DOI: 10.15575/ks.v3i3.13327

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era 4.0

Riduan Mas'ud

Universitas Islam Negeri Mataram Corresponding Author E-mail: riduanmasud@uinmataram.ac.id

Abstract

This study tries to show that implementing a comprehensive marketing program will help Islamic microfinance institutions (LKMS) improve their overall performance, especially in the current industrial era. Like other Islamic organizations, Islamic microfinance institutions must follow Islamic (Sharia) rules in all aspects of a business. Then a marketing program suitable for Islamic microfinance institutions must include a marketing concept established by relying on Islamic values. Similar to other organizations, the main objective of the marketing program of Islamic microfinance institutions is to retain existing customers and attract new customers. In addition, an efficient marketing program must contain several specifications emphasizing the nature of the market and the institution itself, competitors, development of marketing plans, and client preferences. Some concrete steps that need to be taken by LKMS are using Internet of Things (IoT) technology, cloud computing, big data and customer profiling, and electronic payments.

Keywords: marketing, LKMS, industry 4.0, digital

Abstrak

Penelitian ini mencoba menunjukkan bahwa bagaimana menerapkan program pemasaran yang komprehensif akan membantu lembaga keuangan mikro syariah (LKMS) dalam meningkatkan kinerja mereka secara keseluruhan, khususnya pada era industri saat ini. Lembaga keuangan mikro syariah seperti organisasi Islam lainnya harus mengikuti aturan Islam (Syariah) dalam semua aspek bisnis. Kemudian program pemasaran yang cocok untuk lembaga keuangan mikro syariah harus mencakup konsep pemasaran yang telah ditetapkan dengan mengandalkan nilai-nilai Islam. Serupa dengan organisasi lain, tujuan utama program pemasaran lembaga keuangan mikro syariah adalah untuk mempertahankan pelanggan yang sudah ada dan menarik pelanggan baru. Selain itu, program pemasaran yang efisien harus memuat beberapa spesifikasi yang menekankan pada sifat pasar dan institusi itu sendiri, pesaing, pengembangan rencana pemasaran, dan preferensi klien. Beberapa Langkah kongkret yang perlu dilakukan oleh LKMS yakni seperti penggunaan teknologi *Internet of Things (IoT), cloud computing, big data* dan *customer profiling*, dan penggunaan pembayaran elektronik.

Kata Kunci: pemasaran, LKMS, industry 4.0, digital

INTRODUCTION

M Savings by households is widely considered a good habit to cultivate and has become a global phenomenon over the last three decades. People of every social and economic level, rich or poor, are interested in saving their money to meet future consumption, raise funds for investment, or protect themselves from unforeseen circumstances (Brafu-insaidoo & Ahiakpor, 2011; Kohli & Jaworski, 1990). However, it is difficult for the poor to gain access to formal financial services such as credit and savings facilities (Cravens 1991 in Kazemian et al., 2015) because the terms and conditions applied are complicated. Therefore, microfinance has become a significant source of funding for these communities, and these micro-enterprises play a very important role in poverty alleviation.

* Copyright (c) 2021 Riduan Mas'ud

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License

Received: Juny 10, 2021; In Revised : July 25, 2021; Accepted : July 30, 2021

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

Microfinance refers to financial transactions involving small amounts of money between young and poor financial providers and entrepreneurs, poor households, and micro-enterprises. Its activities include group guarantees, character-based loans, and short-term recurring loans (Brafu-insaidoo & Ahiakpor, 2011). The United Nations (2009) has defined microfinance as offering small financial services and managing small amounts of financial resources through a range of financial products and a system of intermediary functions targeted at low-income individuals or groups.

In recent years, the number of customers of Islamic and conventional microfinance institutions has shown a dramatic increase. Many Islamic and conventional microfinance institutions have been established in response to increasing public knowledge about the benefits of using microfinance services. Microfinance has proven its effectiveness in helping the poor to create significant changes in their livelihoods and make steps towards improving their living standards, reducing their vulnerability, and creating the financial capacity to pay for their children's education and basic health care (Hudson and Mutesasira). 2002 in Kazemian et al., 2015). As a result, market participants are highly competitive, and clients have a wide choice of microfinance institutions (Wright et al., 2003 in Kazemian et al., 2015). However, microfinance products also have some drawbacks and limitations.

Loans in conventional microfinance are based on a predetermined interest rate. In this case, borrowers, especially the poor, are burdened with high borrowing costs. The higher payment scheme is due to the amount of the loan owed and interest (El-Komi & Croson, 2013). This fixed interest, also known as usury or usury, is prohibited by Islamic law and Judaism and Christianity. Furthermore, in conventional microfinance, the borrower bears all the risks.

In contrast to conventional microfinance, the finance section of Islamic rules (Sharia), which is applied to Islamic microfinance, emphasizes that in every transaction, risks and profits or losses must be shared (Mohammed Obaidullah, 2008). Based on the Islamic concept, if everyone in an Islamic society does their job well, then the poverty rate will decrease. Carrying out one's duties involves concepts like brotherhood and justice which means that every Muslim should take responsibility for the condition of others as a way to worship Allah, which is the most important goal. As a result, most low-income Muslims prefer to deal with Islamic products offered by Islamic financial institutions rather than conventional products (Wilson, 2013).

Due to the problems associated with conventional microfinance and the growing desire among the Muslim community to only deal with Shariah-compliant products, conventional microfinance is seen as a less attractive and less competitive option. It was not able to attract many potential clients, especially among Muslims.

In addition, it is estimated that one-third of the world's poor are Muslim (The Economist, 2008). Therefore conventional microfinance providers are likely to experience reduced demand from this group of people.

Retaining and attracting new customers is often difficult for microfinance providers, especially for Islamic MFIs, because they are new to the market. This is because most MFIs are limited to short-term products in the microfinance provider market. Therefore, their clients may easily decide to leave their current microfinance service provider at the end of the loan cycle (Wright, 2001).

As a result, retaining existing customers and attracting new customers as a sustainable source of finance has become one of the most serious challenges faced by MFIs, especially Islamic MFIs, over the past few years. Therefore, microfinance providers should be aware of the latest marketing strategies when introducing services and facilities. Although there is extensive literature on the study of Islamic microfinance, studying the marketing strategies of Islamic microfinance institutions in Indonesia appears

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era 4.0

Riduan Mas'ud

to be an unexplored research topic. Therefore, it is important that this paper first identifies which marketing approach is most suitable for Islamic microfinance service providers to implement to be sustainable and remain an important and relevant institution for the poor.

