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The Impact of Disposal Behavior on Business after the COVID-19:

A Preliminary Holistic View of Thai Business

ผลกระทบของพฤติกรรมกำจัดต่อธุรกิจหลังโควิด-19: ภาพมุกกว้างเบื้องต้นสำหรับธุรกิจไทย

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บทคัดย่อ

บทความวิชาการฉบับนี้มีวัตถุประสงค์เพื่อทำความเข้าใจว่าวิกฤตที่เกิดจากการระบาดใหญ่ของการแพร่ระบาดไวรัสโควิด-19 ส่งผลกระทบต่อพฤติกรรมของผู้บริโภคอย่างไร โดยกล่าวถึงผลกระทบที่อาจเกิดขึ้นจากผลกระทบเหล่านี้ต่อธุรกิจหลังการแพร่ระบาดของไวรัสโควิด-19 เพื่อตอบวัตถุประสงค์ของบทความนี้ การทบทวนวรรณกรรมเชิงพรรณนาเกี่ยวกับพฤติกรรมการจัดถูกนำมาทำความเข้าใจในช่วงต้นของบทความ หลังจากนั้นได้ทำการค้นหาคำตอบที่เกี่ยวข้องและข้อมูลเกี่ยวกับพฤติกรรมผู้บริโภคในช่วงวิกฤตการแพร่ระบาดของไวรัสโควิด-19 และแนวโน้มพฤติกรรมผู้บริโภค บทความฉบับนี้ชี้ให้เห็นถึงความสัมพันธ์ระหว่างพฤติกรรมการจัดที่ระบุในบทความและผลกระทบที่อาจเกิดขึ้นของการแพร่ระบาดไวรัสโควิด-19 ต่อพฤติกรรมเหล่านี้ นอกจากนี้บทความนี้ได้แสดงให้เห็นว่าพฤติกรรมการจัดส่งผลกระทบต่อโอกาสทางธุรกิจและการดำเนินธุรกิจที่ยั่งยืน

คำสำคัญ: การแพร่ระบาดของไวรัสโควิด-19, พฤติกรรมผู้บริโภค, พฤติกรรมจำกัด, ธุรกิจ

ABSTRACT

This academic paper aimed to reveal how the COVID-19 pandemic impacted consumer behavior by considering the possible effects of these impacts on business after the COVID-19. According to the aforementioned purpose, the literature on disposal behavior was reviewed. After that, relevant articles on disposal behavior and information of the consumer behavior and trend during the COVID-19 pandemic were explored. This paper demonstrates the relationship between the disposal behavior described in the literature and the possible impacts of COVID-19 on the disposal behavior. Furthermore, it revealed that the disposal behavior impacted business opportunities and sustainable business operation.

Keywords: COVID-19 pandemic, Consumer Behavior, Disposal Behavior, Business

Introduction

Consumer behaviors are essential influencers of sustainable economic, business practices and business model solution (Kamkankaew, 2020). Its influence occurs in all stages of consumption, from purchasing goods and services (Aydinlioglu & Gencer, 2020). Like acquisition and consumption, disposal behaviors are also considered a step of consumer behavior and are seen as a sustainable consumption practice. In addition, disposal behaviors

are essential in sustainable development due to climate changes in recent years (Dogan, 2020). The extension of the life cycle of materials has been pointed out as an alternative to reduce the economic, environmental, and social impacts of the current economic system's production systems and consumption practices (Starostin, Samokhodkin & Elzon, 2020).

The global crisis caused by the COVID-19 pandemic underscored the need for business and consumer practices that consider impacts on sustainability (Ali *et al.*, 2021). Many Researchers; Butu *et al.* (2020) Jezewska-Zychowicz, Plichta & Krolak (2020) Qi & Ploeger (2020) Moon *et al.* (2021) Yuan *et al.* (2021) Zhong *et al.* (2021) pointed out that the reduction of biodiversity may favor the emergence of new pandemics. Furthermore, the crisis also had consequences in the economic and social spheres (Moon *et al.*, 2021). The measures are taken worldwide to contain the pandemic resulted in negative impacts on the Thai economy and the income of the Thai population (Kunpluem, 2020; Kamkankaew, 2021) with a strong effect in Thailand, Social behaviors were also impacted. There was an increase in the number of consumers who prefer to direct their resources to businesses in their community in collaboration with regional development (Yuan *et al.*, 2021). There was also an increase in the distribution of spontaneous income to those most affected by the crisis through donations and collaborative networks (Aydinlioglu & Gencer, 2020; Dogan, 2020; Ali *et al.*, 2021).

