

# Online Marketing of Food Products through Marketplace Platform: A Study of Community Based Online Marketplace of BEDUKMUTU

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**Abstract.** Online food marketing through a marketplace platform has been a trend in today's food product marketing, especially with the COVID-19 pandemic that has increased food product purchases through online platforms. Bedukmutu is an online marketplace platform developed by Universitas Muhammadiyah Yogyakarta (UMY) that provides food product transactions and other products and services. This paper investigated the Bedukmutu marketplace business model in the marketing of food products and how far the Muhammadiyah community ties influence the consumers. Descriptive analysis, website observation, and in-depth interviews with Bedukmutu stakeholders were utilized to explore the extent of online food product marketing practices in this marketplace. The results revealed several key factors in the Bedukmutu business model on food products marketing, including entrepreneurship as a value proposition with the consumer to consumer e-commerce (C2C) model and Muhammadiyah network as a key partner in market development. The offered food products vary from fresh to processed food originating from traders within students, employees and Muhammadiyah community networks. The implementation of purchasing incentives in measuring the performance of UMY employees is one of the motivations for consumer demand (demand-pull) apart from the affiliation factor with Muhammadiyah organizations (community-based).

## 1 Introduction

The development of information technology has recently penetrated various life sectors, starting from transportation, telecommunications, business, and others. The rapid growth of internet users [1] and the increasing telecommunication infrastructure have further supported this phenomenon. Increasingly affordable technological devices have also contributed to this development.

The results of a survey on the penetration and behavior profile of Indonesian internet users conducted by the Indonesian Internet Service Providers Association in 2018 showed that out of 264.16 million Indonesians, 171.17 million (64.8%) were active internet users.

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This number increased by 10.12% from 2017, amounting to 143.26 million or 54.69% of Indonesia's total population [2].

The rapid development of internet use is mainly motivated by the massive use of messaging-based applications such as WhatsApp, LINE, and Facebook Messenger applications [2]. Another reason for using the internet is to search for information (search engines) and economic reasons such as searching for product information and buying and selling [3].

Trends in using the internet for economic activities, both for searching product information and trading, have recently increased. The Ministry of Communication and Information Technology stated that the value of the online business in Indonesia in 2014 reached 12 billion dollars with an annual growth of 40% [4]. The latest data from the Google search site even states that Indonesia is the country with the largest online business development in Southeast Asia, valued at 27 billion dollars in 2018 and a growth of 49% per year [5].

There are various online business platforms, starting from social media (online shop), websites and marketplaces. A marketplace is generally defined as a virtual place allowing transactions or trades between sellers and buyers [6]. It is one of the widely used platforms for providing convenience, interaction and inexpensive value with the main objective to facilitate communication and reduce transaction costs [7]. The development of the platform marketplace is also increasing, both global marketplaces such as Amazon.com, Alibaba.com, and domestic marketplaces such as Tokopedia, Bukalapak and others.

Bedukmutu is a marketplace developed by Muhammadiyah. It was initiated by Universitas Muhammadiyah Yogyakarta (UMY) with the main objective of economic empowerment and enhancing the entrepreneurial spirit of Muhammadiyah members, especially the UMY academic community [8]. Bedukmutu has developed quite rapidly since its establishment in 2017. One development is the increase in transaction turnover from IDR 1,336,000 in July 2017 to IDR 730,349,583 a year later [9]. Moreover, the number of traders and product variations have also increased, not only from the UMY academic community but also to the Muhammadiyah network in Yogyakarta. The variety of products also varies from household needs, foodstuffs to property and automotive products.

The increasing activity and role of the Bedukmutu marketplace is an interesting trend given the large economic potential of Muhammadiyah members [10]. Previous research related to the Bedukmutu marketplace focused more on consumers [9] and the purpose of establishing this marketplace, especially in the development of sociopreneurship, both for UMY lecturers and employees [8] and for students with the BEDUKMAWA platform targeting the student market [11]. There is no research specifically analyzing the Bedukmutu business model. Therefore, this study aims to determine the Bedukmutu business model, especially in the marketing of food products. This research hopes that a better understanding of the BEDUKMUTU business management model will be obtained.