RESEARCH METHOD

This study aims to find out how implementing a comprehensive marketing program will help Islamic microfinance institutions (LKMS) improve their overall performance, especially in the current industrial era. Using a case study approach. This research takes data using literature study and observation. The author takes directly the theories and related data both from books and from research articles that have been published and analyzed using triangulation so as to find the correct conclusions and explained descriptively.

RESULT AND DISCUSSION

Result

Industry 4.0

Industry 4.0, also known as the fourth industrial revolution, was first introduced as the main strategic objective of the German government industry in 2011 (Kagermann H, Wahlster W, 2013). Since then, it has become a popular topic of discussion among business, academics, and foreign governments (Hermann et al., 2016). Combining the Internet of Things (IoT), information integration, and other high-tech advancements, Industry 4.0 is an industrial digital revolution that started with a focus on production and manufacturing and spread to many other areas (Roblek et al., 2016; Xu et al., 2021). There are many different definitions for this industry transformation, but no ideal definition applies to all of them. However, this study characterizing the next generation industrial revolution, which includes the terms Smart Factory, CPS, IoT, and IoS, is based on a literature review by Herman et al (2016).

When a factory adopts a Cyber-Physical System (CPS), which combines physical technology and cyber technology, it creates a "smart factory" that closely integrates previously autonomous different systems, making automation technology more complicated and precise (Shi et al., 2020). IoT, also known as Industrial Internet of Things (IIoT) Industry 4.0, is a method by which businesses integrate smart electronics in their manufacturing processes to create internal or external information networks dynamically. It is supported by the Internet of Services (IoS), such as cloud computing (Liao et al., 2018).

The fourth industrial revolution aims to improve flexible production models that incorporate realtime communication between all parties and facilities involved in the production of digitally produced goods and services (Zaidin et al., 2018). As an illustration, consider a production company that takes special orders or instructions through a cloud service and immediately adapts the production line in a highly affordable way to meet customers' various needs and quality criteria. This will have a significant impact on the conventional manufacturing sales paradigm.

Marketing in Microfinance

The term "marketing" is usually associated with promotional, advertising, and public relations activities to increase sales of a service, product, or concept. In a broader perspective, marketing can be defined as a program that includes a collection of activities, including market segmentation, positioning strategy, demand and consumer analysis, promotion, and competition analysis. Marketing has become

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

significant for MFIs over the past few years due to environmental and internal aspects such as increased competition in the MFI market, declining growth rates in certain MFIs, increasing client dissatisfaction, and the growing recognition that MFIs should be more customer-oriented/client-led (Grant 2000 in Kazemian et al., 2015).

For most MFIs, marketing means responding to the market in terms of developing new products based on customer needs (Wright et al. 2003 in Kazemian et al., 2015). Still, marketing strategy has deeper implications in the microfinance market. Marketing strategies for microfinance include branding and company identification as well as product delivery systems and customer service strategies, in addition to product strategies. These strategies can direct Islamic microfinance institutions (LKMS) to achieve sustainable performance, increase customer loyalty, and further increase profitability (Churchill and Halpern 2001 in Kazemian et al., 2015). Generally, marketing for an MFI can be defined as an analytical tool for investigating and realizing customer needs. This can guide the MFI to understand their target market (which clients the MFI should target); how many clients? And how many clients are expected to acquire (market share)? Due to increasing client desertion, increasing competition in some microfinance markets, and increasing recognition that MFIs need to be more customer-oriented, the concept of marketing in microfinance has become very relevant in recent years (Grant 2000 in Kazemian et al., 2015).

In addition, due to the "Islamic" label, marketing in the Islamic microfinance business must have some special characteristics compared to other microfinance providers. When a microfinance provider claims it follows Islamic Sharia finance rules, it should exhibit Islamic behaviour in all aspects, not just financial matters (IRTI, 2007). Islam is like a package based on gaining Allah's pleasure by helping each other and taking responsibility for the financial and social conditions. For example, an Islamic institution must consider its competitors' condition, its customers' financial situation, and other things to help them whenever they need help. This is because apart from attracting new customers and achieving more financial benefits, the institution's main objective is to follow the rules of behaviour and Islamic culture to gain Allah's blessings and satisfaction (Shirazi 2008 in Kazemian et al., 2015).

The microfinance industry is maturing, and with this maturity comes change (Freitas-da-Costa et al., 2011). In recent years, commercial banks have started to scale down their services to traditional MFI clients, and in Islamic countries, they have started to provide some Islamic services to their Muslim clients (Chowdhry, 2006). In addition, some institutions have become formal financial institutions, and microfinance institutions are eager to enter the market. Meanwhile, customers are becoming more sensitive and sophisticated about service quality and product types. In conclusion, MFIs need to focus on retaining current customers and identifying new clients interested in their financial services to achieve financial stability and sustainable performance. To achieve this goal, every MFI, both Islamic and conventional, should be concerned with maximizing their return on investment (profitability).

Table 1 describes external and internal factors that can affect profitability that can be overcome through marketing programs (El-Komi and Croson, 2013). Similar to conventional MFIs, external and internal factors that affect profitability through appropriate marketing programs and strategies also apply to MFIs. For example, internal factors that include increasing portfolio size can increase the market share of Islamic MFIs by attracting more Muslim or even non-Muslim customers based on promoting Islamic financial values such as interest-free loans. Reducing client losses can demonstrate one of the significant concepts of Islam, namely, "brotherhood", and attract more clients by helping them solve potential problems. Increasing the rate of return is one of the strategies of an Islamic MFI that cares about solving its clients' problems. In addition, external factors include analyzing competition, which can assist Islamic MFIs in showing appropriate reactions to competitors' actions and learning from them by monitoring their

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era 4.0 Riduan Mas'ud

actions. The economic environment is also considered another marketing strategy. For example, Islamic MFIs may share information about local economic situations affecting a client's financial position. The political/regulatory environment is also an important factor that must be considered in the microfinance business. A marketing strategy must also consider external shocks that can affect product demand.