From a business point of view, the change in consumption practices and patterns creates a favorable environment for new business models. There is a need to re-adapt the proposal to create and deliver value for the existing business models, in line with the new post-COVID-19 reality (Songsraboon, 2020). Factors such as intensive use of technology, concern for sustainability, financial restrictions in public and private spheres, changing in customer needs, both in B2B and B2C businesses, generate substantial impacts from a managerial and business points of view, making it an essential field for researches (Aydinlioglu & Gencer, 2020; Dogan, 2020; Starostin, Samokhodkin & Elzon, 2020; Ali *et al.*, 2021; Butu *et al.*, 2020; Jezewska-Zychowicz, Plichta & Królak, 2020; Qi & Ploeger, 2020; Moon *et al.*, 2021; Yuan *et al.*, 2021; Zhong *et al.* (2021).

In this paper, the disposal behavior becomes even more relevant because the practice has effects on either the economic, environmental or social dimensions. Disposal practices can reduce the volume of discarded material and extend product life, reducing the use of new raw materials (Laitala, 2014). Disposal practices involve monetary benefits to consumers, increasing, generating new business and employment opportunities, and reorganizing the value chain (Sarigöllü, Hou & Ertz, 2021). The idea of disposal encompasses

the prospect of disposing of a product. Academically, the concept is treated more broadly and defines various behaviors as linked to disposal as well as contemplating studies from Laitala, (2014) Cruz-Cardenas & Aravalo-Chavez (2018) Gilal *et al.* (2019) Phulwani, Kumar & Goyal (2021) that focused on the meaning of possessions, the purpose of disposal behaviors and disposal channels. Most of the research on consumer behavior focused on the product acquisition stage and on the considerations and processes that determine how consumers make purchasing decisions and peripherally treating the disposal behavior or even ignoring it (Taufik *et al.*, 2020). Despite the growing number of studies related to disposal behavior (Islam, Dias & Huda, 2020), there is a lack of studies aimed at systematizing consumer behavior regarding the disposal of products described in the literature.

In this paper, there was an academic gap to be filled and related to the studies of discarded consumption behavior and the possibility of a relevant managerial and social contribution in the analysis of this theme applied to the current moment. Thus, the present study sought to answer the following research question: how did the crisis generated by the COVID-19 pandemic has impact on consumer discard behaviors? In addition, an attempt was made to discuss the possible effects of these impacts on the post-COVID-19 businesses, focusing on sustainability issues.

Disposal Behavior and Sustainability

The consumption process consists of a sequence of behaviors before, during and after the purchase (Nenckova, Pecakova & Sauer, 2020). The post-purchase stage consists of consumer behaviors related to the use, care and maintenance and disposal of the product after use (Sarigollu, Hou & Ertz, 2021). Therefore, disposal can be understood as the final part of the consumption cycle.

From the point of view of the life cycle of materials, the disposal ends a cycle of use and can mean both the end of the useful life and the reinsertion of the materials in a new cycle of use. New used cycles extend the life cycle and reduce the withdrawal of raw materials from nature, resulting in preserving ecological systems and reducing environmental impact (Gilal *et al.*, 2019). The production of new products generates externalities such as emission of polluting gases, emission of solid waste, water, energy, and land use. Added to the impacts of production are those generated by logistics, transport and distribution, which result in the use of fossil fuels and emissions of polluting gases, among others (Zhang *et al.*, 2020). Thus, the

behaviors related to disposal decisions have sustainable implications and are considered as a dimension of sustainable consumption.

In the sustainability area, Circular Economy is considered the most current economic system strategy for sustainable development and is based on closed cycles and the redesign of products and processes, seeking restorative practices (Nainggolan *et al.*, 2019). In the Circular Economy, the recovery and regeneration routes are mainly focused on the recirculation of post-consumer materials through 3 principles: reduction, reuse and recycling (Testa, Iovino & Iraldo, 2020), all of which are impacted by disposal behaviors. Abuabara, Paucar-Caceres & Burrowes-Cromwell (2019) mentioned the opportunities to reduce the environmental impacts which were i) the production of products with higher quality and, consequently, a longer useful life, ii) the reduction of the disposal in landfills and iii) the increase in the market demand for used items.

