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#### Review dari Reviewer

## Food Safety and Halal Issues in Food Aggregator Applications: "A Consumer's Point of View"

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#### ABSTRACT

Food delivery services are increasingly developing, especially during the COVID-19 pandemic. Aggregator application made simple to use by consumers. This application, not only easy to use for consumers, but also makes it easier for producers to sell their products. However, consumers do not know whether the products offered in this application are included in the safe and halal food category. This research is qualitative research with a descriptive design which was in January - February in DIY through online interviews. In this study, the researchers examined how consumers' perceptions of the safety and halal food in delivering food services with the aggregator application. The results show that consumers believe that the products sold in the aggregator application are safe and halal. Consumer trust came from seen the rating, product photos, and the taste of the product. For product safety, consumers see product quality from product packaging. As for the halal label of the product, consumers believe that if there is no information the product is haram it means that the product is halal. Consumers purchase products in the aggregator application because they believe that all products sold in the application are safe and halal.

Keywords: Aggregator Application, Consumer, Food Safety, Halal Food

#### 1. INTRODUCTION

The termination of employment has made many MSMEs appear in DIY as an alternative source of financial income. The largest increase in MSMEs was in the food and beverage business sector, it was noted that business in the food sector increased by 350% and herbal food products by 200% (Rosita, 2020). The culinary business is one of the fastest-development businesses in recent years and can generate large profits. This business provides a sizeable contribution to the creative economy sector, up to 34% in Indonesia (Tumpuan, 2020). Culinary business is also supported by technology and information, one of them is e-commerce with an e-marketplace model. The concept of an e-marketplace is like a traditional market where there are sellers and buyer, but it is done by online. An e-marketplace provider is an intermediary that provides a place for sellers and buyers to carry out buying and selling transactions (Kurnia et al., 2017). Internet has also encouraged the expansion of online food delivery services that allow consumers to easily access, search, and compare prices on various culinary products (Dang et al., 2018). The aggregator application is an online food delivery service application that provides convenience to consumers. Only by using a smartphone, consumers can easily order food from the various restaurants they want. This application helps entrepreneurs in the culinary field on delivering food orders from the place of production to consumers' homes (Kapoor & Vij, 2018).

The number of MSMEs that have sprung up today makes them compete to provide services that satisfy customers. Especially during the Covid-19 Pandemic, consumers will tend to choose products that are guaranteed safety and halal. This is a huge potential for MSMEs to produce quality products (Muhamad, 2020). Food safety regulations on MSME products are stated in the Government Regulation of the Republic of Indonesia Number 86 of 2019 which contains accredited food safety certification

**Commented [Ma1]:** Penulisan kata kunci abstrak digaris miring

Commented [H2R1]: Baik sudah kami perbaiki

(Pemerintah Republik Indonesia, 2019). Meanwhile, regulations for halal products are listed in Law No. 33 of 2014 which states that all products must be certified halal (Pemerintah RI, 2014).

A food product is declared safe if the food product is free from various contaminants such as physical contamination, chemical contamination, and microbiological contamination (Zaini et al., 2019). Indonesian government also has the responsibility for providing safe, nutritious, and quality food, all of which are stated in Government Regulations (Sartika, 2020). In Islamic Sharia law, food products are declared halal by fulfilling provisions such as products not containing non-halal parts of animals or haram products, animals slaughtered in the name of Allah, in the preparation stage the ingredients are not prepared or produced using tools or equipment that is contaminated or used with non-Halal materials, and during the stages of the process of preparation, manufacture, packaging, storage and distribution of the product must be physically separated between halal and non-halal products (Talib & Johan, 2012).

However, it is known that the level of awareness of MSME actors, especially those engaged in the culinary sector, is still low on the application of food safety standards for the products they sell (Pritanova P et al., 2020). In addition, the level of public knowledge and awareness regarding halal products in Indonesia is still low, this is known because people think that all products sold in Indonesia are halal products because most Indonesians are Muslims (Akim; Konety, Neneng; Purnama, Chandra; Adilla, 2018).

