

# Retail halal control points – which control process can be applied digitally?

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**Abstract:** This study investigates the importance and need to apply the concept of retail halal control points (RHCP) in the food industry, specifically the supermarket which operates a complex supply chain system. The examination of the application of the RHCP on the supermarket is also to facilitate the business entity in obtaining halal or Shariah-compliant status. The RHCP method can assist the supermarket management to control for prohibited or illegal elements from infesting the supermarket supply chain process. In this way, the process of food safety and food products in supermarkets would comply with the Islamic teaching on halal principles. Unfortunately, it appears that up to now, there is no study in that direction. There are few studies though, that study halal control points but not in the field of retailing. For this reason, this study was conducted to fill the gap by examining the use of RHCP in the supermarket. By using the purposive sampling technique, four supermarkets located in the Klang Valley were cross-examined. Quality assurance managers and halal executives from each supermarket were interviewed extensively by using open ended questions. The interview transcripts were then analyzed by using thematic analysis. The results showed that the management team of all the selected supermarkets agrees to use a standard operating guideline for ensuring halal or shariah-compliance status in the supermarkets. Additionally, to achieve an optimum level of effectiveness with the RHCP method, the use of digitalisation is recommended. Difficulties in getting information and support from the supermarket management were among the main drawbacks of this study. Nonetheless, this study is significant for both the retail industry and academia at least in terms of discussing the issues of the RHCP concept. This would certainly help the supermarket management in planning their supermarket business effectively and thus able to sustain competitiveness.

**Keywords:** Retail Halal Control Points, Shariah-Compliant, Supermarket.

## 1. Introduction

Future supermarkets need to impress prospective and existing customers by improving their establishment. Improvements need to cover many aspects so that many supermarkets can implement one of the 'best practice' systems in terms of supermarket operations. The system can be effective by integrating modern automation technology that can enhance activities. This is beneficial for customers in terms of added value they would receive for the product or service. To materialize this initiative, a Supermarket Best Practice Guideline (SBPG) was developed to describe, systematize and consolidate all activities in a supermarket effectively. Why do they need a SBPG? There are about 1.6 billion Muslims worldwide and it is anticipated that Muslims will occupy 35% of the world population by 2030 according to new population projections by the Pew Research Center's Forum on Religion & Public Life (<https://www.pewforum.org>). In addition, halal trade on a global scale is estimated to be realised between USD2.1 trillion and USD6 trillion in the coming years. This is because consuming halal certified products is obligatory for Muslims to perform as consuming otherwise is not permissible in Islam. Hence, the retail supply chain process needs to ensure that food and food services are halal and Shariah compliant. In this regard,

the Supermarket Best Practice Guidelines are helpful as they attempt to prevent pollution and potential hazards, even from the religious perspective, in relation to the retail supply chain process and supermarket operations.

Next, the SBPG does its work by using a method called retail halal control points. A retail halal control point is the point which measures, controls and follows strict procedures. Consequently, contamination and hazards can be prevented or eliminated in the entire retail supply chain. Meanwhile, a supermarket is a self-service shop that offers a variety of food and beverage, as well as household products, that are organised into sections. In terms of size, the supermarket is larger and has a wider selection than the regular grocery store. Due to complexities arising throughout the supermarket supply chain, understanding the retail halal control points is crucial as it helps the supermarket employees to carry out their daily tasks efficiently. Hence, supermarket employees should be given knowledge on the elements and process of supermarket best practice. This helps in managing and handling the procurement; ordering; movement; storage; labelling; display; and handling of product.