Profitability Determinants	Marketing Effects/Benefits
Inte	rnal factors
Increase portfolio size	Market and demand analysis can identify potential target markets for the institution's products
	Positioning strategies can help institutions better define how clients perceive products and how they are delivered
	Promotional activities can increase client awareness of the product
Reduce client loss	Marketing programs allow institutions to monitor and analyze customer behaviour to anticipate potential
	problems and proactively address them before the client leaves. To retain current customers by solving their future problems based on the Islamic concept o "brotherhood."
Improved rate of return	Consumer analysis can help agencies identify the causes of low returns – i.e., inappropriate product design, external shocks, poor delivery – so that
	appropriate solutions can be implemented.
Exte	rnal factors
Competition	Marketing programs enable institutions to monitor competition and analyze its impact on customers so that Shariah MFIs can follow or stay ahead of the competition.
Economic environment	Market research can highlight factors affecting the local economy (weather, religious holidays, etc.) that may affect clients' demand for financial products or their ability to repay
Political/regulatory environment	Market research can pinpoint policies and regulation that may affect the level of fees charged by institutions, the rate of capitalization, etc.
External shock	Marketing programs enable institutions to analyze potential product demand shifts due to catastrophic changes, such as floods, wars, economic crises, etc.

Table 1. Determinants of MFI Profitability

Source: El-Komi & Croson (2013)

Marketing Program for Sharia MFIs

The use of the word Islamic to describe a company's operations has enormous implications, starting from how the service or product is developed and ending with how it is handled after use. Islam is not just a name; it is an overall business philosophy that incorporates every aspect of the business (Alserhan, 2016). From a marketing point of view, any Shariah MFI that wants to grow and achieve sustainable financial and social performance should have an efficient and comprehensive predefined marketing program that can present all useful data related to the organization, including understanding the nature of the organization. Markets, institutions and their competitors develop marketing plans (Sebhatu, 2009).

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era 4.0

Riduan Mas'ud

Market and Institutional Analysis

The first step of the marketing program for providers of Islamic Microfinance Institutions (LKMS) is to define an Islamic market and the characteristics (traits) that an Islamic market must possess; then, a comprehensive analysis of the nature of the market and the nature of institutions must be defined. This step provides an overview of the financial services market and the institution's current and potential situation (Grant 2000 in Kazemian et al., 2015).

Nature of Markets in Islam: markets are held wherever and whenever an exchange occurs between buyers and sellers on mutually agreed terms and conditions. In general, Islamic markets are where the target consumers are Muslims and non-Muslims; this definition includes Muslim countries and Muslim and non-Muslim communities in non-Muslim countries (Alserhan 2011). The market has a very critical situation in Islam; making money through training and trading as a profession is highly recommended in Shariah. "O ye who believe! Do not squander your wealth among yourselves in vain, except by mutual agreement" (Quran 4:29). Prophet Muhammad also said, "The person who brings merchandise to our market is like a person who fights in the way of Allah."

Knowing which market an Islamic MFI wants to be successful in and its characteristics (the nature of the market) can help organizations to make the right decisions in various situations. After that, MFIs should also identify their traits to estimate how much they can adapt to the marked environmental changes. They must know what they are looking for, their specific goals, and what external and internal factors can impress them in achieving them. There are three types of markets that Islamic microfinance institutions need to consider (Karim et al., 2008): new markets, emerging markets, and developed markets.

New markets include situations where there are few financial service providers and little effective demand for financial services. Emerging markets are markets where the effective demand for financial services begins to increase, but microfinance providers are unable to meet the demand. In this case, the institutional focus is on developing institutions to meet these demands. A growing market has three characteristics: every type of financial service is available, clients can easily choose their preferred Islamic microfinance provider, and competition among service providers is growing (Zeller, 2006).

Therefore, Islamic microfinance needs to identify the nature of its market to plan marketing programs that are appropriate to the market they are in. Institutional Nature Islamic microfinance providers can be categorized into different groups based on their characteristics. Types of Institutions In general, there are many legal microfinance providers, including Islamic and conventional types such as commercial or Islamic banks, NGOs, village-based organizations, and credit unions. Each of these types may have its target market, goals, and level of development. Some of them, such as commercial banks, usually carry out very careful market analysis to prepare an organized marketing program to enter the microfinance market. On the other hand, some of them, such as small NGOs or village-based microfinance providers that focus on providing credit to the very poor, may not have professional finance staff. They are not motivated or trained to develop and follow a marketing program.

Institutional Goals All Islamic MFIs focus on poverty alleviation. Some of them are nonprofit seekers, which means their main goal is to help the poor rather than be a profitable company. This includes small NGOs and village-based financial providers. On the other hand, the main focus of commercial banks is their profitability and financial performance. Level of Development A developed (mature) Islamic microfinance provider should have a larger portfolio size, a larger number of clients, and a more formal client monitoring system to show progress on the road to sustainability.

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era 4.0

Riduan Mas'ud

Financial Resources The level of financial resources depends directly on the level of development. For young Shariah MFIs, the first and most significant issue is gaining access to Islamic financial resources to meet borrower demands. They will focus on marketing only after solving the problem of financial resources by accessing borrowed funds. However, mature Islamic MFIs try to create a stronger marketing culture within the institution and then expand it to the market to attract new customers (Hiatt & Woodworth, 2006; Zeller, 2006).

Competitor analysis

A successful marketing program must also analyze the competitive environment to estimate the degree of market flexibility when one competitor does something new. Competitors in Islamic and conventional microfinance businesses mean another option for customers. In other words, customers are usually attracted to MFI institutions that have provided for their needs better than other MFIs (Wilson, 2013). Therefore, MFIs must monitor the actions and competitive environment of others to respond to any actions or changing conditions that could threaten their profitability or attract customers in the target market. Sharia MFIs can also attract other competing customers; for example, they can attract competitors' failing clients, identify their weaknesses and help them to improve and provide other opportunities based on the concept of "brotherhood" in Shariah. That's why competitor analysis is so important in sustaining a marketing program.