On the other hand, the level of consumer trust in the products sold in the aggregator application is quite large. The consumer is seen from safety in terms of food safety, which can be seen in the food they order is still sealed and neatly packed (Vincentius & Putranto, 2020). Consumers 'perceptions of food safety certifications held by food producers also have a significant impact on consumers' desire to buy these products. It is known that the existence of certification regarding product safety provides important guarantees for consumers (Liu et al., 2020). This research aims to know how far the customer trust aggregator applications are. On the other hand, with the high level of consumer belief in the product, the researcher underlines that to keep up consumer believe, producers must try to legalize their products on food safety and halal certification.

Based on the above background, this research will discuss further the safety and halal category of food sold in the aggregator application from a consumer's point of view, especially during the COVID-19 pandemic. This research was conducted because no research examined the safety and halal category of food in the aggregator application during the COVID-19 Pandemic.

#### 2. METHODS

This research is qualitative research with a descriptive design. Respondents in this study are consumers who usually order food using an aggregator application that is determined by inclusion criteria such as: Living in DIY and using an aggregator application before and during the pandemic. Data collection was carried out using the purposive sampling method and triangulation method carried out by interviewing also processed food producers using aggregator applications as well as food safety and halal experts conducted in January - February 2021. The research was conducted through in-depth interviews using online platform meetings. Respondents provide an explanation of the research procedure before the interview begins, and if the respondent agrees then the respondent will agree to the informed consent in the form of a digital file.

#### 3. RESULTS AND DISCUSSION

#### 3.1 Characteristics Respondent

Respondents in this study consisted of 10 people who are consumers in the aggregator application, producers who sell their products in the aggregator application, food safety experts, and halal food experts.

3.2 Consumer Perceptions of the Development of the Online Food Business During the Covid-19 Pandemic

Respondents in this study argued that the online food business using an aggregator application has been known since 2019 in DIY, and the respondents themselves also felt very helped by the emergence of this application. Especially during the COVID-19 pandemic.

Commented [Ma3]: Hasil kuosioner atau hasil wawancara?

Jika hasil kuosioner atau wawancara dalam bahasa Indonesia, bisa dituliskan juga bahasa Indonesianya sambil diikuti teriemahan bahasa Inggrisnya.

Commented [H4R3]: Baik sudah kami perbaiki

"During this Pandemic COVID-19, I rarely come out, and if I am not cook, I will rely on that. Especially since COVID has become more frequent, I always order some food in the application "-AD. Consumers-

"Online food business rapidly increase now, especially since the pandemic. Everyone began to open an online shop. It is easier for me, at least in a day I will buy it by online"-RS. Consumers

"Especially now, when WFH is at home, I can't go anywhere, so I often start using services like that" -RR. Consumer-

Usually before ordering food from the aggregator application, respondents will look at the food to be ordered through photos, ratings from other consumer ratings, and promos that offered by producers.

"Usually I sort out the rating, keep looking at the price, whether the promo is right or not. For me, at least the rating is 4.4"-AD. Consumer-

"I usually look at the photos, keep looking at the ratings. Because you can't see the comments, the rating is random, at least the rating is 4.5 or above". - RS. Consumers-

"Of course, we will definitely see reputation from seller or producer -RR. Consumers-

3.3 Consumer Perceptions of Online Food Safety Risks During the Covid-19 Pandemic

The COVID-19 pandemic that has been running for 1 year has also changed the way food producers sell. The online food sales system through an aggregator application has increased. Based on the results of interviews conducted with consumers, producers, and food experts, there are several differences in perceptions in terms of food safety. From the consumer side, they think that food is safe in terms of its packaging. The level of consumer confidence is quite large in the products sold in the aggregator application.

"I believe in that. If I already use go-jek, I will assume that the shop has been surveyed by the gojek. All the food displayed in the aggregator application such as go-jek or grab means that he has passed quality". -AD. Consumers -

"First I'll see the reputation of this seller. Starting from the packing side, the seller will give you something to convince consumers that it's safe like that"-RR. Consumer-

Producers have perception that on the stages of preparation until distribution already safe for consumers. Washing their hand is one of the procedures they always to do before they start production, and they always use personal protective equipment (PPE).

