

# Denial-Resistance-Exploration-Commitment, a Consumer Behavior Switch During Covid-19

Ratih Pratiwi<sup>1</sup>

*Faculty of Economy  
Wahid Hasyim University  
Semarang, Indonesia  
[rara@unwahas.ac.id](mailto:rara@unwahas.ac.id)*

Rizky Rama Setyaky<sup>2</sup>

*Faculty of Economy  
Wahid Hasyim University  
Semarang, Indonesia  
[rizkyrama287@gmail.com](mailto:rizkyrama287@gmail.com)*

Nofita Sulistiyanti<sup>3</sup>

*Faculty of Economy  
Wahid Hasyim University  
Semarang, Indonesia  
[nofitasulistiyanti@gmail.com](mailto:nofitasulistiyanti@gmail.com)*

Syafiqotul Azka<sup>4</sup>

*Faculty of Economy  
Wahid Hasyim University  
Semarang, Indonesia  
[syafiqotulazka2508@gmail.com](mailto:syafiqotulazka2508@gmail.com)*

**Abstract:** The global pandemic COVID-19 has forced everyone to face a health crisis and created severe shocks in the world economy. When other businesses decline because no one dares to leave, e-commerce becomes the choice for shopping. This study aims to examine the influence of the SMEs' IT utilization ability on e-commerce and consumer purchasing behavior.

This research is a quantitative study that discusses the influence of ICT and e-commerce on changes in consumer behavior. Data were collected using questionnaires distributed to household-scale frozen food industry respondents in the PAKUDJEMBARA area. Data were measured using a Likert scale 1-5 and analyzed using SPSS analysis. 20. The results of this study indicate that ICT Skills and e-commerce have a significant positive effect on customer behavior. ICT Skill is an effort for MSME resilience to break consumer buying behavior during a pandemic. E-commerce has changed the paradigm of customer behavior in the pandemic era. This research has not provided both theoretical and practical implications to be generalized further. So that further research can consider the implications of ICT Skills and e-commerce in changing consumer behavior.

**Keywords:** *costumer behavior, e commerce, ICT Skill*

## I. INTRODUCTION

The impact of the Covid 19 pandemic is not only paralyzing health and large industrial economies, but MSMEs have the greatest impact. The start-up business has stalled in its business journey. The consumption pattern of the people has changed to be digital based. All needs can be fulfilled with just one click, therefore online shopping is much more convenient as it does not require someone to physically visit the store and can invest time in doing other things. The internet has also revolutionized the way people shop as a whole. Because of its many advantages and benefits, more people today prefer to buy online rather than the traditional way of visiting shops [1]. The Covid 19 pandemic changed the pattern of supply and demand in the economy, thereby amplifying the impact of the pandemic on service-related sectors, such as restaurants and tourism [2].

The majority of internet users in Indonesia are social media enthusiasts, accessing social media via mobile devices and are dominated by millennials and generation Z; a generation born in the digital era, where smartphones and

online shopping have become part of their daily lives [3]. Its importance has been proven by various studies [4]–[6]. Social media eliminates barriers to distance, space and time, as well as prices of goods that affect consumer purchasing behavior [7]. Technology and information encourage the provision, development and updating of information that can influence consumer purchasing decisions [5]. IT resources in the form of technology that help humans create, change, store, communicate and / or disseminate information are used to make it easier to bring together buyers and sellers of goods and services [8]. Customer behavior has a very dynamic nature. Changes in customer preferences occur all the time so marketers must understand consumer buying patterns, product preferences and trends that customers are interested in. Online marketing helps marketers, the sales and purchase process that helps customers get the desired product without being constrained by time, distance and geographical conditions [5].