In addition, the consumer can be highlighted as an essential factor in sustainability strategies to the extent that he actively participates in several stages of the consumption chain: in the acquisition of goods and services, influencing production practices and models; in the maintenance of the goods, aiming at their durability and reuse and in the correct destination of the residues and goods after their use (Ratner *et al.*, 2021). The consumer's decision on the destination of the products after the cycle of use is articulated with other consumption behaviors and impacts the purchase process of other products (Testa, Iovino & Iraldo, 2020). The decision on disposal is a consumer's personal choice since the destination of the products for the different disposal channels results from their assessment (Nainggolan *et al.*, 2019; Islam, Dias & Huda, 2020).

In terms of disposal behaviors described in the literature, there is a lack of clarity about the thresholds between one type of behavior and another, with overlaps and even the treatment of different behaviors as synonyms. In addition, the disposal behavior is understood as complex factor since it is often difficult to identify the final destination of the goods due to the prolongation of the products' life cycle (Phulwani, Kumar & Goyal, 2021; Sarigollu, Hou & Ertz, 2021). However, the repetition of certain definitions demonstrates a greater acceptance of specific aspects of each behavior, which allows the systematization of behaviors.

Consumer behavior concerning product disposal is exposed to macro and micro-environmental influences. Macro environmental influences are related to economic and cultural issues (Taufik *et al.*, 2020) and micro environmental ones to the family (Islam, Dias & Huda, 2020) and the physical environment around the consumer (Sarigollu, Hou & Ertz, 2021). The crisis caused by the COVID-19 pandemic changed both contexts. Thus, it is expected that it

has influenced the disposal behavior. Next, the changes caused by the pandemic and the measures of social isolation in the context and consumption behavior will be explored.

COVID-19 pandemic and effects on Consumption Behavior

The COVID-19 pandemic brought changes in the short and medium-term (Butu *et al.*, 2020). Many countries have opted for isolation or social distance measures in different degrees of severity and control (Zhong *et al.*, 2021). Several changes in the mode of consumption were noticed early in the period of social isolation (Starostin, Samokhodkin & Elzon, 2020). As consumers became aware of the potential of the pandemic, they developed reactions to defend themselves from perceived threats and, afterwards, regained control of lost freedoms (Aydinlioglu & Gencer, 2020). Consumers began to adopt new behaviors resulting from measures of social isolation and prevention of contagion. These behaviors have been transformed mainly by the imposition of stricter hygiene habits, the prohibition of agglomerations in public places and the temporary closure of non-essential businesses (Jezewska-Zychowicz, Plichta & Królak, 2020). One of the phenomena of social isolation was the increased use of technology for professional and social connectivity (Qi & Ploeger, 2020). Other changes in consumption habits were identified, such as the use of the internet for shopping, physical activities, work, education, health services, among others (Yuan *et al.*, 2021).

In addition to the significant health impact of the pandemic, COVID-19 has been having a considerable impact on the economy. In Thailand, macroeconomic forecasts point to a drop in GDP of -4.00% to -7.00% in 2020 (Bank of Ayudhya Public Company Limited, 2021). The scarcity can be seen the impacts of the economic recession of income due to unemployment and families without alternatives to generate income and means to support themselves (Bank of Thailand, 2021). This scenario requires actions to preserve capital and individual and family financial resources, resulting in conservative economic behaviors (Dogan, 2020). In this sense, it is understood that COVID-19 led consumers to change their consumption habits, prioritize essential and fundamental items, and decrease the consumption of superfluous items (Zhong *et al.*, 2021).