"I always wash my hands before work and use PPE, because I'm afraid if that happen to us. -P. Producer-

"I do, it has been a habit from long ago, from my mother's gen. I wash everything that goes into the refrigerator first. From the vegetables, I dry them for a while, then put them in the refrigerator. So, the refrigerator is clean". -DW. Producer-

According to a food expert, food that called safe when producer meet the criteria of food safety such as ingredients, situation, location, tools and even packaging. Passed from validation or legalization and have a certificate can be called as safety food by the expert

"Indeed, we urge to carry out legality in the form of certification registration in the food sector"
-GN. Food Expert-

**Commented [Ma5]:** Hasil kuosioner atau hasil wawancara?

Jika hasil kuosioner atau wawancara dalam bahasa Indonesia, bisa dituliskan juga bahasa Indonesianya sambil diikuti terjemahan bahasa Inggrisnya.

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**Commented [Ma7]:** Hasil kuosioner atau hasil wawancara?

Jika hasil kuosioner atau wawancara dalam bahasa Indonesia, bisa dituliskan juga bahasa Indonesianya sambil diikuti terjemahan bahasa Inggrisnya.

Commented [H8R7]: Baik sudah kami perbaiki

Commented [Ma9]: Hasil kuosioner atau hasil wawancara?

Jika hasil kuosioner atau wawancara dalam bahasa Indonesia, bisa dituliskan juga bahasa Indonesianya sambil diikuti terjemahan bahasa Inggrisnya.

Commented [H10R9]: Baik sudah kami perbaiki

**Commented [Ma11]:** Hasil kuosioner atau hasil wawancara?

Jika hasil kuosioner atau wawancara dalam bahasa Indonesia, bisa dituliskan juga bahasa Indonesianya sambil diikuti terjemahan bahasa Inggrisnya.

Commented [H12R11]: Baik sudah kami perbaiki

#### 3.4 Consumer Perceptions of Online Food Safety Risks During the Covid-19 Pandemic

Overall, both consumers and producers believe that the products they buy are halal. In addition, based on the results of interviews with several producers, they know about halal certification. However, they have not taken care of it due to financial constraints. So far, producers only think that if they buy raw materials that are already circulating in Indonesia and there is a BPOM logo, it means that the product is halal.

"I use products that have the BPOM label, which has been distributed in Indonesia." - EL. Producer"

"Yes, it's expensive. Especially if it's a factory equivalent. Tens of millions you know if it is equivalent to a factory". - DW. Producer-

The level of consumer confidence in producers is also large, consumers believe that if there is no information about haram in a product, it means that the product is halal.

"There is nothing as long as the food list is not haram, I consider it halal". -AD. Consumer-

"As long as they do not sell non-halal ingredients, I trust them. especially when the producer was Muslim because Muslims knew better, he would not use it." - RS. Consumer-. "- RS. Consumer-

The halal food expert has the perception that currently MSMEs producers do not have special awareness about halal certification where ownership of halal certification is not only a necessity but can also be an opportunity to increase their profits.

"It's true, still 50% is still half like that ...". -RT. Halal Specialist-

In line with the opinion of consumers, if producers process halal certification on their products, the producers themselves will ultimately benefit.

"Oh, that's why if he's serious it's even better because if consumers trust him, that's the luck too." -AD. Consumer-

#### DISCUSSION

Tambahi kalimat/keterangan sebelum menuju poin-poin.

#### 1. Food Safety Risk

The risks of food safety sold in aggregator applications need to be considered. Especially during the COVID-19 pandemic, consumers regarding food safety and hygiene increased (Naquiah et al., 2021). Several aspects must be met as requirements of healthy food, namely that food must be hygienic, safe, and healthy. When deciding to buy a product, the main thing that consumers will think about is hygiene. Consumers hope the food they consume is clean and free from contamination (Sartika, 2020). Unhygienic food will make the food being easily contaminated and harm human health. Food contamination can occur along the food supply chain (Wahyuni et al., 2019). On the other hand, a study conducted (Komalasari & Widiawati, 2020) stated that only 28.04% of traders had good knowledge of food, while about 71.96% of street food traders did not know good food safety.