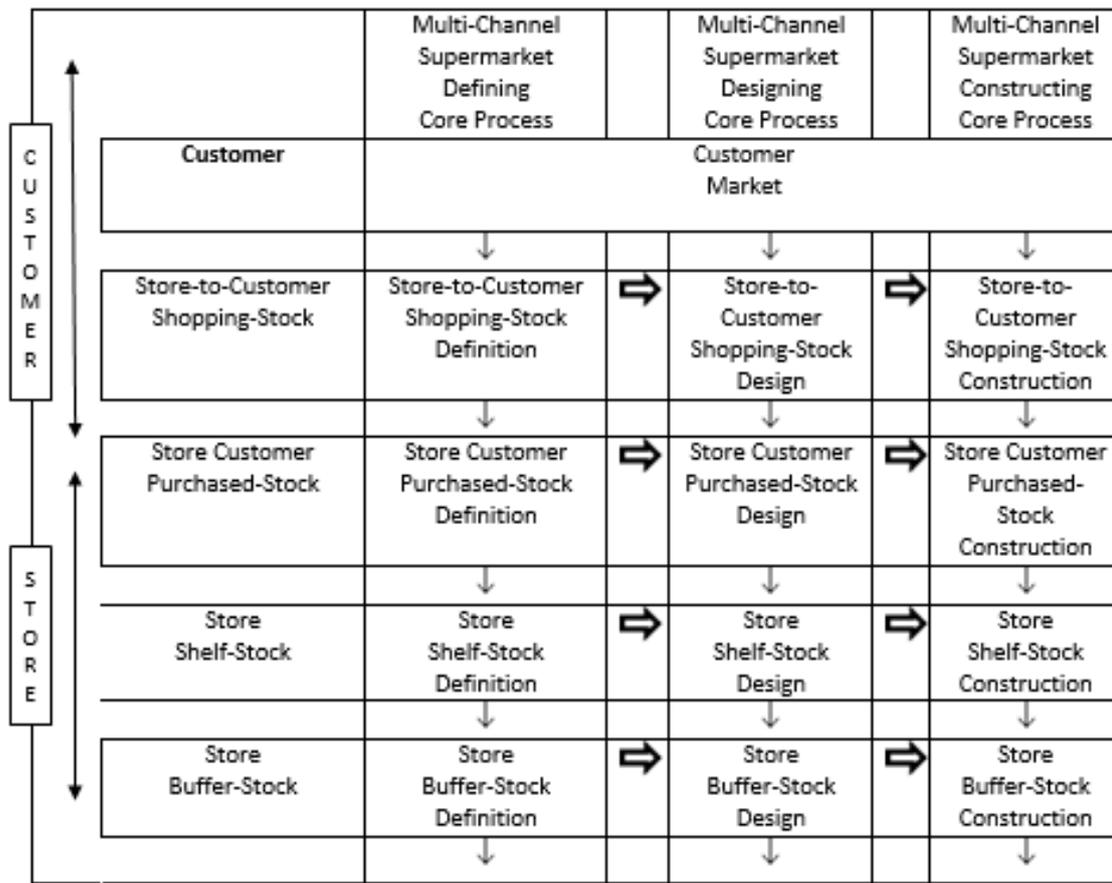
## 2. Understanding the multi-channel supermarket

Supermarkets operate a complex supply chain system. Every supermarket has a similar system structure that consists of multi channels or component entities, namely a chain of pick-up points; a chain of retail stores; a chain of fulfilment stores; a set of fulfilment centres; various transportation systems; a set of warehouse distribution centres; and an array of product suppliers (Steeneken & Ackley, 2014). A single set multi-channel supermarket usually exists in a competitive environment. As it comprises the component entities, the single set multi-channel supermarket is considered a value-added intermediary as they act as an extension of the geographically dispersed supplier companies, that is, representing them to the final user (that includes wholesaler, retailer and individual consumer). For example, in carrying out its function, a multi-channel supermarket business acquires and assembles a wide assortment of goods from individual suppliers, then organizes and distributes them to a chain of retail stores, fulfilment stores and fulfilment centres, and finally customers access these stores and centres to purchase the goods.

When customers shop in the local retail stores, they gain access by using the traditional (offline) way of scanning the QR code or other techniques made available by modern information and communication technology. Uniquely, a multi-channel supermarket is a business enterprise that provides a service. Furthermore, this service has business value. The value is first created by obtaining existing products from suppliers that are located far away. Then the products are assembled in regional warehouses. Finally, they are distributed to local stores, local fulfilment stores and regional fulfilment centres for customers to come and buy. Figure 1 shows how the individual sub-system units are constructed and then they carry out their roles accordingly, within the integrated supplier-to-customer work-flow sequence (Ackley et al., 2014). This clearly illustrates how work is performed in a multi-channel supermarket business.