Consumers' perception of climate change and sustainability was also impacted by the pandemic leading people to change their lifestyle to reduce impacts on the environment. As a result, consumers are more open to the exchange of products and to the consumption of second-hand products (Aydinlioglu & Gencer, 2020), which affects the useful life of products,

disposal habits, and consequently on consumption habits. . There was also growth in the do-it-yourself movement (Zhong *et al.*, 2021). For example, social media mentions for painting and home renovations doubled in the first two weeks of March 2020, generating greater demand for the retail of household items (Starostin, Samokhodkin & Elzon, 2020). Finally, surveys conducted by Dogan (2020) and Moon *et al.* (2021) indicated consumer support for the local economy. They are more likely to buy from businesses in their regions or cities to strengthen them that they purchase from local producers or small producers will be maintained after the pandemic.

The consumption behaviors were affected by the COVID-19 crisis. From the literature of Laitala (2014) Cruz-Cardenas & Aravallo-Chavez (2018) Gilal *et al.* (2019) Huang *et al.* (2019) Islam, Dias & Huda (2020) Nenckova, Pecakova & Sauer (2020) Taufik *et al.* (2020) Zhang *et al.* (2020) Islam, Dias & Huda (2021) Islam, Dias & Huda (2020) Paço *et al.* (2021) Phulwani, Kumar & Goyal (2021) Sarigollu, Hou & Ertz (2021), these papers had been analyzed and synthesized the concepts of disposal behavior in the literatures. From these papers, the eight types of disposal behavior were found and were presented in the theoretical framework together with possible effects of COVID-19 on these behaviors, which was shown in figure 1. The possible disposal behavior effects of COVID-19 were suggested based on the reading of the management issues analyzed.

1. *To give*: Behavior that does not result in obtaining financial gain on those who are discarding the product. The behavior of giving can be confused with that of giving or receiving. Its main objective is to target individuals with close ties, especially family and friends. Concerning sustainability, consumers connected to fashion and concern with sustainability issues are more likely to give their clothes to family and friends.

2. *To donate*: It is one of the most cited disposal behaviors in the literature. Its main characteristic is transferring to a stranger, with charities, secular or religious, being the most cited destinations. Donors are not profitable with the donation, but charities can either pass on donations to the final beneficiary or sell them for financial return, directing the money raised to meet other demands. Although profit is not an objective of the donation, donors may receive indirect financial benefits, such as tax rate rebates, and the reasons for the donation may not. The donation occurs through several means: the delivery of empty bags in neighborhoods for later collection with donations, in a community, reverse logistics model; from collection through charity trucks; and deliveries in clothing and banks, thus avoiding reverse logistics problems.

Clothing is more likely to be donated if delivery locations are within walking distance of their homes, suggesting that convenience may be an essential factor in this behavior.

3. *To return*: Understands the moment when the product returns to its origin, either by checking benefits in policies or programs of return or when receiving a gift that, for some reason, needs to be returned. The literature indicates that return behavior takes place through two main aspects: returns following the exchange policies and return programs that aim at the reverse logistics process. Return behavior can be caused by unwanted gifts or purchasing products that does not meet consumer expectations or needs. In addition, it can be carried out through recycling programs, in which the consumer returns the product to the retailer to perform the correct disposal. Returning behavior impacts on the acquisition process - the easiness to return to retail based on credit, refund or exchange policies in the store influences provide the consumer with greater security in the acquisition and can result in buying surplus products - and other disposal behaviors - for example, can reduce donations to charities.

4. *To store*: Lending behavior occurs when another person is allowed to use a product for a specified period, returning to the owner at the end of that period. There is a prevalence of behavior in articles on the loan of children's products, the divestment practices of children's articles, as cribs, toys, clothes and others, are also seen as a way of transmitting values to the children, in order to show them that if the object has no more functional value, it must be passed on. Different channels discard the meanings attributed to children's items. The products chosen to be loaned to other families were those listed with great personal significance and high value for other families, with the return of the product being a condition.

5. *To throw it away*: It is used to maintain or store objects outside of use and linked to different motivations. It might be associated with attachment by a person who offered a gift or associated with an identity you want to keep. It may precede other disposal behaviors, as it helps to weaken the link between the subject's identities concerning the object's detention. The practice presents a paradox: there is a way out of circulation of possession, but its owner keeps it with him.

6. *To re-gift*: When a friend, neighbor or family member receives a gift passed on with status again, the recipient is unaware that he is a representative. An increase in the behavior of re-gifting for economic and financial issues can be

expected. On the other hand, issues of hygiene and social distance can inhibit this practice.