The level of consumer confidence in the products sold in the aggregator application is quite high. It can be seen in the results of research which show that consumers think the products sold in the application have been selected properly. The producers in this study think that safe food is food that is well prepared and workers who always wash their hands before production. Meanwhile, according to the Government of Indonesia through the Food and Drug Supervisory Agency (BPOM), to improve food safety, especially in the home industry, regulations are made as stated in the Regulation of the Head of BPOM Number. HK.03.1.23.04.12.2206 Concerning Guidelines for Good Food Production Practices for Home Industries. This regulation contains guidelines that explain how to produce quality, safe and suitable food for consumption (Masyarakat, 2017).

To maintain the level of consumer trust, the Government must ultimately step in by strengthening the food safety system for online food delivery services. What the government can do to support food

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Jika hasil kuosioner atau wawancara dalam bahasa Indonesia, bisa dituliskan juga bahasa Indonesianya sambil diikuti terjemahan bahasa Inggrisnya.

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**Commented [Ma15]:** Hasil kuosioner atau hasil wawancara?

Jika hasil kuosioner atau wawancara dalam bahasa Indonesia, bisa dituliskan juga bahasa Indonesianya sambil diikuti terjemahan bahasa Inggrisnya.

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**Commented [Ma17]:** Hasil kuosioner atau hasil wawancara?

Jika hasil kuosioner atau wawancara dalam bahasa Indonesia, bisa dituliskan juga bahasa Indonesianya sambil diikuti terjemahan bahasa Inggrisnya.

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safety is by facilitating the management of food safety certification, educating sellers about food safety standards, and facilitating supervision and tracing of food safety issues (Aprilianti & Amanta, 2020).

#### 2. Halal Food Issues

At present, consumption of halal food is important because it is related to quality, cleanliness and food safety as emphasized by Sharia principles. Halal food products involve the entire supply chain network directly from the origin of the food to being served to consumers (Naquiah et al., 2021). The existence of halal certification on food products sold can not only be a trademark for business, but also can be a guarantee label to consumers (Talib & Johan, 2012). Research conducted by (Ahmad et al., 2017) suggests that halal certification on food products is very significant with the willingness of consumers to buy these products because consumers really pay attention to the religious side and ingredients of these products. In line with consumer perceptions that consumers pay attention to the ingredients used by producers, if the product is not made with haram ingredients, it means that the product is halal. The level of consumer confidence in this study is quite high in halal products sold in the aggregator application.

Research conducted by (Khairunnisa et al., 2020) states that the existence of a halal certificate owned by a producer can also maintain consumer confidence, besides that producers can also expand product marketing and increase business turnover, and ownership of halal certification on products is carried out to follow the principles of doing business in an Islamic manner. But on the other hand, the ownership of halal certification to producers who sell products in the aggregator application is not proportional to the large number of sellers. Consumer confidence is motivated by the belief that Indonesia is a country with a Muslim majority population, so that the products sold are also halal products. This is in line with research conducted by (Huda, 2012) which explains that producers are still not familiar with the halal certification regulations issued by MUI. Based on research (Eye & Prevention, 2021) which states that in an effort to develop and provide facilities for the advancement of MSME products, especially in an effort to assist MSME players in producing halal-certified products, the Government provides a free administrative assistance program to obtain halal-certified legality.

#### 4. CONCLUSION

In this study, it can be concluded that the level of consumer confidence in producers who sell products in the aggregator application is high. Consumers have the perception the products that sold in this application are included as safe and halal products. To maintain this level of trust, producers must try to facilitate by processing the legalization of their food products, which includes safe and halal certification issued by authorized institutions in Indonesia.

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**Commented [Ma19]:** Perhatikan penulis kutipan ditengah dan diawal kalimat. Nama akhir penulis (tahun), ....

Jika penulisan kutipan di akhir kalimat: (Nama akhir penulis, tahun).

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Commented [Ma21]: Perhatikan penulis kutipan ditengah dan diawal kalimat. Nama akhir penulis (tahun), ....

Jika penulisan kutipan di akhir kalimat: (Nama akhir penulis, tahun).

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Nama akhir penulis (tahun). ....

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(Nama akhir penulis, tahun).

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Nama akhir penulis (tahun), ...

Jika penulisan kutipan di akhir kalimat: (Nama akhir penulis, tahun).