Each of the supply chains functions according to its own needs. Collectively, they have to meet the specifications planned inside a supermarket. However, the supermarket may face problems with their operations. The types of activities in its operations are supplier selection and ordering, inventory management, receiving, sorting and storage, processing, shelf displaying, managing customer flow in the supermarket, and maintaining equipment and machines. As these are complex activities, the supermarket needs to have an effective monitoring procedure. In other words, what is needed is a real system to combat problems related to such contamination. In turn, this can indirectly convince users to shop at the supermarket especially during the pandemic Covid-19. The system in use currently is good enough, but it would be better if the supermarket can use the retail halal control points guideline together with it. What is the concept of /are retail halal control points?

**Figure 1.** Core Process in Retail Stores



Source: Ackley et al (2014)

### 2.1. Retail halal control points

Supermarket management needs to have an effective system despite the presence of many variations in the management and control systems in each supermarket. One example of an effective system is the concept of hazard analysis and critical control point. The concept of halal control points has its origin from the notion of hazard analysis and critical control point (HACCP). Hazard analysis and critical control point was designed to prevent microbial, physical and chemical hazards in food for space assignment or mission (Janevska et al., 2010). Studies that use the HACCP mostly concentrate on ensuring food safety, and halal analysis of food products (Riaz & Chaudry, 2004) and equipment or machines that come in contact with food (Henderson, 2015). The HACCP concept is also used in studies involving the supermarket. The supermarket is chosen as it is a potential place for contamination too. In the relevant literature, there are several authors who suggest that HACCP can also be used in ensuring halal compliance (Kohilavani et al., 2013; van der Spiegel et al., 2012; Bonne & Verbeke, 2008). For example, the concept of HACCP enables the elements of retail halal control points (RHCP) to be identified that can eliminate the possibility of the presence of illegal components in the entire retail supply chain of a supermarket. Consequently, the safety of the entire supply chain in a supermarket can be rest assured. Hence, the RHCP can be defined as a point, step, or procedure that monitors the entire operation of the retail supply chain in a supermarket.

Through the RCHP, the supermarket management can identify and control possible contaminations in its entire supply chain. This ensures the safety of goods in the supermarket. As such, the goods sold will not endanger consumers. Coincidentally, this initiative conforms to the teaching of Islam (Ambali & Bakar, 2014). Although the concept of HACCP can be explained clearly (Henderson, 2015; Kohilavani et al., 2013), the practical interpretation is very different for a

company or sector, and also for a Western country or Islamic country. Information concerning laws and regulations of halal goods and general guidelines for the handling of halal goods in supermarkets are available, but very limited and if available are not comprehensive enough. Understanding the concept of halal control points within the supermarket is also different and limited (Anizah & Sarawati, 2016; Anizah et al., 2020). Therefore, the objective of this study is to understand the concept of HACCP that is used as a basis for the development of RHCP in a supermarket, and to identify the appropriate elements of retail halal control points in the supermarket. To achieve this, the retailers need the right planning tools. They also need to understand how to apply them. It is hoped that the identified elements can be used as a useful guide in preventing contamination. Moreover, this initiative also ensures halal and shariah-compliant process being exercised in supermarket operations. At the same time, this study can help supermarkets progress towards obtaining halal certification status.

### 3. Methodology

The methodology that is applied in this study is qualitative in nature. For example, interviews with halal executives and quality managers are conducted to obtain views from the management side regarding the adequacy of developing a RHCP guideline for a supermarket. This approach helps in understanding where does a supermarket's management stand on the issue of possible contamination in the supermarket's entire supply chain. By conducting a series of observations and focus group sessions, the researchers can get more information that could possibly lead to other issues on the topic they are conducting their research. The interviews and focus group sessions are recorded by a digital voice recorder, transcribed and translated. Meanwhile, the observations help the researchers to fully understand the whole process of the RHCP activity in the selected supermarkets. Next, comparisons are made among all the selected supermarkets.

For this study, the purposive sampling technique is used as the researcher wants to establish two categories of respondents: first, the supermarket's staff and management; and second, the concerned authority, that is, the Department of Islamic Development Malaysia (JAKIM), an agency responsible for Islamic affairs including halal certification, in Malaysia. In the first stage, two main staff from the retail operations from each selected supermarket are identified to be interviewed. A structured questionnaire is used for the interview about the supermarket's supply chain operations condition. The respondents are free to express their opinions on this. Next, a small focus group consisting of four staff members from the management level is conducted for each supermarket. Their responses are compared with the responses obtained in the first stage. In the final stage, an interview with JAKIM is carried out to approve and endorse the findings of the study. Next, the data obtained is analysed by using a thematic approach. Thematic analysis is a method of analysing qualitative data. The data obtained from the interview will be carefully examined to identify themes for ideas surfaced during the interview.