Marketing Plan

After identifying the nature of the market and institutions and analyzing competitors, the next step is to look at the organization's marketing plan. A comprehensive marketing plan outlines an organization's overall marketing efforts (Tahir & Umar, 2008). In other words, a marketing plan is like a roadmap for an institution which means it shows the organization's current position and identifies where it wants to be and how it should get there, too (Grant 2000 in Kazemian et al., 2015). For Sharia MFIs, the marketing plan can be realized with the organization's marketing philosophy. Adding the word "Islam" or "Islamic" in the concept of market, marketing, or any kind of business will be understood as a practice that is by Sharia, following Islamic teachings regarding all aspects of trading, applying Islamic business ethics, and observing market etiquette as detected by religion. Islam (Alserhan 2011). These concepts have characterized the maturation of most industries over time and are also evident in the Islamic microfinance industry. This maturation process is usually linear, meaning the organization must go through each phase before moving on to the next.

The process of going from a product-driven organization to a customer-driven organization and the necessary instruments within a certain period.

- 1. Customer behaviour analysis: focuses on analyzing customer needs (to provide services based on the reasons customers leave) and developing new products according to client needs and preferences (Grant 2000). Shariah MFIs may consult with experts in Islamic finance regulations to achieve this goal when introducing new Shariah-compliant microfinance services (Wilson 2007).
- 2. Product analysis: at this stage, the Islamic MFI should produce services based on customer behaviour analysis cost-effectively and profitably with a minimum risk level; in Islamic microfinance, all services and products must be Islamic. In this case, it could include some activities that reduce the cost of services to reduce costs, for example, extending the payment term to help the poor or how they can use other potential aspects of Islamic finance rules to introduce some other Shariah. Suitable services such as Tawaro and Qardolhasan provide interest-free loans, as stated in Sharia (El-Gamal, 2003).

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

3. Promoting and selling products: this includes persuading potential customers to use the services provided (Wright, 2001). This can be achieved in several ways, such as introducing new services to clients and increasing client awareness about the organization and its product offerings (Grant 2000 in Kazemian et al., 2015). As an Islamic organization, Shariah MFIs following this concept should avoid criticizing competitors to clients or even discussing the disadvantages of competitors' services. It should only introduce the services it provides (Shirazi 2008 in Kazemian et al., 2015).

Marketing analysis is the last stage of becoming a customer-driven organization. Islamic MFIs must consider and analyze all internal and external market environment factors. For example, a company should focus on special dates that are important to its target customers. If the target customers are farmers, the Islamic MFI should consider that in certain months of the year, their ability to pay will decrease, and in those months, they will need more money so that the Islamic MFI can plan to meet their needs. After this last stage, the Shariah MFI can become a customer-driven organization from being a product-driven organization.

Marketing Strategy for Sharia MFIs

As mentioned earlier, marketing is a comprehensive field that aims to strengthen institutions by focusing on the client. As stated by (Kotler, 1994; Kotler & Keller, and Lane, 2016), marketing tries to understand client needs and adapt operations to meet those needs and achieve greater sustainability. It addresses new product development, pricing, location of operations and promotion of the institution and its products. Thus, it creates exchanges that satisfy individual and organizational goals.

Therefore, it is very important for Islamic microfinance organizations to recognize the important role of marketing strategy; Hudson and Mutesasira (2002) in Kazemian (2015) believe that "the importance of formal planning about strategy development and especially implementation. Plans serve as roadmaps for achieving strategic goals and optimizing process consistency, timing, coordination, momentum and overall control." Furthermore, discussing the departments engaged in marketing in every organization, Kohli & Jaworski (1990) stated that several departments must be involved in activities to meet the target market of customers. One or more departments should focus on understanding current and future customer needs, in particular, and the data collected should be shared. According to Robinson (1994) in Kazemian et al. (2015) the combination of motives that can be met with a combination of savings products determines the demand for savings facilities. In addition, three factors can influence microfinance institutions have several other pricing options based on these three main considerations. Alternatives include break-even target pricing and profit impact pricing, cost and pricing, relationship pricing, skimming pricing, penetration pricing, market-level pricing, and value-in-use pricing.

Furthermore, Kotler (1994); Kotler & Keller, Lane (2016) mention that one of the most important things in a marketing program is realizing the difference between a marketing program and a marketing strategy. In the current context, marketing strategy is directly related to the marketing approach or program adopted by microfinance institutions. In addition, achieving the marketing objectives of a microfinance provider will be difficult unless the marketing strategy is translated into a marketing program.

Organizations that need to attract Muslim customers must align their marketing strategies with Islamic values and standard guidelines. Muslims believe that Islam provides ways and suggestions for a better life on an organizational and personal level. Then, customers of Islamic companies should feel that these companies are trying to develop Shariah advice to make their lifestyle better. Therefore, it is highly

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

recommended to these organizations to show that they are followers of the Sharia in all aspects. The first and most important step towards achieving this goal is to follow Islamic marketing strategies, such as using religion as a brand and making products fully Islamic (Alserhan 2011). According to Drummond et al. (2007), the marketing approach is defined as the planning and execution of certain actions in the market. Specific actions include pricing policies, product policies, marketing communications, shipping and distribution policies, and service policies.

Gr€onroos (1990) emphasizes that the most visible aspect of the marketing strategy of microfinance institutions is marketing communications. Marketing communication methods for MFIs can be categorized as follows:

- 1. Advertising: for example, mass media such as radio, TV, press, websites, social media, email marketing, and outdoor media and transportation to reach a large audience.
- 2. Sales promotion, which relates to short-term goals. This includes providing consumer equipment of varying value in exchange for different levels of savings.
- 3. Personal selling or face-to-face marketing.
- 4. Public relations: this involves creating a favourable image for the microfinance provider in the minds of potential customers or indirect marketing.

Wright (2001) provides a comprehensive and comprehensive summary of marketing strategies for microfinance institutions. According to them, marketing strategies for microfinance institutions fall into three distinct categories: corporate brand strategies, product and product delivery strategies, and customer service strategies.

Corporate Brand Strategy As defined by Kotler & Keller, Lane (2016), this includes "a name, term, symbol or design (or a combination of these) intended to denote the goods and services of one seller or group of sellers and to differentiate them from those of competitors. ." Some of the most prominent responsibilities of the marketing team of any microfinance institution are the development of brand attributes and position statements based on brand communication plans, internally and externally, to achieve several marketing objectives such as corporate identity and corporate and public communications. Connection. Furthermore, for Islamic organizations like Sharia MFIs, using a religious brand like Halal can capture a desire for purity that goes beyond the obligations of its devout adherents. At first glance, the brand is how customers can distinguish between Islamic and non-Islamic organizations. Therefore, for Sharia MFIs targeting Muslim customers, using religion as a brand is very important. Islamic branding can be defined in three ways: religion, origin, and customer.