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## Food Safety and Halal Issues in Food Aggregator Applications: "A Consumer's Point of View"

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#### **Abstract**

Food delivery services are developing significantly, especially during the COVID-19 pandemic. Food aggregator application is one of the online systems which enables customers to order delivery food from several food providers. This application was made as a simple app to make it easy to use by customers. In addition, it also makes it easier for food producers to sell their products. However, it has its limitation in which the consumers do not know the safety and halal status of the products offered in this application. This research aimed to understand the consumers' perceptions of the food's safety and halal status in this food delivery system. This descriptive-qualitative research was held in January - February in DIY through in-depth interviews using an online meeting platform. The results showed that the consumers believe that the products sold in the aggregator application are safe and halal. The consumer's choice and trust depended on the restaurant's rating, products' photos, and their taste. In the product's safety context, the consumers justified the product quality from its packaging. As for the halal label of the product, the consumers believe that the product is halal if there is no information that these products contain non-halal ingredients.

**Keywords**: Food Aggregator Application, Consumer, Food Safety, Halal Food

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#### 1. INTRODUCTION

As a result of the termination of employment, many new MSMEs in Daerah Istimewa Yogyakarta (DIY) were built as an alternative source of financial income. The highest increase in MSMEs was in the food and beverage business sector, in which businesses in the food sector remarked by 350% increase and herbal food products by 200% (Rosita, 2020). Culinary is one of the fastest-development businesses in recent years that could generate large profits. In Indonesia, this business provides a sizeable contribution to the creative economy sector up to 34% (Tumpuan, 2020). Culinary business is also supported by technology and information systems. One of them is e-commerce with an e-marketplace model. The concept of an e-marketplace is like a traditional market where there are sellers and buyers, but it is conducted in an online setting. An e-marketplace provider works as an intermediary that provides a place for sellers and buyers to carry out buying and selling transactions (Kurnia et al., 2017). The internet has also encouraged the online food delivery system to expand. It makes it easy for consumers to access, search, and compare prices on various culinary products (Dang et al., 2018). The aggregator application is an online food delivery service application that provides convenience in food buying for consumers. They only need to use a smartphone to order food easily from the various restaurants they want. This application helps the culinary sector entrepreneurs to deliver the ordered food from the production site to customers' houses (Kapoor & Vij, 2018).

The growth of the number of MSMEs today makes them compete to provide services that satisfy customers. Especially during the Covid-19 Pandemic, consumers tend to choose products with safety and halal guaranty that provide huge potential for MSMEs

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to produce quality products (Muhamad, 2020). Food safety regulations on MSME products are stated in the Government Regulation of the Republic of Indonesia Number 86 of 2019, which contains accredited food safety certification (The Government of Indonesia, 2019). Meanwhile, regulations for halal products are listed in Act No. 33 of 2014 stated that all products must be certified for halal status (Pemerintah RI, 2014).

A food product is declared safe if the food product is free from various contaminants such as physical contamination, chemical contamination, and microbiological contamination (Zaini et al., 2019). The Indonesian government also has the responsibility for providing safe, nutritious, and quality food, all of which are stated in Government Regulations (Sartika, 2020). In Islamic Sharia law, food products are declared halal by fulfilling provisions such as products not containing non-halal parts of animals or haram products, animals slaughtered in the name of Allah, in the preparation stage the ingredients are not prepared or produced using tools or equipment that is contaminated or used with non-Halal materials, and during the stages of the process of preparation, manufacture, packaging, storage and distribution of the product must be physically separated between halal and non-halal products (Talib & Johan, 2012).

However, it is known that the level of awareness of MSME actors, especially those engaged in the culinary sector, is still low on the application of food safety standards for the products they sell (Pritanova P et al., 2020). In addition, the level of public knowledge and awareness regarding halal products in Indonesia is still low, this is known because people think that all products sold in Indonesia are halal products because most Indonesians are Muslims (Akim; Konety, Neneng; Purnama, Chandra; Adilla, 2018).

On the other hand, the level of consumer trust in the products sold in the aggregator application is quite large. The consumer is seen from safety in terms of food safety, which can be seen in the food they order is still sealed and neatly packed (Vincentius & Putranto, 2020). Also, the consumers' perception of food safety certification, has a significant impact on consumers' desire to buy the products. Certified products provide essential guarantees for consumers of products safety(Liu et al., 2020).