## **2 Literature Review**

### **2.1 Online marketing**

Online marketing, or in other terms referred to as digital marketing, is a marketing method based on information technology. The development of online-based marketing cannot be separated from the development of internet use, which is growing every year [2]. The development of the internet allows humans to easily and cheaply connect (connectivity), which has a massive influence in marketing, thus emerging digital marketing [12].

Another definition of online marketing or e-marketing is the use of information technology in marketing, communication, delivery, and exchange activities that provide value to consumers, clients, partners, and the community. In simple terms, it can also be defined as an application of information technology in traditional marketing activities. There are two impacts of information technology on marketing. It increases the efficiency and effectiveness of the marketing function and changes traditional marketing strategies [13].

The internet has a vital role in the development of online marketing, including in Indonesia. There are several reasons why Indonesian consumers use the internet for economic activities, including searching for information on products to be purchased, visiting online stores (online shops), making online purchases, and transactions [14].

## **2.2 Food product**

Food is an essential and strategic commodity for humans. Apart from being a basic need, food has become a commodity that even until the 21st century, not all the world's population is fulfilled. In 2017, the Food Agriculture Organization (FAO) reported that 795 million people suffered from food shortages and more than 2 billion people were malnourished. It can be exacerbated by climate change and pressure on natural resources where food is produced [15].

The use of information and communication technology in food products trade reduces food problems by providing food products easily accessible at affordable prices. The adoption of information technology is proven to have a significant role in influencing the food system and providing market access for small businesses, rural economies and farmers [16].

Sales of online food products also experienced significant growth of around 30% in 2019 with a value of 1,452 billion dollars. It is the highest growth compared to online sales of other products such as fashion, electronics, music, travel and tourism industry [14].

Food products in this study include all food and processed food products according to the food categories issued by the Food Agriculture Organization (FAO) of the United Nations in the Food Categorization System For The Codex General Standard For Food Additives (GSFA). There are 16 categories of food products according to FAO: fruits and vegetables, vegetable oils, dairy products and their derivatives, eggs and egg products, meat and meat products, fish, fermented herbs and spices, drinks, salt, ice, bakery products, cereals, grains and processed foods [17] [18].

## **2.3 Marketplace**

Bedukmutu is a form of the online business model using a marketplace platform. Marketplace, or in other terms, is called "exchange" or "hub" is a virtual location with facilities to allow transactions between sellers and buyers. The marketplace itself is a form of intermediation independent from both sellers and buyers [6]. Another definition of the marketplace is an information system network that facilitates sellers and buyers to exchange information, carry out transactions and other activities before the transaction occurs [19].

In simple terms, a marketplace refers to a market where many sellers and buyers make transactions. The marketplace manager is a service provider bringing together sellers and buyers and independent from both of them [20].

As a business model, the marketplace is designed to create market efficiency and improve business processes [19]. There are various marketplace business models [21]. In general, from the perspective of participating parties, there are at least five general models of the marketplace business model [22] [23]:

- a. Business to Business (B2B) model marketplace, which is an e-commerce model where the main actors are corporate entities and other companies. It can be explained in simple terms as a business process where a company sells goods or services to other companies.
- b. Business to consumer (B2C) model marketplace, which is an e-commerce model where the main actors are a company and a direct consumer. It is a traditional marketplace model where companies sell their products directly to consumers using an e-commerce platform.
- c. Business-to-government (B2G) model marketplace, which is an e-commerce model where the main actors are companies and the government as consumers. It usually occurs in companies participating in online government tenders.
- d. Consumer-to-consumer (C2C) model marketplace, which is an e-commerce model where consumers and other consumers trade with each other. Consumers in this model are facilitated by intermediaries to make online transactions.
- e. The consumer-to-business (C2B) model marketplace, which is the opposite of the B2C traditional model in which companies as producers sell to consumers. In this model, consumers sell goods or services to companies.

Apart from the above five models, some literature also mentions other e-commerce business models. There are Government-to-Government (G2G), Government-to-Citizen (G2C), and Government-to-Business (G2B) e-commerce where the government is the service provider for companies or businesses [24] [25].