### 4. Findings

Researchers faced some problems during data collection such as obtaining permission and consent from the management; which then has led to the lack of real information for this study. Nevertheless, with the help of reliable networks and some concerned staff of the respective supermarket, some information was successfully collected. Fortunately, some respondents informed regarding the RHCP have made the discussion fruitful. There are four elements identified in this study which often emerge during interviews and discussions; such as the process characteristics, control and personal hygiene of employees, sertu (shariah ritual cleaning or purification) and user communication. The results are shown in Table 1.

**Table 1.** Halal critical points guidelines

PROCESS CHARACTERISTICS				
		Yes	No	Remarks
1	Certified halal transit and logistics practices are clearly monitored or letter of guarantee is sufficient (since logistic industry is not ready yet)			
2	List of ingredients, including additives and processing aids are clearly stated. - biological descriptions from food suppliers are clearly stated. - chemical descriptions from food suppliers are clearly stated. - physical descriptions from food suppliers are clearly stated.			
3	Origin of materials are clearly stated.			
4	Methods of processing e.g. butchering, cooking, baking and mixing), etc. are clearly stated.			
5	Packaging and/or labelling:			
	<ul style="list-style-type: none"> <li>Raw meat, poultry, fish and shellfish are handled or packaged properly.</li> </ul>			
	<ul style="list-style-type: none"> <li>Products prepared and packaged in store, such as cooked meats, cheeses or bakery products are handled or packaged properly.</li> </ul>			
	<ul style="list-style-type: none"> <li>Vegetables such as apples, tomatoes, sweet peppers are handled or packaged properly.</li> </ul>			
6	Storage conditions and shelf life are clearly managed.			
7	Preparation and/or handling before use or processing are clearly stated.			
8	Storage and handling methods are clearly stated.			
9	Merchandising display (effectively protected from contamination) and layout plan are clearly managed.			
10	Shopping trolleys are clean and free from contamination.			
11	Shopping baskets are clean and free from contamination.			
12	Check-out counters (point of sales) are clean and free from contamination.			
13	Loading bays and retail floor are free from:			
	<ul style="list-style-type: none"> <li>Rats &amp; mice</li> </ul>			
	<ul style="list-style-type: none"> <li>Cockroaches</li> </ul>			
	<ul style="list-style-type: none"> <li>Flies</li> </ul>			
	<ul style="list-style-type: none"> <li>Others _____</li> </ul>			
14	Good control of contamination practices and good hygiene practiced all the time.			
15	Good practice on traceability and monitoring system			
16	Digitalize every control points (efficiency)			
EMPLOYEE PERSONAL CONTROL & HYGIENE				
1	a) Procedures of proper handwashing are clearly stated.			
	b) The appropriate use of gloves and dispensing utensils			
	c) Control of bare hand contact with ready-to-eat products and/or goods			
	d) Exclusion and restriction to all employees:			
	i. Smoking			
	ii. Spitting			
	iii. Touching the hair, face or parts of the body or clothing			
	iv. Eating			
	v. Working while ill with diarrhoea, vomiting or any infectious diseases			
	vi. Wearing watches or jewellery, as they can fall in the food.			
2	Specific procedures for customer self-service displays (such as salad bars and buffet lines to protect food from contamination) are clearly stated.			