Based on limited research examining the safety and halal category of food in the aggregator application during the pandemic, the researchers conducted research aimed to know how far the customer trust on the food aggregator applications and explore further the safety and halal category of food sold in the aggregator application from a consumer's point of view, especially during the pandemic.

#### 2. METHODS

This research was a descriptive qualitative research design. The participants in this study were consumers who usually order food using an aggregator application, determined by inclusion criteria: living in DIY and using an aggregator application before and during the pandemic. Data was collected using the purposive sampling method in January - February 2021. The triangulation method was applied by interviewing the food producers who use aggregator applications and food safety and halal experts. The research was conducted through in-depth interviews using online platform meetings. The consent procedures were delivered before the interview. The respondents who agreed to the terms were asked to sign a digital informed consent form.

#### 3. RESULTS AND DISCUSSION

## 3.1. Respondents' Characteristics

Respondents in this study consisted of ten persons consist of 7 customers who met the inclusion criteria, a seller, a food safety expert, and another halal food expert.

## 3.2. Consumer Perceptions of the Development of the Online Food Business During the Covid-19 Pandemic

Respondents in this study argued that the online food business using an aggregator application has been known since 2019 in DIY. Also, the respondents felt that this system was very helpful, especially during the COVID-19 pandemic.

"Selama Pandemi COVID-19 ini, saya jarang keluar, dan kalau saya gak memasak, saya biasanya ngandelin aplikasi itu. Apalagi karena COVID jadi saya makin sering, mesen makanan di aplikasi "-AD. Konsumen-

"During this Pandemic COVID-19, I rarely come out, and if I do not cook, I will rely on that. Especially since COVID outbreak, I use it more frequently, I always order some food in the application "-AD. Consumers-

"Bisnis makanan online sekarang meningkat pesat, apalagi sejak pandemi. Semua orang mulai buka toko online. Jadi mempermudah saya juga, paling ga dalam sehari saya beli makanan secara online"-RS. Konsumen –

"Online food business increase rapidly nowadays, especially since the pandemic. Everyone began to open online shops. So, it is easier for me, at least each day I will buy it (food) by online (once)" -RS. Consumers —

"Apalagi sekarang kalau kerja di rumah gak bisa kemana-mana, jadi sering mulai pakai layanan makanan online di aplikasi" -RR. Konsumen-

"Especially now, when I work from home (WFH), I can't go anywhere, so I start to use food delivery services (more) often in the application" -RR. Consumer-

Before ordering food from the aggregator application, the respondents usually look at the food to be ordered through the photos, ratings from other consumers, and promos offered by producers.

"Biasanya saya sortir ratingnya, terus lihat harganya, ada promo yang pas atau ngga. Kalau saya, minimal ratingnya 4,4 lah"-AS. Konsumen-

"Usually I sort out the rating, keep looking at the price, whether the promo is right or not. For me, at least the rating is 4.4" -AD. Consumer-

"Biasanya kalau saya lihat fotonya, terus lihat ratingnya. Karena kita gak bisa liat kolom komentar, kalau rating acak, setidaknya peringkatnya 4,5 ke atas". - RS. konsumen-

"I usually look at the photos, keep looking at the ratings. Because we cannot see the comments, if the rating is random, at least the rating is 4.5 or beyond". - RS. Consumers-

"Ya pasti dong, biasanya saya liat dari reputasi penjual atau produsennya". -RR. Konsumen"Of course, I will definitely look at the seller or producer reputation -RR. Consumers-

## 3.3. Consumer Perceptions of Online Food Safety Risks During the Covid-19 Pandemic

The COVID-19 pandemic that has been running for a year also change how food producers sell their products. The online food sales system through an aggregator application has increased. Based on the results of interviews conducted with consumers, producers, and food experts, there are several differences in perceptions in terms of food safety. From the consumers' point of view, they think that food is safe based on its packaging. The level of consumer trust in the products sold in the aggregator application is quite significant.