Moreover, besides considering consumer relations, the marketplace business model can also be seen in several dimensions. There are various theories on this business model. Some of the essential pillars are the value and product offered [26], consumer channels and interactions [27] and parties involved in it [23].

In agriculture marketing, the marketplace has an important role, especially in facilitating consumers for finding good quality products at lower prices from various suppliers [28] and supporting product penetration in the market [29]. However, even though the marketplace has proven beneficial for marketing, especially agricultural products, the future application still has many challenges such as network security issues, poor infrastructure, especially in rural areas, and lack of training for farmers [30].

### **3 Methodology**

To achieve the objectives, this study employed a survey and a descriptive method by conducting a literature review and interviews with Bedukmutu stakeholders mastering the operation of the BEDUKMUTU marketplace. The descriptive method was chosen because it is a method for examining the status of a group, object, condition, situation [31] or event in the present to obtain a systematic and accurate description of facts and phenomena [32].

Bedukmutu was chosen because it is an online marketing platform developed by Muhammadiyah, one of the biggest Islamic community organizations with millions of members throughout Indonesia [33]. With the massive number of its member, the economic development of Muhammadiyah is interesting.

Descriptive analysis was utilized to determine the Bedukmutu business model through searching for websites and other information sources and interviews with key persons of Bedukmutu. To analyze the business model of Bedukmutu, this paper applied a business model framework developed by Karl Tauscher and Sven M. Laudien [23] and David J. Teece [27]. There are three major dimensions to explore the Bedukmutu business model. First, the value creation dimension, comprising platform type, key activity, price discovery and system review. The second dimension is value delivery, consisting of marketplace participants,

scope, transaction types and key value propositions. While the last aspect is the value capture dimension, covering the revenue stream, pricing mechanism, and revenue source.

## **4 Result and discussion**

### **4.1 Bedukmutu marketplace profile**

Bedukmutu, an acronym for “Bela-Beli Produk Muhammadiyah Bermutu” (English: Purchasing Movement of Muhammadiyah Quality Products), is an online marketplace developed by the Universitas Muhammadiyah Yogyakarta (UMY), Indonesia. Developed in 2017, the establishment of this online marketing platform/e-commerce was initiated by the UMY management, i.e., the Vice-Chancellor for Finance and Assets [34].

Several reasons underlay the establishment of Bedukmutu. It aims to optimize the economic value of Muhammadiyah members, especially the academic community of UMY. As one of the major universities in Yogyakarta, in 2019, UMY was reported to have 26,229 active students [35] and 1,095 lecturers and staff [36], which was a large market base. Among lecturers and employees, it was estimated that at least 17 billion rupiahs of money were circulated each month (salaries and allowances), a huge market demand if it could be managed.

Moreover, the development of Bedukmutu was also inseparable from the mandate of the 14th Muhammadiyah Congress in Makassar, which encouraged Muhammadiyah’s members in economic sectors [9]. Bedukmutu is expected to assist Muhammadiyah members in meeting the demands and providing a supply of goods and services from and by Muhammadiyah members themselves.

The establishment of Bedukmutu also aims to build an entrepreneurial spirit among the UMY academic community [8]. Given the large market potential of UMY comprising students, lecturers and employees, with the existence of Bedukmutu, it is expected that they will not only become consumers but also to play an active role in becoming business actors by trading goods and services to fellow UMY academics.

### **4.2 Bedukmutu food product marketing model**

Food products are the most traded products in the Bedukmutu marketplace. Data for 2018, from a total of 3,142 products traded in Bedukmutu, there were at least 1,809 (57.6%) food products traded [9]. The number of food products traded has almost doubled (199%) in 2020, reaching a total of 3,595 items [37].

Furthermore, regarding the marketing model for food products in the Bedukmutu marketplace, this paper follows the models of Karl Tauscher and Sven M. Laudien [23] and David J. Teece [27]. There are three main aspects used to understand the marketplace business model, namely the value creation, value delivery and value capture dimension. All three main dimensions consist of eleven attributes, as presented in Table 1.