7. *To reuse*: Reuse occurs when a product is modified to be used in another way or for another purpose. Reuse is a way to extend the life of products before they are recycled or disposed of permanently. The transformation of clothes into rags is an example, in addition to the customization of garments. The adaptation of objects for other purposes is also a found manifestation of reuse behavior, such as old garden furniture that is transformed into decorative items or reused toothbrushes for domestic cleaning. As a result, reuse increases the proper life cycle and postpones the entry of the product into the destination cycle for solid urban waste. Materialistic consumers are prone to reuse, find new uses for products, and avoid discarding throwing them away.

8. *To recycle*: Recycle refers to using the raw material of the product to produce a new product. Recycling can be seen as a counterpoint to the behavior of throwing away. Some studies even consider that all behaviors other than throwing in the trash are considered recycling. This makes recycling be used as a more comprehensive disposal behavior, including others. Use of the product's raw material to transform it into another product or the same product for another use, of the same or lower category, resulting in the extension of the useful life of the raw material. An increase in recycling behavior within households is expected due to economic and financial restrictions, both for transformation into a lower and higher category. For example, we are transforming used pillowcases and T-shirts into masks or floor cloth. It is observed that, in general, an increase in most disposal behaviors is expected due to the financial crisis, conservative behavior in spending and use of resources and feeling of solidarity. Barriers to movement and movement, the risks of social contact with other people and concerns about product hygiene, which can lead to contagion if infected, can be identified as barriers.

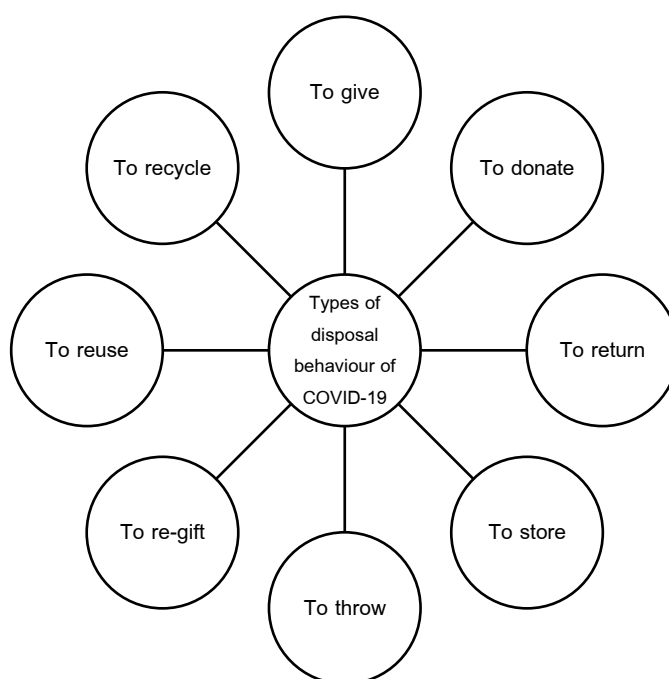


Figure1: Types of disposal behavior of COVID-19

Source: Authors

Disposal Behavior Impact on post-COVID-19 for Thai businesses

The eight types of disposal behavior collected beyond the level of the consumer which have been synthesized by the literature of Laitala (2014) Cruz-Cardenas & Aravalo-Chavez (2018) Gilal *et al.* (2019) Huang *et al.* (2019) Islam, Dias & Huda (2020) Nenckova, Pecakova & Sauer (2020) Taufik *et al.* (2020) Zhang *et al.* (2020) Islam, Dias & Huda (2021) Islam, Dias & Huda (2020) Kamkankaew *et al.* (2021) Paço *et al.* (2021) Phulwani, Kumar & Goyal (2021) Sarigollu, Hou & Ertz (2021). The disposal behavior impact on post-COVID-19 of consumer effect on the Thai business operation in during COVID-19 epidemic. Businesses are being challenged by changing consumer behavior. Consumers' post-consumer behavior certainly affects the transformation of business practices. Businesses need to understand the changes. The eight types of disposal behavior, the new issues are important that businesses must to learn for adaption to increase the capability of the organization. Thus, the main effects observed in the post-COVID-19 business models due to changes in consumer disposal behavior are described below (see in figure 2), discussed, and, in some cases, suggestions are made for the economic recovery after the health crisis.