The first is a religion based, which means microfinance organizations are strictly based on Shariah compliance. For example, when they see the Halal brand on food, everyone realizes that this product is Sharia compliant; Similarly, when people see an MFI brand including Islamic signs such as Qardolhasan or Non-Riba, they will understand that this MFI is a sharia MFI. The second is by origin, meaning that these companies are known as Islamic companies because they come from Islamic countries. However, they do not promote themselves as Sharia compliant because some of them are downright non-compliant, such as Emirates Airlines, which is known to be a company from an Islamic state but serves alcohol which is prohibited in Islam. Similarly, Grameen bank in Bangladesh looks Islamic because it works in an Islamic country but is not Shariah compliant because it operates at predetermined rates. The third is by the customer; this type of brand uses organizations in non-Muslim countries targeting Muslim customers; for example, microfinance providers in non-Muslim countries that produce financial services only for Muslims are known as Islamic institutions (Alserhan, 2016)

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

Product Strategy Product strategy is a strategic approach to developing and improving products to suit market needs and carrying out activities to optimize sustainable product sales most profitably. The first step of a product strategy is product development and differentiation, a continuous and systematic process of assessing the needs of different markets and segments to support the development and innovation of products that meet those needs most feasibly and feasibly. Profitable way. In particular, MFIs will seek opportunities not oversupplied from a competitive perspective. Brands and taglines are another part of the product strategy that focuses on influencing potential clients to use the microfinance services provided. Several tools can help microfinance institutions achieve their goals, such as designing a brand that can transmit confidence and loyalty to visitors and creating short sentences that can change the MFI's goals and attract audiences as a tagline. The last part of the product strategy is the sales strategy. In the final analysis, the MFI's sales strategy will depend on its product and target market. This will strike a balance between a push-based and a pull-based strategy for selling the product. A pull-based strategy involves spending a large amount of money on advertising and promotions to increase demand. This attracts customers to request products based on advertising, public relations, sales promotion, and direct marketing (Wright, 2001).

On the other hand, a push-based strategy uses a sales force to push the product through personal selling and direct marketing. From an Islamic perspective, naming an Islamic organization is impossible, while its products and services are not Sharia-compliant (Shirazi 2008 in KKazemian et al, 2015). So Islamic MFIs should adopt their services to Islamic finance rules to provide free interest-based loans. As mentioned earlier, Islamic finance regulations still have a lot of potentials to introduce new Shariah-based services. In selling a product or service, the sales structure of the sales strategy can be shown graphically, as shown in Figure 2.



Figure 2. Sales structureSumber: (Kazemian et al., 2015; Wright, 2001)

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

- Riduan Mas'ud
- 1. Advertising generates demand for Shariah MFI products through face-to-face communication channels. This can be very comprehensive and complex, like using mass media and other channels.
- 2. Public relations: means promoting Islamic microfinance services indirectly to potential clients.
- 3. Sales promotion involves making special offers like fee waivers or reducing the opening balance to motivate potential clients to start using Islamic microfinance services.
- 4. Direct marketing is a form of selling that links the Islamic MFI and its prospects directly. For example, marketing kiosks in crowded places, flyers, and direct mail distribution.
- 5. Personal selling: staff move to town, village or town, meeting people individually, trying to motivate clients to use the services provided.

Product Delivery and Customer Service Strategy is defined as a way to deliver the services provided and sold to customers and get their feedback to increase customer satisfaction and enhance customer value. Personal training or employee delivery is the cheapest and fastest way to ship products. For more mature Shariah MFIs, due to a large number of customers, this method does not work. These institutions are following the progress of the submission process, which includes establishing a special department to meet the objectives of the Shariah MFI. For example, such a strategy is practised by most MFIs in developed countries. In recent years, MFIs have used technological strategies to deliver products, such as using a client's Internet bank account.

Discussion

Marketing Strategy in the Industrial Age 4.0

Companies face difficulties due to the rapid changes in consumer demand and market conditions. As a result, businesses recognize the need to create new technologies and goods to attract and retain customers and improve competitiveness and performance (Nica, 2019). Therefore, Industry 4.0 technology is an important advancement that offers solutions to problems in today's market (Corallo et al., 2020). This study will focus on marketing innovative Islamic MFIs, which require developing new goods and services to meet changing consumer demands (Chen, 2020). This is a key innovation of industry 4.0. Big Data, one of the new technologies under Industry 4.0, has increased the capacity of marketers to collect and analyze market data for better decision-making and marketing strategies (Ardito et al., 2019). Therefore, studies show a sizeable relationship between marketing and Industry 4.0. The main purpose of this section is to show how Industry 4.0, the fourth industrial revolution, has influenced creative marketing in today's business climate, particularly in Shariah MFIs.

Internet of Things (IoT)

Disruptive technologies are rapidly emerging in modern culture, and relationships between individuals are instantaneous. As a result, as businesses use these technologies to enhance consumer experiences and forge stronger partnerships, the Internet of Things (IoT) has spread. According to Aydnocak, the Internet of Things (IoT) is an IP-connected network of hardware, software and services that use the existing internet infrastructure to enable autonomous communication (Aydinocak, 2022). To explore new potentials for increasing customer satisfaction, company leaders and managers can incorporate information into their systems and processes thanks to this interconnected technology (Kamp, 2018). The Internet of Things (IoT) is a cutting-edge communication strategy that uses appropriate

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

digital communication protocols and items to connect them to improve the flow of information (Ahlemeyer-Stubbe & Müller, 2020).

Moreover, as IoT technologies are integrated into various devices, such as smartphones, monitoring sensors, surveillance cameras, and household appliances, they are used to collect large amounts of consumer data (Jonny et al., 2021b). Marketers can take advantage of this opportunity to interview target consumers for strategic information.

