruent to the findings of this study include engaging, supporting, and developing the skills of the waste pickers. In addition, two key practices from three social enterprises in Kenya (Panum et al., 2018) were their entrepreneurial capabilities and close interactions with local stakeholders.

Conclusion and Discussion

From the findings, this study supplements and challenges academic knowledge in innovation in social enterprise marketing (i.e., product, price, place, and promotions) and process operations. Congruent to the literature, the two cases exemplify the new product development (i.e., variety in creative product design). Pricing emphasizes the social value by either launching an initiative credit card payment method to street food vendors or value-based pricing to target at middle-income customers who realize the value of eco-products. Additionally, process innovation aligns with the literature review in the way that it finds alternative methods for using materials (from non-bio to bio-degradable materials) and uses less natural material to reduce environmental costs. What is challenging in the findings and the literature review is that the cases utilize and apply modern technology into marketing mix innovations. Examples include a virtual warehouse, an e-commerce website, and mobile technology with gamification.

The research yields benefits to two diverse groups, namely policymakers and social enterprise marketers. Policymakers may also view the findings as applicable in their national policy design. When the government urgently faces diverse social problems, helping social entrepreneurs and other types of societal sector organizations achieve their societal objectives is crucial. The ways to foster innovation, according to the matrix provided by Edler and Fagerberg (2017) that is suitable to Thailand's context, are to provide direct support for the firms' research and development, and innovation, promote an innovation network cluster across industries (i.e., commercial, social, charitable organizations), formulate public procurement criteria to purchase from innovative firms, and offer innovation inducement prices. This recommendation is important because green social entrepreneurs, according to this research's findings and literature review, need to build a robust network as they have limited resources compared to mainstream business organizations.

The findings also revealed interesting inspirations for social enterprise marketers to foster a new method of conducting marketing and operations continuously. One prominent challenge in putting bio-products and packaging into practice is the difficulty in communicating societal value (i.e., value to environmental conditions, value to society and community) to end-users and distributors. The promising signs of environmentally friendly innovation in packaging is an increase in bio-related patterns of consumption behavior (Vernuccio et al, 2010). Along with the hurdle in informing customers on the benefits of innovations in products, customers also found price as an influential factor to not purchase bio-foam packaging, which is four times more expensive than traditional foam packaging. This finding aligns with the empirical findings from Abbas et al. (2017) which found price was significant in consumer

acceptance to buy innovative smartphone products in Pakistan. Furthermore, social entrepreneurs should grasp the benefits of digital communication platforms (mobile applications, social media, Second Life, which is a digital virtual platform where users could simultaneously collaborate, share, and exchange trade (Mbunge et al., 2021) (Manuel, 2019; Srivetbodee et al., 2017).

Both cases also come up with new products to offer varieties and grasp selling opportunities to the market. As they need to compete in the market, understanding the real needs and pain points of customers is indispensable. It is therefore recommended that in innovating their products or services, social entrepreneurs should embrace co-create and collaborate new product ideas (More, 2020) from customers and related parties, such as the beneficiaries, the venture capitalists (if any), and the public.

Innovations generated by social entrepreneurs should be scalable in terms of social value generation. The more innovation the entrepreneur creates with marketing and production, the more impact the products will have on industry and society. For instance, in TP Packaging, innovations are added to the non-food industry, such as automobile, manufacturing, and even cosmetics. Given that the enterprise could reduce a significant monthly amount of plastic waste disposal at 500,000 units (compared to yearly plastic waste disposal of Thai consumers at 2,000,000 tons) (Thailand Environment Institute, 2021), the impact on other industries would yield a significant environmental impact. Nonetheless, the case findings also signal that social enterprise marketers should ensure that their segmentation, targeting, and positioning strategy is clearly defined and that they invest moderately before they implement marketing actions.

As the term suggested, marketing innovation needs to integrate advances in science, technology, or engineering into its marketing application. The two cases interviewed illustrated how they administered their current technology application into their marketing mix. For instance, mobile marketing is adopted in the marketing communication mix in the case of Kid Kid and virtual warehouse software is exercised in the distribution channel marketing mix in the case of TP Packaging. The findings also suggest that there is a link between applying technology and key practices by green social entrepreneurs in implementing marketing and process innovation, Hence, it is advisable that social entrepreneurs should embed the latest technology, such as artificial intelligence (AI), cryptocurrency, and machine-to-machine (Internet of Things) into key innovation types as appropriate. This is in sync with the latest findings from Ungerman, et al. (2018). For instance, social entrepreneur marketers might embrace augmented reality into service process delivery to customers. They can use virtual reality (VR) glasses for customers to preview the designed bio-products and bio-packaging products. Likewise, cryptocurrency, such as Bitcoin and Libra, might be used to introduce a new auxiliary pricing format.

Finally, apart from bringing passion to the business, social entrepreneurs should not miss the important ingredients, that is marketing and process innovations, to make their business sustainable in the long run. As the social entrepreneurs point out, business is relentlessly changing and solely doing good might align with social priorities, but it is not sufficient in sustaining a successful business.

The results from this study, nonetheless, came from two cases, so are not representative of social entrepreneurs in general. To justify the findings, further research on this theme of marketing and

process innovation could explore other green social entrepreneurs.

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