1. Digitalization of the economy: The restrictions on travel and social contact, a consequence of the pandemic, lead consumers to seek alternatives for maintaining social connections, with the adoption of digital environments as a solution. In Thailand, there was an increase in virtual platforms and solutions, including an acceleration of digitalization. This shift from the physical to the digital environment had the effect of transforming consumption habits, such as using the internet for shopping, physical activities, education, and leisure, among others. Consequently, there is the consolidation of businesses that already operated on digital platforms and the migration of resale businesses and donation and sharing initiatives to this environment.

2. Do-it-yourself movement: Consumers are more likely to buy second-hand items or reform existing products and goods. The production of content is presented to add value to the business. In addition to the sale of the product, the sale of products for maintenance and renovation, as well as online tutorials for the cleaning, maintenance and recovery of products already purchased, may prove relevant for consumers, strengthening the brands and justifying the creation of info products that can be marketed, such as e-books and digital courses, among other formats. Therefore, businesses can add digital services to consumers, taking advantage of a greater digital connection to the public.

3. Partnerships and support for homemade solutions: With the emergence of solutions that dialogue more closely with the needs of consumers triggered by COVID-19, partnerships and co-creation can also be rethought given disposal behaviors. In the case of partnerships, the association between brands and marketplaces stands out, in which brands can at the same time sell used items, monitor the life cycle of their products, have information about consumers and strengthen their brand, associating themselves to sustainability on brand, and the brands themselves can support with the knowledge or close partnerships with influencers who manufacture homemade solutions with recipes that retake advantage of products and waste that would be definitively discarded.

4. New consumer movements, new business models: In addition to adapting existing businesses, there is also room for creating new business models. A growing share of consumers wants to direct their financial resources seeking local prosperity, motivated by solidarity, a fertile field for business. Existing movements, but still unusual, can also inspire new businesses. It is the example of low consumerism, which preaches the conscious consumption of less quantity of goods of more outstanding durability, or whose consumption causes less possible environmental impact, even after its useful life.

5. *New business models from waste*: With social isolation and movement restrictions, professional and educational activities were moved to homes, displacing garbage and waste production. Consumers became more aware of their waste production. Allied to the growing concern with environmental, economic and social sustainability, in this context, actions and businesses that aim at the collection, recycling and reuse of household waste are gaining strength. One of the products developed during the pandemic was a gel alcohol dispenser made from recyclable materials.

6. *New circular economy proposals*: The pandemic exposed weaknesses in the current economic system, strengthening the Circular Economic as a proposal to recover the economy aligned with sustainability. The challenges imposed by COVID-19 from the Circular Economic, indicating that this direction's actions will be increasingly common. Circular Economy dialogues with disposal behaviors while observing the entire life cycle of products, seeking the lowest possible generation of waste, in addition to extending the life of goods already in circulation. Its bases focus on replacing and reducing materials in production, materials recovery (reuse for resale, repair, renovation, reconditioning and manufacturing and reprocessing, upcycling, downcycling and recycling). Thus, circular logic businesses affect and can be directly affected by consumer behaviors.