Globalization and intensification of informatisation change the lifestyle of people almost anywhere in the world as a result of globalization and informatization. This process occurs in line with increasing global financial and economic risks, social tensions, and the decline in national cultural traditions that have been formed from generation to generation [9]. All countries are moving towards a globalization and information society, and the development of the digital economy and information and communication technologies are developing their own socioeconomic and cultural models that influence the transformation of consumer behavior. Certain specific trends are observed in the transformation process. Thus, various types of consumer activities become more intellectualized [9]. The ability and readiness of business actors to use technology are the main problems of business actors' readiness in facing e-commerce. The use of IT in marketing is still dominated by the digital natives generation who understand technology from a young age, while the majority of industry players are the generation of digital immigrants who understand technology out of necessity [10]. Meanwhile, to survive a pandemic that limits physical contact, industry players are required to be able to follow changes in traditional marketing modes to marketing via the internet [11]. E-business allows a company to interact

with data processing systems both internal and external to be more efficient and flexible [12].

Consumer behavior needs to be studied and understood, because understanding consumer behavior for marketers can be done to implement marketing strategies to suit the characteristics of consumers. The assessment of consumer behavior is a study of the purchasing decision process that individual consumers must go through [7].

This study aims to examine the influence of the SMEs' IT utilization ability on e-commerce and consumer purchasing behavior. This research is expected to be able to provide a better understanding for stakeholders to increase resilience to a pandemic.

## II. LITERATURE REVIEW

### A. IT Skill

In many literatures, the term mastery of technology (technological acquisition) is defined as the ability to produce and manage the process of technological change [13]. This mastery process goes through the stages of selecting, obtaining, implementing, managing, adopting, imitating, acquiring, upgrading and mastering technology from outside which is more advanced effectively and efficiently [14]. Communication and information technology is the technology required to process information using electronic computers, communication devices and software applications to convert, store, protect, process, transmit and retrieve information anytime and anywhere [15].

From the above discussion, it can be concluded that the ability to use information and communication technology (ICT Skill) is the technology needed to process information using electronic computers, communication devices and software applications to convert, store, protect, process, transmit and retrieve information. anytime and anywhere. Indicators of communication and information technology used in this study are: duration of daily internet use in the workplace, frequency of use, level of internet usage for various business activities; and Types of web pages accessed while working [16].

### B. E-Commerce

Electronic commerce is all trading activities carried out through electronic media [7]. The term e-commerce is used to describe all transactions using electronic media. E-commerce is divided into six types, namely Business to business (B2B); Business to consumer (B2C); Consumer to consumer (C2C), Consumer to business (C2B); Business to public administration (B2A) and Consumer to public administration (C2A) [6].

E-Commerce is a process of buying and selling transactions electronically via the internet [1]. E-commerce is defined as a business process using electronic technology that brings together companies, consumers and the public in the form of electronic transactions. E-Commerce is also defined as the exchange or sale of goods, services and information electronically [1]. The use of the internet in E-Commerce is a favorite choice for most people because of the conveniences that the internet network has as a very large, fast and easy access to public network, the internet as a

medium for conveying messages / data making it possible to send and receive information in form of analog and digital electronic data [17].

E-commerce capability is defined as a high-level multidimensional construction resulting from a set of specific variables that measure e-commerce functionality [18]. E-commerce capabilities reflect a company's strategic intention to use the Internet to share information, facilitate transactions, improve customer service, and strengthen back-end integration [19]. To some extent, this e-commerce capability must be reflected in the functionality of a company's Web site, because the Internet is a new channel for reaching customers and the Web serves as a gateway for dealing with customers and suppliers in the internet era [20]. E-commerce functionality can range from static information to online order tracking, and from digital product data to personalized features tailored to customer needs [21]. This functionality shows various levels of sophistication that can be measured [18]. The indicators used are information, transactions, customization and backend integration [19].

### C. Consumer Behavior

The Covid-19 outbreak has forced radical changes in just 2-3 months, forcing consumers to struggle with it. This phase of change and adjustment was initially laden with denial, which was then followed by resistance as a result of experimenting and exploration so that eventually a commitment was formed to change behavior and form new habits [22]. The denial-resistance-exploration-commitment process forces consumers to prepare themselves and get used to it quickly so that new consumer habits appear in sizes of weeks or months, not years [23].