IoT can also be used to improve marketers' understanding and forecasts of consumer behaviour. IoT technology connects physical objects to the internet and enables data exchange, giving businesses access to critical communications and information (Jonny et al., 2021a). This interconnection allows marketers to expand their communications, and increase the capacity of businesses to respond to client comments, questions or complaints in an effective and timely manner. Therefore, businesses can use IoT to be more proactive in matters related to customer service, increase satisfaction, and foster positive relationships. The relationship marketing benefits of IoT. Because of this, IoT will give marketers access to customers they've never had before, enabling them to better understand, predict, and serve their customers.

Therefore, it can be concluded that LKMS can adopt IoT technology in various forms of transactions carried out. For example, LKMS can use the website or social media as an extension to customers to disseminate and receive information to and from customers. This can affect the level of customer engagement with the MFI. Another example that can be done is in terms of transactions. With the current IoT, customers do not need to make transactions at the office or location of the LKMS but simply through a smartphone or application owned by the LKMS.

Cloud Computing

An evolving technology called cloud computing (cloud computing) relies on internet connections with low latency and high bandwidth. Prior to its development, businesses had to invest in networks, storage, software, and hardware to be compatible with digital technologies (Lee et al., 2017). However, by offering computing resources such as data storage and setup, today's cloud computing eliminates these costs without harming organizational profitability (Alakaş & Eren, 2022). To provide data storage, analytics, architecture, and design, cloud computing services can be accessed from anywhere at minimal cost with existing computing equipment (Pant, 2020). As a result, cloud computing helps create the critical digital infrastructure required for successful marketing. Digital marketers, for example, have remote access to data in various file formats. On the other hand, the previous storage method for owning a server implies that the terminal is physically connected to the server and thus reachable locally (Cagle et al., 2020). As a result, marketing wastes time and resources managing and maintaining an efficient workflow.

This problem is solved by cloud computing, which allows digital marketers to access critical information from any location and at any time. In addition, cloud computing allows online marketers to provide a protected environment where clients can provide immediate feedback on goods, services or entire brands (Lobova et al., 2020). To ensure that business marketing efforts match the wishes and demands of clients, as well as to increase satisfaction and build relationships, this information can be used in marketing campaigns, messaging, and strategies (Attaran & Attaran, 2020). While having access to client input is an important potential for business expansion, the inability of marketers to understand the vast amount of data collected by disruptive technologies can be a major barrier (Lu et al., 2020). As a result, having access to cloud-based analytics tools expands digital marketers' capabilities to make the most of

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era 4.0 Riduan Mas'ud

Industry 4.0 products and technologies. In addition, businesses of all sizes can now quickly and easily access marketing data, enabling them to work more productively and efficiently.

With this technology, the LKMS can simplify, reduce costs, and increase efficiency in the customer data storage process. This technology tends to be quite safe and far from disaster risk. In contrast to traditional technology that uses storage as a hard disk or flash disk, cloud computing technology is safer in the event of a disaster such as a fire or a robbery against an LKMS Institution.

Big data analysis and customer profiling

Database marketing, which involves collecting, aggregating, and selling personal data and information, is linked to big data marketing. The popularity of e-commerce sites such as Amazon and Alibaba and social networking sites such as Facebook, Twitter, and Instagram, have increased data collection opportunities for targeted advertising (Gupta et al., 2021). Companies that collect, analyze, integrate and sell user information, including personal information related to online and offline actions, are known as data intermediaries (Matthyssens, 2019). The concept of big data has become very popular worldwide due to the big change in the importance of data. According to Fan et al., big data is "the amount of data that is beyond the capacity of technology to store, manage and process efficiently" (Fan et al., 2015). Because the data is obtained from several interconnected devices and systems, it is difficult to assess and apply because of the large number of them. As a result, big data analytics uses analytical tools to find hidden patterns in data and generate in-depth interpretations. A description of consumer Big Data analytics is provided by Erevelles et al. as "the extraction of hidden insights about consumer behaviour from Big Data and the exploitation of those insights through useful interpretation" supports this notion (Erevelles et al., 2016). Big Data analytics helps marketers understand how consumers perceive and engage with a brand. Big Data Analytics offers the business intelligence needed to transform marketing strategies by enforcing useful improvements to improve the quality of goods or services.

Industry 4.0 marketing is data-driven. To increase brand recognition and increase consumer acquisition, it uses big data. Big Data analytics provides marketers with a comprehensive perspective on customer behaviour and trends, empowering them to create and use user-specific content to improve brand recognition and recall online and in-store (Gupta et al., 2021). In addition, Big Data enables marketers to use the cloud to obtain and analyze consistent and customized data from multiple sources, such as web pages, emails, and mobile applications (Moors & Rogiest, 2018). Big Data can help marketers maximize performance and cut costs by leveraging real-time marketing data (Ramadhani & Erwin Widodo, 2019). To develop strategies that satisfy today's needs and wants, marketers can use Big Data analytics to understand their target consumers and markets.

With big data and customer profiling, marketing activities carried out by MFIs will be much easier. For example, an LKMS wants to promote related programs they have. LKMS only need to sort and choose to whom, where, and when the program will be promoted. Currently, various social media have provided paid promotional media based on big data so that the message or information to be conveyed will be right on target according to customer needs and interests.

Electronic Payments (e-payments)

According to A.Koponen (2006), who studies various electronic payment systems, several online payment systems have emerged in recent years. This system can be roughly divided into account-based and electronic currency systems. Users of account-based systems can make payments using their bank accounts, while users of other systems can only make payments if they have enough electronic currency.

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

Various payment options are available through this system, including electronic payment cards, e-wallets, virtual credit cards, mobile payments, loyalty and smart cards, electronic cash (E-cash), and stored value card payments. In their report reviewing online payment systems for e-commerce, OECD (2006); Yang (2017) defines electronic payment methods; This summary description is provided here to examine some of the differentiating elements of the most widely used online payment services.

Based on this description, LKMS can adopt several examples of electronic payments in accordance with the institution's capacity and ability. Referring to current developments, payment methods via smartphones are in great demand by various groups. Thus, LKMS need to take concrete steps to attract funds from prospective customers.