"Saya sih percaya aja. Menurut saya, kalau pake aplikasi go-jek saya anggapnya toko itu udah di survey sama pihak gojeknya. Intinya semua makanan yang dijual di aplikasi gojek atau grab udah melewati pengecekan kualitas" "I believe in that. If I use Go-jek application, I assume that the shop was surveyed by the Go-jek. All the food that were displayed in the aggregator application, such as Go-jek or Grab means that the products have passed the quality control". - AD. Consumers -

"Pertama saya liat dulu reputasi dari penjual. Mulai dari cara ngemasnya, penjual akan kasih sesuatu untuk meyakinkan pembelinya bahwa produk mereka aman". -RR. Konsumen-

"First, I will look at the reputation of this seller. Starting from how the food was packaged, the seller will give you something to convince consumers that their products are safe"-RR. Consumer-

The producers think that their production processes from the preparation stage until the distribution were safe for consumers. Washing their hands is one of the procedures they always do before they start food production, and they always use personal protective equipment (PPE).

"Saya selalu mencuci tangan sebelum berkerja dan menggunakan alat pelindung diri, karena saya khawatir hal serupa menimpa saya". -P. Produsen-

"I always wash my hands before work and use PPE, because I'm afraid that (bad thing) is happen to us. -P. Producer-

"Ya, itu sudah kebiasaan dari dulu, dari jaman ibu saya. Saya cuci dulu semua sebelum masuk ke dalam kulkas. Mulai dari sayuran, saya keringkan sebentar, terus saya masukkan dalam kulkas. Jadi, masuk kulkas udah dalam keadaan bersih". -DW.Produser-

"I do. It has been a long-time habit, since my mother's generation. I wash everything first before they are stored in the refrigerator. Starting from the vegetables, I dry them for a while, then put them in the chiller. So, they are stored in the chiller in a clean condition.". -DW. Producer-

According to a food expert, food is considered a safe product when its producer meets the food safety criteria. It consists of the ingredients, situation, location, tools, and even packaging. While it passed the validation or legalization process and has a certificate, the expert can state that the food produced is safe.

"Memang sudah kami himbau ke semua produsen untuk melakukan legalitas dengan cara mendaftarkan sertifikasi keamanan pangan"-GN. Ahli Pangan-

"Indeed, we urge to carry out the legalization process by registrating to the food safety certification" -GN. Food Expert-

## 3.4. Consumer Perceptions of Online Food Safety Risks During the Covid-19 Pandemic

Overall, both consumers and producers believe that their products are halal. In addition, based on interview results with several producers, they know about halal certification. However, they decided not to take it due to their financial constraints. So far, producers think that if the raw materials they use are circulated in Indonesia with a BPOM logo, they assume that those products are halal.

"Saya menggunakan produk yang berlabelkan BPOM, yang sudah beredar di Indonesia"

"I use products that have the BPOM label, which has been distributed in Indonesia." - EL. Producer"

"Ya mahal. Apalagi kalau setara dengan pabrik. Puluhan juta lho kalau setara dengan pabrik". -DW. Produsen-

"Yes, it's expensive. Especially if it is equivalent to a factory. Ten million (rupiah) if it is equivalent to a factory". - DW. Producer-

The level of consumer trust in food producers is also considerable. The consumers believe that if there is no information about haram ingredients or status in a product, the product is halal. "Tidak masalah, selama daftar makanannya tidak haram, saya anggap itu halal". -AD. Konsumen-

"No problem, as long as the food list is not haram, I consider it halal". -AD. Consumer-

"Selama mereka tidak menjual makanan dengan bahan baku haram, saya percaya sama mereka. Apalagi kalau penjualnya muslim kan, karena mereka lebih tau dan ga akan pakai bahan haram". -RR. Konsumen-

"As long as they do not sell non-halal ingredients, I trust them. especially when the producer is Muslim because Muslims knew better, he would not use it." - RS. Consumer-. "- RS. Consumer-

The halal food expert has the perception that currently, MSMEs producers do not have special awareness about halal certification where ownership of halal certification is not only a necessity but can also be an opportunity to increase their profits.