Changes in consumer behavior are the impact of changes in the social and technological environment and can determine consumers' thoughts about what to buy, when to buy, how and where to buy [24]. Consumer behavior is consumer action in fulfilling needs [5]. The presence of a pandemic has created new habits and cultures in society. Many shifts and behavioral changes have occurred after the pandemic, ranging from small habits in everyday life to habits that change lifestyle. Consumers are increasingly concerned with health and hygiene and are increasingly consuming health products and vitamin drinks. Inventory Knowledge predicts 4 types of shifts in consumer behavior known as The 4 Mega Shifts in Consumer Behavior, namely: Stay at home lifestyle, Bottom of pyramid, Go virtual and Empathic society [25].

Trends indicate the growing role of the intellectual component in the marketing process of products and services and in the saturation of market information, particularly resulting from the increasingly complex complexity of products and services. The increased complexity comes with an intensive flow and accumulation of a greater volume of information, intellectual input, and knowledge in production and circulation [9]. The development of the digital economy has led to significant transformations in consumer behavior. In the "new" economy, they result from processes such as

intellectualization, standardization, service, ecology, technology, humanization, aesthetics, civilization, and consumption virtualization [9]. Changes in consumer behavior are indicated by herd mentality, panic buying and Maslow's lower order needs [26]. The indicators used in this study after being adjusted to the research location are stay at home lifestyle, ecological consumption and virtual consumption.

**III. METHODOLOGY**

This research is a quantitative study using a Likert scale 1-5. Respondents in this study were 347,149 SMEs in the province of Central Java and small businesses according to Central Java BPS in 2020. The sample used in this study is purposive sampling, which is a frozen processed food SME in Central Java which has been producing for more than 15 years. As a result, 114 UKM Frozen Food were found in Central Java. The data obtained were analyzed using SPSS 20 software.

**IV. RESULT AND DISCUSSION**

To determine whether the data used is valid and reliable, the validity and reliability tests are conducted. The validity test tests each of the variables used in this study. The whole research variable contains 11 statements that must be answered by the respondent.

TABLE I. VALIDITY TEST RESULT

Variable	Indicator	Item Code	r hitung	r tabel	Remark
<i>IT Skill</i>	1	X2.1	0,869	0,183	Valid
	2	X2.2	0,835	0,183	Valid
	3	X2.3	0,738	0,183	Valid
	4	X2.4	0,454	0,183	Valid
<i>E Commerce</i>	1	X3.1	0,786	0,183	Valid
	2	X3.2	0,738	0,183	Valid
	3	X3.3	0,648	0,183	Valid
	4	X3.4	0,791	0,183	Valid
<i>Consumer Behavior</i>	1	Y1.1	0,804	0,183	Valid
	2	Y1.2	0,765	0,183	Valid
	3	Y1.3	0,802	0,183	Valid

Source: Primary data processed, 2020

Based on Table 1, it is known that the calculated r value of all indicators is greater than the r table value. Therefore it can be concluded that all indicators in this study are valid.

Reliability is a tool for measuring a questionnaire which is a construct or variable measurement tool. The questionnaire is said to be reliable or reliable if a person's answer to the statement is consistent or stable over time. Reliability test is the level of stability of a measuring device in measuring a symptom / event. The higher the reliability of a measuring instrument, the more stable the measuring device is. A construct is said to be reliable if it gives a Cronbach Alpha value > 0.60.

TABLE II. RELIABILITY TEST RESULT

Variable	Cronbach Alpha	Status
<i>IT Skill</i>	0,761	Reliabel
<i>E Commerce</i>	0,715	Reliabel
<i>Consumer Behavior</i>	0,721	Reliabel

Source: Primary data processed, 2020

Multiple linear regression analysis that has been carried out obtained regression coefficients, t value and significance level as shown in Table 3 as follows:

TABLE III. MULTIPLE LINEAR REGRESSION TEST RESULT

	Unstandardized coefficients	Standardized coefficients	t	Sig
	B	Std. Error	Beta	
Constant =	2,819	1,199	2,35	,020
Consumer Behav				
ICT Skill	,269	,068	,387	,000
E Commerce	,073	,062	,098	,241

Source: Primary data processed, 2020

The variable ICT Skill (X1) has a positive influence on consumer behavior (Y) with a value of 0.387; meaning that the better the ICT Skill actors, the better consumer behavior will be. E Commerce variable (X2) has a positive influence on consumer behavior (Y) with a value of 0.098; meaning that the better E Commerce (X2), the consumer behavior (Y) is increasing.