CONCLUSION

Marketing in microfinance differs in several ways from other industries because MFIs are faced with poor customers who expect the MFI to save them. Moreover, in the microfinance industry, retaining customers is much more difficult than in other industries; Due to the short-term financial services provided, customers may decide to stay with a particular MFI or go to another MFI. Furthermore, some aspects of the marketing concept have different meanings for Shariah MFIs because, as Islamic institutions, obtaining financial gain should not be their most important goal. They provide Islamic financial services to please God and help the poor to improve their livelihoods. Thus, they are required to follow Islamic behaviour and culture in all aspects of their business, especially in marketing and the use of marketing strategies. This includes, for example, attracting new clients, promoting the services they provide, reacting to the actions of their competitors, designing Islamic brands and taglines, delivering Shariah-compliant products to clients and getting their feedback, and caring for their client's situation after using their products. While it is not meant to suggest that conventional microfinance institutions do not include these aspects in their marketing, following this strategy should be highlighted in Islamic microfinance institutions. In the current industrial 4.0 era, several steps that need to be adopted by LKMS are the use of Internet of Things (IoT) technology, cloud computing, big data and customer profiling, and electronic payments.

REFERENCES

- Ahlemeyer-Stubbe, A., & Müller, A. (2020). How to leverage internet of things data to generate benefits for sales and marketing. *Applied Marketing Analytics*, *5*(3).
- A.Koponen. (2006). E-Commerce, Electronic Payments. Proceedings of the Research Seminar on Telecommunications Business.
- Alakaş, H. M., & Eren, T. (2022). Integrated Systems and Utilization in Logistics. In Accounting, Finance, Sustainability, Governance and Fraud. https://doi.org/10.1007/978-981-16-5644-6_11
- Alserhan, B. A. (2016). The principles of Islamic marketing. In *The Principles of Islamic Marketing*. https://doi.org/10.4324/9781315553948
- Ardito, L., Petruzzelli, A. M., Panniello, U., & Garavelli, A. C. (2019). Towards Industry 4.0: Mapping digital technologies for supply chain management-marketing integration. *Business Process Management Journal*, 25(2). https://doi.org/10.1108/BPMJ-04-2017-0088
- Attaran, M., & Attaran, S. (2020). Digital Transformation and Economic Contributions of 5G Networks. International Journal of Enterprise Information Systems, 16(4). https://doi.org/10.4018/IJEIS.2020100104

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

- Aydınocak, E. U. (2022). Internet of Things (IoT) in Marketing Logistics. In *Accounting, Finance, Sustainability, Governance and Fraud*. https://doi.org/10.1007/978-981-16-5644-6_10
- Brafu-insaidoo, W. G., & Ahiakpor, F. (2011). Understanding the marketing strategies of microfinance institutions within the Accra metropolis of Ghana: Case of selected institutions. *African Journal of Marketing Management*, *3*(2).
- Cagle, M. N., Yılmaz, K., & Doğru, H. (2020). Digitalization of Business Functions under Industry 4.0. In *Contributions to Management Science*. https://doi.org/10.1007/978-3-030-29739-8_6
- Chen, C. L. (2020). Cross-disciplinary innovations by Taiwanese manufacturing SMEs in the context of Industry 4.0. *Journal of Manufacturing Technology Management, 31*(6). https://doi.org/10.1108/JMTM-08-2019-0301
- Chowdhry, B. S. (2006). Creating an Islamic Microfinance Model The Missing Dimension. *Dinar Standard*.
- Corallo, A., Latino, M. E., & Menegoli, M. (2020). Agriculture 4.0: How Use Traceability Data to Tell Food Product to the Consumers. *ICITM 2020 - 2020 9th International Conference on Industrial Technology and Management.* https://doi.org/10.1109/ICITM48982.2020.9080349
- Drummond, G., Ensor, J., & Ashford, R. (2007). Strategic Marketing: Planning and Control. In Strategic Marketing: Planning and Control. https://doi.org/10.4324/9780080498270
- El-Gamal, M. (2003). Interest and the paradox of contemporary Islamic law and finance. *Fordham International Law Journal*, 27(1).
- El-Komi, M., & Croson, R. (2013). Experiments in Islamic microfinance. *Journal of Economic Behavior* and Organization, 95. https://doi.org/10.1016/j.jebo.2012.08.009
- Erevelles, S., Fukawa, N., & Swayne, L. (2016). Big Data consumer analytics and the transformation of marketing. *Journal of Business Research*, 69(2). https://doi.org/10.1016/j.jbusres.2015.07.001
- Fan, S., Lau, R. Y. K., & Zhao, J. L. (2015). Demystifying Big Data Analytics for Business Intelligence Through the Lens of Marketing Mix. In *Big Data Research* (Vol. 2, Issue 1). https://doi.org/10.1016/j.bdr.2015.02.006
- Freitas-da-Costa, M., Silva, W. C., Paula, T. S., Silva, D. O., & Vieira, M. G. (2011). Social marketing and nonprofit organizations. *World Academy of Science, Engineering and Technology*, 77.
- Gr€onroos. (1990). Service management and marketing: managing the moments of truth in service competition. *Choice Reviews Online*, 27(11). https://doi.org/10.5860/choice.27-6416
- Gupta, S., Justy, T., Kamboj, S., Kumar, A., & Kristoffersen, E. (2021). Big data and firm marketing performance: Findings from knowledge-based view. *Technological Forecasting and Social Change*, *171*. https://doi.org/10.1016/j.techfore.2021.120986
- Hermann, M., Pentek, T., & Otto, B. (2016). Design principles for industrie 4.0 scenarios. *Proceedings* of the Annual Hawaii International Conference on System Sciences, 2016-March. https://doi.org/10.1109/HICSS.2016.488
- Hiatt, S. R., & Woodworth, W. P. (2006). Alleviating poverty through microfinance: Village banking outcomes in Central America. *Social Science Journal*, 43(3). https://doi.org/10.1016/j.soscij.2006.04.017
- IRTI. (2007). Framework and Strategies for Development of Islamic Microfinance services. *Working Paper for Ifsd Forum, Islamic Microfinance Development: Challenges and Initiatives.*
- Jonny, Kriswanto, & Toshio, M. (2021a). Building an Implementation Model of IoT and Big Data and Its Improvement. International Journal of Technology, 12(5). https://doi.org/10.14716/ijtech.v12i5.5178
- Jonny, Kriswanto, & Toshio, M. (2021b). Modeling IoT and big data implementation. *Proceedings of 2021 International Conference on Information Management and Technology, ICIMTech 2021*. https://doi.org/10.1109/ICIMTech53080.2021.9535084