#### **4.2.1 Value creation**

The value creation dimension of the Bedukmutu business model is composed of four attributes, which can be explained as follows:

##### **a. Value proposition**

A value proposition is a value offered and promised by the marketplace or company to consumers [38]. There are interesting findings when discussing the value proposition of

Bedukmutu. As a marketplace, Bedukmutu is a business-oriented platform. However, the value offered is more in the development of entrepreneurship [8]. The initial objective of Bedukmutu is to promote the spirit of entrepreneurship among the UMY academics in particular and Muhammadiyah members in general.

Bedukmutu is not a selling movement but a purchasing movement. It is expected that this marketplace will encourage UMY lecturers and employees to buy from colleagues and relatives among Muhammadiyah members (community-based motivation). In the end, if it gets bigger, it will prosper the economy of all parties joining Bedukmutu, especially in food products, the basic needs of everyone.

To support the purchasing movement, UMY introduced a policy encouraging lecturers and employees to purchase through Bedukmutu, included in the employee performance indicators through the Sistem Kinerja Pegawai (SKP). This policy is technically implemented by encouraging lecturers and employees to make a minimum purchase of IDR 2,500,000 yearly (accumulative) to obtain a 100% performance assessment score. As for students, the encouragement of this purchasing movement starts with giving shopping vouchers.

**Table 1.** Bedukmutu business model.

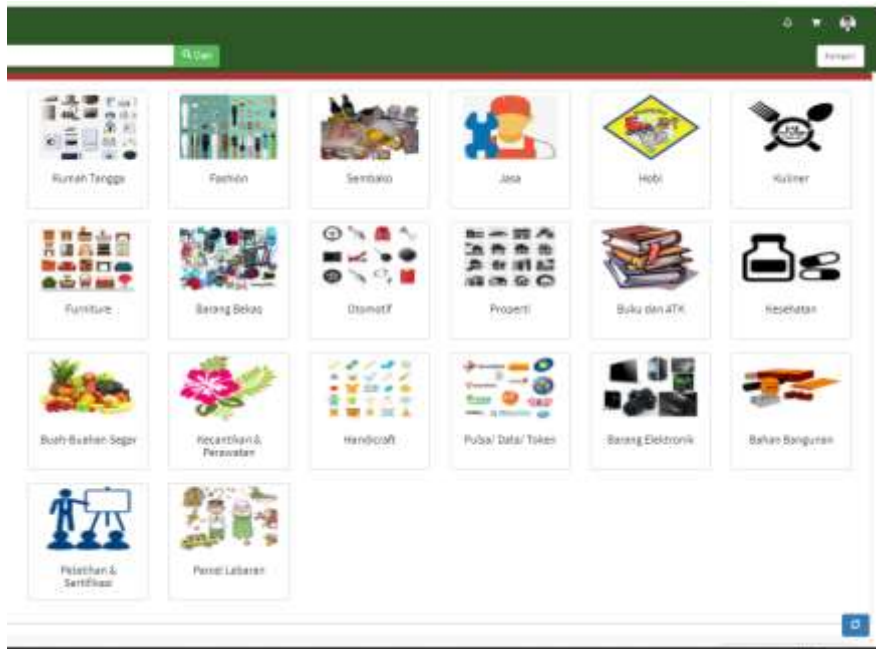
<b>Business Model Dimension</b>	<b>Attributes</b>	<b>Bedukmutu</b>
Value creation	Value proposition	Entrepreneurship development
	Product and services	20 category of product
	Platform type/channel	Web-based platform
	Review system	None
	Customer segment	UMY employees
Value delivery	Marketplace participant	Customer to Customer (C2C)
	Geographic scope	Local
	Key partners	Seller/supplier, Muhammadiyah network
Value capture	Transaction type	Digital
	Cost structure	Operational cost, investment and development cost
	Revenue source	Transaction fee

**b. Product and services**

Bedukmutu offers a variety of products and services ranging from daily necessities such as rice and sugar to properties such as land and houses. For services offered include English language training and seminars.