**A. ICT Skill, MSME resilience efforts to break consumer purchasing behavior during a pandemic**

Changes in consumer behavior during a pandemic occur because of the impulse of changing conditions that forces them to adapt to these conditions. It is possible that current consumer behavior will last for quite a long time, because consumers also need time to make adjustments to return to their old habits and behavior. At this time consumers are accustomed to shopping or doing activities by minimizing

physical contact and carrying out health protocols anytime and anywhere because they still feel threatened by a pandemic.

Industry players must take advantage of information technology to increase the competitiveness of companies in a very competitive era [27]. Digital technology provides convenience in business processes and transactions both internally and externally [6]. Managing a company with digital technology can reduce transaction costs, increase the speed of transactions between businesses as well as between businesses and customers [28]. Digital information devices are effective tools to improve external communication and service quality to customers [13]. The application of information and communication technology is a systematic, integrative, and comprehensive process, supported by a framework that focuses on processes that are oriented towards the needs and characteristics of the business and the setting of success targets [29]. With the broad role of ICT in industrial resilience, the ability to utilize ICT industry players plays a very important role in industrial resilience during a pandemic.

In the past, the process of disseminating information to a wide audience was carried out using traditional technology, so in the information and digital era, as now, the process of disseminating information is carried out through digital technology [5]. Information is sent in various forms such as text or images through various information and communication technology equipment such as smartphones, television, and other modern communication media. The development of communication and information technology is very fast, of course, provides great benefits in facilitating communication and work [4]. The benefits of the first development of technology and information are to facilitate and speed up communication. The presence of new communication and information technology has led to a communication revolution around the world, in the past it took a very long time to obtain or send messages to other people but in the digital era it only took a fraction of a second to send messages to several people with different distances [4].

The ability of business actors to utilize digital technology will make it easier to communicate and easier to access information. Business people can easily access and obtain types of information and types of news easily anytime and anywhere. The ease of accessing information has an impact on the increasing knowledge and insight possessed, as well as shortening production time and costs. The ability of frozen food business actors in Central Java to utilize communication and information technology encourages trade to be carried out electronically or e-commerce which allows consumers to search for and buy products online. The growing capacity of business actors in utilizing communication and information technology has resulted in the convenience of consumers to obtain product information online [16].

The results of this study indicate that the duration of daily use of the internet at work, the frequency of use, the

level of internet usage for various business activities; and The types of web pages accessed while working greatly affect how consumers live a stay at home lifestyle, affect consumption patterns that pay attention to environmental ecology and virtual consumer style of consumption.

### ***B. E-commerce capability encourages a paradigm shift in customer behavior in the pandemic era***

Changes in consumer behavior during a pandemic occur because of the impulse of changing conditions that forces them to adapt to these conditions. It is possible that current consumer behavior will last for quite a long time, because consumers also need time to make adjustments to return to their old habits and behavior. At this time consumers are accustomed to shopping or doing activities by minimizing physical contact and carrying out health protocols anytime and anywhere because they still feel threatened by a pandemic.

Before the pandemic, online shopping was still limited to products such as clothing, consumer electronics, or ordering airplane tickets or totals. With the outbreak, online shopping will soar both in terms of breadth ("wide") and in terms of depth ("deep"). Online shopping activities will expand to other categories such as grocery and essential necessities / daily routine as a result of restricting activities outside the home. Online shopping will also experience a deepening, which is indicated by the increase in the volume of purchases in each category. Previously, consumers used omnichannel, who still used physical contact even though they purchased online (digital-physical), but with the rise of the contact-free lifestyle, consumer behavior will increasingly swing to online shopping.