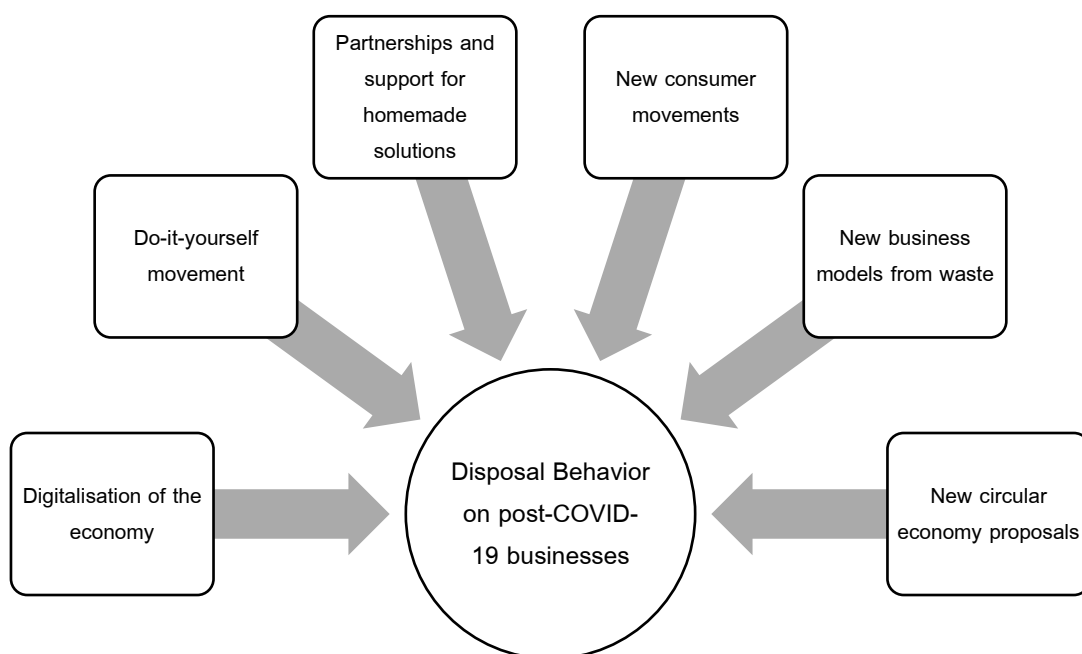


Figure2: Disposal Behavior on post-COVID-19 for Thai businesses

Source: Authors

Finally, it is clear that the COVID-19 pandemic offers an excellent opportunity for companies to contribute to addressing urgent global social and environmental challenges and that new business models linked to the consumer's disposal behavior are relevant to the moment.

Conclusion

The crisis of COVID-19 brought significant challenges to humanity, impacting habits, feelings, routines and behaviors. Consequently, businesses and value chains are affected by the change in the social and economic context. The crisis adds to the environmental challenges faced in recent years, such as climate change and the difficulty of promoting changes in production processes and consumption behaviors that preserve biodiversity and the environment. In this context, this article sought to explore how the crisis generated by COVID-19 can impact disposal behaviors, considering this behavior as a dimension of sustainable consumption. Inseparably, the crisis has effects and challenges for business, with economic, environmental and social effects.

Deepening the study of disposal behaviors has managerial relevance insofar as they can influence the other stages of consumption. In addition, disposal practices can impact business models, creating opportunities to rethink and redefine the way businesses create, capture and add value. For example, businesses that operate on the Circular Economic logic seek to minimize the exploitation of organic raw materials and replace the concept of an end-of-life product, using business strategies based on repair, maintenance, reuse, redistribution, recycling, reform and remanufacturing. Disposal behavior thus impacts business opportunities and sustainable and, in particular, circular business models based on extending the useful life of resources.

Implementation and future study

The practical implications of this study are relevant to the discussions about behaviors and COVID-19. An increase in most disposal behaviors is expected, impacting the entire value chain, especially producers, retailers and consumers. New business opportunities arise, which demand innovation in the current models designed for the pre-COVID-19 market system. The creative potential of these innovations, in turn, can seek economic recovery more equitably,

including the plots with lower income and whose inequality was accentuated by the COVID crisis¹⁹. The impact includes multiple stakeholders at the governmental, academic and business levels.

As a limitation, the scenario's uncertainties stand out. We live in a period of exception, in which the knowledge produced about the pandemic of COVID-19.

For future studies, it is suggested to collect empirical data to verify the discard behaviors and changes related to COVID-19, using as a basis the systematization by behaviors developed in this study. When dealing with disposal behaviors, it is suggested to map specific, less complex behaviors in the literature, such as exchanging, returning and re-giving, guaranteeing a more detailed discussion about them. Finally, there is a need for further research on disposal behaviors in developing countries. It is exceedingly proposed that the Brazilian context be studied due to the size of the domestic market, the volume of consumption, and the volume of potential disposal transactions. In the current scenario and understanding that emerging economies maybe even more impacted by the health crisis, another factor stands out for a broader investigation directed at developing countries. Some consumer behavior may be short-lived. In addition, it is pointed out that the article was written in the middle of a pandemic so that the studies and reports consulted make up the data sources available at the moment. It is hoped that, in the future, many studies will add to

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