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

- Kagermann H, Wahlster W, H. J. (2013). National Academy of Science and Engineer- ing. Recommendations for implementing the strategic initiative INDUSTRIE 4.0: Final report of the Industrie 4.0 Working Group. *National Academy of Science and Engineering, April*.
- Kamp, B. (2018). Expanding international business via smart services: Insights from 'hidden champions' in the machine tool industry. In *Progress in International Business Research* (Vol. 13). https://doi.org/10.1108/S1745-886220180000013012
- Karim, N., Tarazi, M., & Reille, X. (2008). Islamic Microfinance : An Emerging Market Niche. *Cgap*, *49*(August).
- Kazemian, S., Abdul Rahman, R., Mohd Sanusi, Z., & Ibrahim, Z. (2015). Structure of Marketing Program for Islamic Microfinance Institutions. *Springer Proceedings in Business and Economics*. https://doi.org/10.1007/978-981-287-499-3_17
- Kohli, A. K., & Jaworski, B. J. (1990). Market Orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing*, 54(2). https://doi.org/10.2307/1251866
- Kotler, P. (1994). Marketing Management: Analysis Planning Implementation and Control. *Journal* of *Retailing*, 88(3).
- Kotler, P., & Keller, Lane, Kevin. (2016). Marketing Management. In Pearson (Vol. 22).
- Lee, C. H., Chen, C. H., Lee, Y. C., Xu, G., Li, F., & Zhao, X. (2017). Accelerating retail-innovation design for smart services via foresight approach and case-based design. *Advances in Transdisciplinary Engineering*, 5. https://doi.org/10.3233/978-1-61499-779-5-813
- Liao, Y., Loures, E. D. F. R., & Deschamps, F. (2018). Industrial Internet of Things: A Systematic Literature Review and Insights. *IEEE Internet of Things Journal*, 5(6). https://doi.org/10.1109/JIOT.2018.2834151
- Lobova, S. v., Alekseev, A. N., Litvinova, T. N., & Sadovnikova, N. A. (2020). Labor division and advantages and limits of participation in creation of intangible assets in industry 4.0: humans versus machines. *Journal of Intellectual Capital*, 21(4). https://doi.org/10.1108/JIC-11-2019-0277
- Lu, C., Chang, F., Rong, K., Shi, Y., & Yu, X. (2020). Deprecated in policy, abundant in market? The frugal innovation of Chinese low-speed EV industry. *International Journal of Production Economics*, 225. https://doi.org/10.1016/j.ijpe.2019.107583
- Matthyssens, P. (2019). Reconceptualizing value innovation for Industry 4.0 and the Industrial Internet of Things. In *Journal of Business and Industrial Marketing* (Vol. 34, Issue 6). https://doi.org/10.1108/JBIM-11-2018-0348
- Mohammed Obaidullah. (2008). Introduction of Islamic Microfinance. In *Journal of Social Issues in Southeast Asia* (Vol. 23, Issue 1).
- Moors, J., & Rogiest, S. (2018). Implementing big data analytics in a manufacturing environment: A theoretical framework. *Proceedings of the 14th European Conference on Management, Leadership and Governance, ECMLG 2018*. https://doi.org/10.33423/jsis.v14i1.988
- Nica, E. (2019). Cyber-physical production networks and advanced digitalization in industry 4.0 manufacturing systems: Sustainable supply chain management, organizational resilience, and data-driven innovation. *Journal of Self-Governance and Management Economics*, 7(3). https://doi.org/10.22381/JSME7320194
- OECD. (2006). Online Payment Systems for E-Commerce. In OECD Digital Economy Papers.
- Pant, Y. (2020). Application of cloud computing in businesses. In *Innovations and Challenges in Human Resource Management for HR4.0*.
- Ramadhani, H. A. D., & Erwin Widodo, S. T. (2019). A data analytics model of banking performance and economic condition: East Java Region Case. *Proceedings of the International Conference on Industrial Engineering and Operations Management, 2019*(MAR).
- Roblek, V., Meško, M., & Krapež, A. (2016). A Complex View of Industry 4.0. SAGE Open, 6(2). https://doi.org/10.1177/2158244016653987

Digital Marketing Communication Patterns for Islamic Microfinance Institutions in the Industrial Era

4.0

Riduan Mas'ud

- Sebhatu, S. P. (2009). Sustainability Performance Measurement for sustainable organizations : beyond compliance and reporting. *11th Quality Management and Organizational Development*, 2006.
- Shi, Z., Xie, Y., Xue, W., Chen, Y., Fu, L., & Xu, X. (2020). Smart factory in Industry 4.0. Systems Research and Behavioral Science, 37(4). https://doi.org/10.1002/sres.2704
- Tahir, M., & Umar, M. (2008). "Marketing Strategy for Islamic Banking Sector in Pakistan" Blekinge Institute of Technology School of Management, Ronneby, Sweden. *In Business, June*.
- The Economist. (2008). Poverty: The bottom 1.4 billion. In Economist (Vol. 388, Issue 8595).
- Wilson, R. (2013). Making development assistance sustainable through Islamic microfinance. In *Shari'a-Compliant Microfinance* (Vol. 9780203808832). https://doi.org/10.4324/9780203808832
- Wright, G. (2001). Microfinance systems: designing quality financial services for the poor. *Choice Reviews Online*, *38*(08). https://doi.org/10.5860/choice.38-4585
- Xu, X., Lu, Y., Vogel-Heuser, B., & Wang, L. (2021). Industry 4.0 and Industry 5.0—Inception, conception and perception. *Journal of Manufacturing Systems*, 61. https://doi.org/10.1016/j.jmsy.2021.10.006
- Yang, W. (2017). Analysis on Online Payment Systems of E-Commerce. *Oulu University of Applied Sciences*.
- Zaidin, N. H. M., Diah, M. N. M., & Sorooshian, S. (2018). Quality management in industry 4.0 era. *Journal of Management and Science*, 8(2). https://doi.org/10.26524/jms.2018.17
- Zeller, M. (2006). A comparative review of major types of rural microfinance institutions in developing countries. *Agricultural Finance Review*, 66(2). https://doi.org/10.1108/00214660680001187