So far, consumers order food / drinks online only for types of food in the context of "indulgence" such as: boba tea, latte, snack, pizza, burger, or geprek chicken with continued social distancing for a long time, then online food delivery services will shift from indulgence to utility which means it leads to ordering food for routine daily needs. The increase in ordering for frozen food needs and even become a daily or weekly routine, and the extension of the social distancing period, so the e-commerce business model will start to be widely adopted. Social distancing will form a new normality in which business actors will imply e-commerce which makes it easier for consumers to buy, receive goods, consume, enjoy services, or enjoy experiences with as little contact as possible with other people. This phenomenon will form a new lifestyle that I call: contact-free lifestyle.

The ecology of consumption is another important feature of the modern market. It describes the consumer's focus on a prudent environmental attitude, particularly waste reduction and recycling efforts, selecting products and services based on "clean" production technologies. In this aspect, the term "ecology" appears in a new meaning, relating to the development of new perspectives and value systems and priorities in human activities during a pandemic, namely paying attention to environmental sustainability, cleanliness, hygiene and health. The virtual consumption indicator shows

that consumer behavior during the pandemic has become more dependent on digitization. Selection and purchase decisions are made through digital technology to reduce physical contact. Activities carried out through virtual activities such as gathering, school, traveling or worship. The stay at home life indicator shows that all activities and physical activities are carried out at home, including work. Being a remote worker requires consumers to work through the home, using a zoom application so that consumers decide to change the layout of their homes to be more zoomable, and move a little office environment into the house. This affects the choice of home interiors, furniture, electronic devices and other needs to support consumer comfort in doing their work at home.

The ability of SMEs in providing information, serving consumers in carrying out transactions, and customizing by adjusting consumer needs and integrating marketing strategies with technology infrastructure that stores company information used by marketing. This capability will increase consumer comfort in living a stay at home lifestyle, encourage ecological consumption choices, and encourage high virtual consumption.

## V. CONCLUSION

The global pandemic COVID-19 has forced everyone to face a health crisis and created severe shocks in the world economy. With the existence of a social distancing and lockdown system, industry players have to face huge losses and this will continue to grow every day. Companies must learn to adapt to changes that are so radical and full of uncertainty even by using the smallest gaps. The impact that looks contrasting with other industries is the E-commerce industry. When other businesses decline because no one dares to leave, e-commerce becomes the choice for shopping. The phenomenon of changing business modes with e-commerce causes drastic changes in customer behavior.

E-commerce allows companies to forge tight electronic integrations to facilitate coordination, fulfillment, and inventory management behind the office and with external partners. The ability to integrate is important to fit these parts and to connect different systems and fragmented resources thus enabling companies to get greater returns on existing investments. E-commerce requires the ability to provide information, namely, to provide useful information about a company and its products and services, how to search, navigate, review products, and store locations.

While usability that is integrated and tailored to the specific needs of the company cannot be obtained easily - or it is possible to simply ditch the old technology and replace it with a new one. It takes a lot of time and effort to make all individuals in the company understand technology. The ability to use ICT will greatly encourage changes in customer behavior by bringing together business actors and buyers in the digital market. Industry players must be ready to face the changing times and adapt by increasing their ability to utilize ICT.

## VI. LIMITATIONS AND FUTURE RESEARCH AGENDA

This study has invested a lot of effort in data collection, but the limited availability of data makes this study use secondary data obtained from existing publications. This article's data set focuses on variables related to e-commerce and ICT resources only. This study has not yet discussed managerial skills and other intangible resources related to e-commerce. So that research on other resources more broadly, especially organizational, managerial, and human resources and the synergy between online and offline assets as complementary will be very useful. The sample size of 114 companies is relatively small so they do not use SEM analysis. Thus the results of regression analysis, although valid as a research methodology, may not provide a global picture of the overall situation in the research field. This research is a quantitative study that discusses the influence of ICT and e-commerce on changes in consumer behavior in the frozen food business in Central Java, but this research has not provided both theoretical and practical implications to be generalized further. So that further research can consider the implications of ICT Skills and e-commerce in changing consumer behavior.

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