"Nah iya betul, masih 50% yang percaya ya setengah-setengahlah ...". -RT. Ahli produk Halal

"That is right, there is only 50% who believe, so it still half of them...". -RT. Halal Specialist-

In line with the consumer's opinion, if producers process halal certification on their products, the producers themselves will ultimately benefit.

"Oh ya, itu asalan kenapa. Kalau mereka serius, akan lebih bagus karena kalau konsumen percaya sama produk mereka, itu udah jadi keuntungan buat mereka". -AD. Consumer-

"Oh, that is the reason why if they serious (to take halal certification), it is even better because if consumers trust him, that also will be a benefit for them." -AD. Consumer-

#### 4. DISCUSSION

It can be seen from the result that consumers' trust in the aggregator application is quite high. However, consumers should pay more attention to several things related to food safety and halalness. It is essential to take the risks of unsafe food which are sold in the food aggregator applications into consumers' consideration. Especially during the COVID-19 pandemic, consumers' concern of food safety and hygiene increased (Naquiah et al., 2021). Several requirements

must be fulfilled to be considered a healthy food, namely that food must be hygienic, safe, and healthy. When consumers decide to buy a product, the main issue that consumers will consider is the hygiene aspect. Consumers hope the food they consume is clean and free from contamination (Sartika, 2020). An unhygienic food will make it is easily contaminated and may harm human health. Food contamination can occur along the food supply chain (Wahyuni et al., 2019). On the other hand, a study conducted (Komalasari & Widiawati, 2020), stated that only 28.04% of traders had good knowledge of food safety, while about 71.96% of street food traders did not know good food safety.

The level of consumer trust in the products sold in the aggregator application is quite high. The research results show that consumers think the products sold in the application have passed a proper selection process. The producers in this study think that safe food could be defined as well-prepared food, and the production workers always wash their hands before production. Meanwhile, according to the regulation of the Government of Indonesia through the Food and Drug Supervisory Agency (BPOM), which stated that to improve food safety, especially in the home industry, regulations are made as stated in the Regulation of the Head of BPOM Number. HK.03.1.23.04.12.2206 Concerning Guidelines for Good Food Production Practices for Home Industries. This regulation contains guidelines that explain the procedures to produce qualified, safe and suitable food for consumption (Komala et al., 2017).

To maintain the level of consumer trust, the Indonesian government must ultimately step in by strengthening the food safety system for online food delivery services. The government can support food safety by facilitating the management of food safety certification, educating sellers about food safety standards, and facilitating supervision and tracing of food safety issues (Aprilianti & Amanta, 2020).

At present, consumption of halal food is important because it is related to quality, cleanliness and food safety as emphasized by Sharia principles. Halal food products involve the entire supply chain network directly from the origin of the food to being served to consumers (Naquiah et al., 2021). The product's halal certification works as a business trademark and as a guaranty label for consumers. (Talib & Johan, 2012). Halal certification on food products is very significant with the willingness of

consumers to buy these products because consumers really pay attention to the religious side and ingredients of these products (Ahmad et al., 2017). In line with consumer perceptions that consumers pay attention to the ingredients used by producers, if the product is not made with haram ingredients, it means that the product is halal.

The producer's halal certificate can also maintain the consumer's trust. Besides, the producers can also expand product marketing and increase business turnover. Further, the product's halal certificate ownership is also a form of following the principles of Islamic business manner (Khairunnisa et al., 2020). However, the ownership of a halal certificate for the producers who sell products in the aggregator application is not proportional to their large number of sellers. Consumer trust is motivated by the belief that Indonesia is a Muslim majority country so that the products sold in Indonesia are considered halal foods. This point of view is in line with research conducted by (Huda, 2012), which explained that producers are still not familiar with the halal certification regulations issued by MUI. Based on research, to develop and provide facilities for the advancement of MSME products, particularly to assist MSME players in producing halal-certified products, the Government should facilitate a free administrative assistance program to obtain halal-certified legality (Armiani et al., 2021).

### 5. CONCLUSION

To conclude, the level of consumer trust in producers who sell products in the food aggregator application is high. The consumers in this study believe that the offered products in this application are considered safe and halal. To maintain this level of trust, the producers need to process the legalization step for their food products. It consists of safe and halal certifications issued by authorized institutions in Indonesia.

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