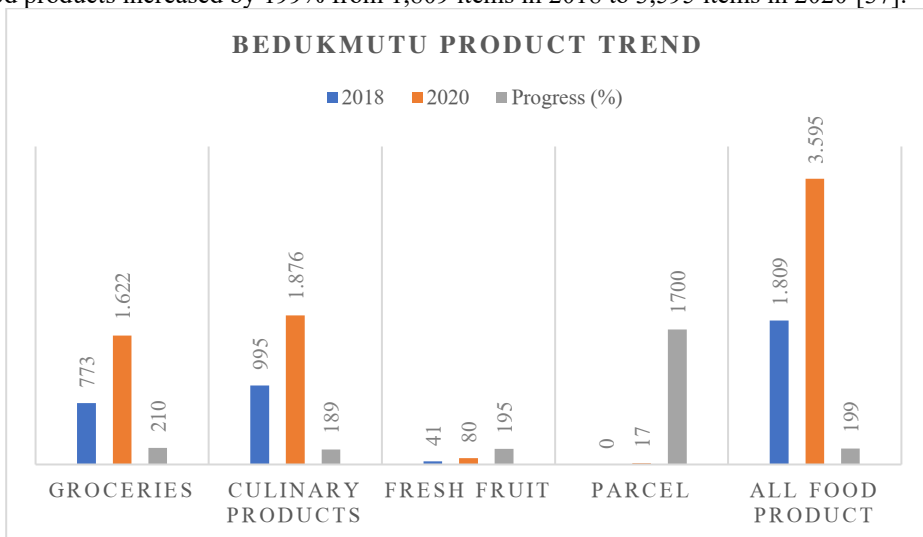
The goods and services offered are divided into 20 product categories. There are four types of food product categories, namely groceries, culinary products, fresh fruit and parcel. The non-food products and services consist of 16 types, namely houseware, fashion, hobbies, furniture, second-hand product, automotive, property, books and stationery, health products, beauty products, handicrafts, data and internet, electronics, building materials and training [37].

In terms of quantity, the products traded in Bedukmutu have increased in the last two years. Overall, the total traded products increased by 478% from 3,142 items in 2018 [9] to 15,019 items in 2020 [37].



**Fig. 1.** Bedukmutu Product Category.

The increase in the quantity of traded products has occurred in food products as well. This category consists of four product items, groceries, culinary products, fresh fruit, and parcels. Parcel products did not exist in 2018. Culinary products remain the most traded product, followed by food products and fresh fruit. This trend has not changed since 2018. In general, food products increased by 199% from 1,809 items in 2018 to 3,595 items in 2020 [37].



**Fig. 2.** Bedukmutu Product Category.

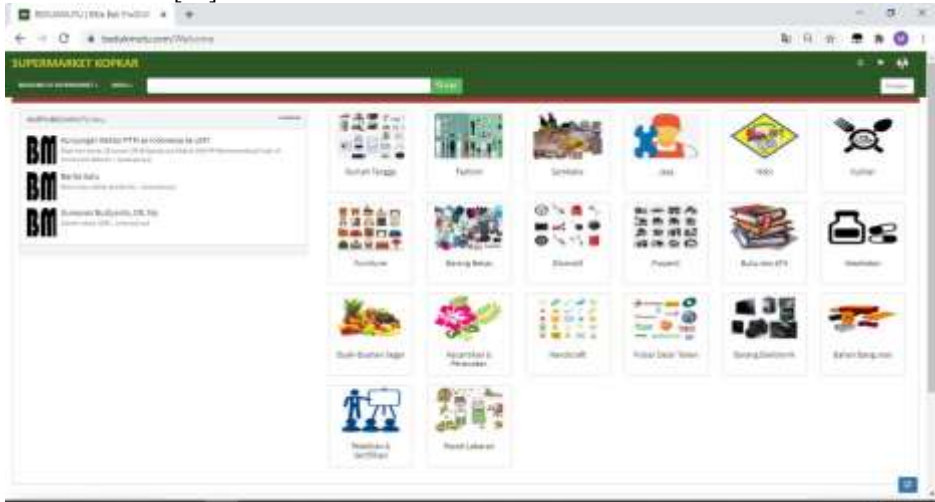
c. Platform type/channel

From the platform side, Bedukmutu can be accessed through the website at [www.bedukmutu.com](http://www.bedukmutu.com). This website address is a new domain of a system migration in 2019



from the previous address at <https://www.bedukmutu.jualretail.com>. Other platforms, such as Android applications, are still under development.

The development of other platforms, such as Android-based mobile applications, is essential to achieve a broader range of Bedukmutu consumers. The study shows that consumers spend more time looking for products on mobile-based e-commerce than the e-commerce website [39].



**Fig. 3.** Bedukmutu Homepage.

d. Review system

Customer reviews are an essential feature of the online marketplace [40]. Providing an opportunity for consumers to provide reviews will be an input in improving service and product quality. Unfortunately, this feature is currently unavailable on the Bedukmutu website. It is necessary to provide space for consumers-seller interaction, which can be seen by other consumers.

e. Customer segment

The main markets of Bedukmutu are UMY lecturers and employees. Bedukmutu has not been opened widely to consumers outside UMY. The development stage carried out aims to include students to participate in the Bedukmawa platform. Bedukmawa, an acronym for “Bela-Beli Produk Mahasiswa” is a Bedukmutu platform with consumers and sellers segments from and between students [11].

#### 4.2.2 Value delivery

Furthermore, in the value delivery dimension, three attributes make up the value of delivery, i.e., the marketplace participant, geographic scope, and key partners. The following is a detailed explanation:

a. Marketplace participant

Based on its participation model, Bedukmutu belongs to the category of consumer-to-consumer (C2C) marketplace. It is one of the most preferred marketplace business models both in Indonesia [41] and abroad [42].

Although the C2C marketplace model is well-known, it also has drawbacks because it must increase users and transactions to grow the revenue as it generally comes from transaction fees [43]. Therefore, the development of Bedukmutu by introducing Bedukmawa



is one of the right policies. If Bedukmutu only relies on the lecturers and staff market segments, there will only be around 1,000 people in the market. However, by opening it to students, a broader market is open, considering that the number of UMY active students in the 2019/2020 academic year is 26,229 [35].

b. Geographic scope

The main markets of Bedukmutu are UMY lecturers, employees and students. Geographically, the market is in Bantul Regency, Yogyakarta. However, although the scope of the Bedukmutu market is only within UMY internal circles, considering that UMY is a campus within Muhammadiyah organizational network, it will undoubtedly be developed in the future not only in Indonesia but also in all Muhammadiyah network worldwide.

c. Key partners

Bedukmutu's key partners are mainly traders. Moreover, Bedukmutu also collaborates with the microfinance institution of BMT UMY to process payments and redeem vouchers. Besides, Bedukmutu is currently developing cooperation with a network of Muhammadiyah regional administrators and several businesses owned by Muhammadiyah members. This Muhammadiyah community association is one of the advantages possessed by Bedukmutu in addition to market development and the increasing number of partners joining its network.

### 4.2.3 Value Capture

Furthermore, the last aspect of the Bedukmutu business model is the value capture dimension. This dimension consists of several attributes, namely transaction type, cost structure, and revenue source. According to the transaction type, product order and payment process at Bedukmutu is carried out digitally, mostly through bank transfer. However, several sellers also accept cash on delivery (COD) payment.

In terms of cost structure, the main costs incurred by Bedukmutu come from operational costs, especially for website management and labor (website admin). Other costs incurred are for investment and system development. Furthermore, as a C2C marketplace model, the primary revenue source for Bedukmutu comes from transaction fees.

## 5 Conclusions

This study concludes that the Bedukmutu business model comprises several critical factors in marketing food products, namely entrepreneurship as a value proposition with the consumer to consumer (C2C) model and Muhammadiyah network as the key partner market development. The offered food products vary from fresh to processed food originating from traders within the UMY employees, students and Muhammadiyah community networks. The implementation of purchasing incentives in measuring the performance of UMY employees is one of the motivations for consumer demand (demand-pull) apart from the affiliation factor of Muhammadiyah organizations (community-based motivation).

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