3	Cross-contamination from utensils, machine and equipment and from the customer flow layout in supermarket area are clearly managed.			
4	Food handler must have his/her certificate of anti-typhoid vaccination (valid for 3 years) and must be certified by a registered medical practitioner. All food handlers are required to: <ul style="list-style-type: none"> <li>i. Attend food handler's training</li> <li>ii. Halal awareness training</li> <li>iii. Typhoid vaccination</li> </ul>			
5	Kitchen environment according to JAKIM specifications			
<b>SERTU (Shariah Ritual Cleaning or Purification)</b>				
1	Sertu is conducted in accordance with sertu guidelines of JAKIM.			
2	Imported products should be reviewed for syubhah product, control of syubhah merchandise, such as: <ul style="list-style-type: none"> <li>i. Gelatine - not declared of the sources,</li> <li>ii. Alcohol from fermentation process (kicap, vinegar) which does not have halal logo.</li> </ul>			
<b>CONSUMER COMMUNICATION</b>				
1	Define supplier and customer			
2	To communicate, educate and create awareness among customers regarding potential cross contamination, namely: <ul style="list-style-type: none"> <li>i. notices board</li> <li>ii. instructions</li> <li>iii. displays board</li> <li>iv. bulletins</li> <li>v. email</li> <li>vi. social medias</li> </ul>			

Supermarket acts as a functional system for doing business. As a system, the sequence of work performed in bringing products from suppliers to customers involves certain discrete activities. Each of these activities provides a critical link in the everyday supermarket operation (process characteristics, control and personal hygiene of employees, sertu and user communication).

During the interview, staffs revealed that this sequence of business activities provides preliminary details to determine the structural layers of the supermarket subsystem. To complete the overall structure of the supermarket, the subsystem layer structure (process characteristics) needs to be clearly understood by each supermarket employee, which represents the life cycle of the supermarket business that require attention.

They also mentioned that maintaining personal hygiene in the workplace are vital to the implementation of halal control points. Customer will use this as a benchmark and management must ensure that all of their hired employees are aware of these requirements. This is important to protect customers while avoiding unnecessary disruption of employee schedules and supermarket operations.

In addition, to ensure that this guideline work well, employees and management as well as JAKIM agreed that Sertu or Shariah ritual cleaning or purification for cleaning involving the highest level of impurities or severe najas (excrement) such as from dogs, pigs and others as such should be emphasized in the supermarket. Every employee must be alert and careful with every situation occurring in the supermarket. They also need to ensure that only halal-certified items are on the supermarket shelf at all times.

Communication is a key component of business, especially in a supermarket. Good internal and external communication will have a positive impact on customers and employees. To ensure that this guideline is effective, all the interviewed parties agreed that any changes or innovations

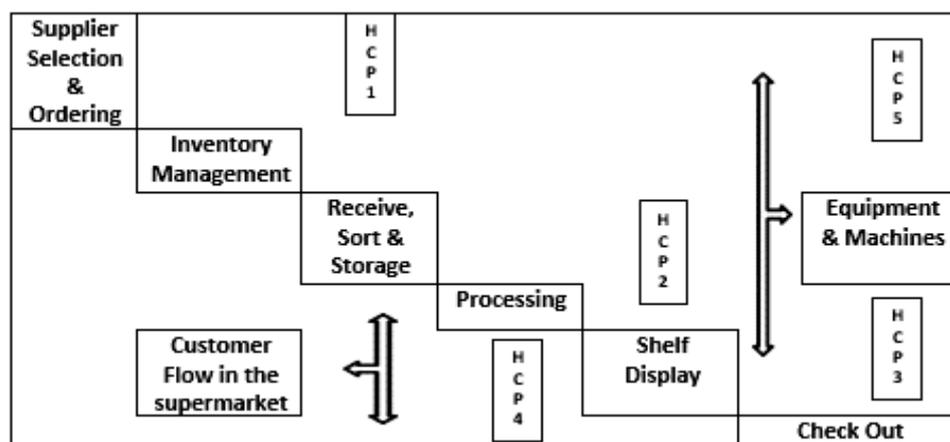
that will be made must be communicated to all interested entities/actors including customers and suppliers. Any information and innovation can be delivered through various methods of communication which may also include social media.

At the end of the interview, all involved parties stressed that these guidelines should improve the conventional operating systems in today's existing supermarkets in Malaysia. Moreover, this guideline will be better if it is digitized and allows it to be performed and monitored more effectively. Digitally stored retail halal control guidelines for supermarkets are essential for data storage. This is a key component of a successful business. Supermarket management needs to keep all files so that they are easily accessible and can help supermarkets plan better, especially those related to suppliers of halal goods. In addition, it can reduce non-compliance in obtaining halal certification or renewing halal certification in the future.

## 5. Managerial implications

Retail operations is a functional term that encompasses all activities a store depends upon to operate successfully. This includes activities under the concept of retail halal control points (HCP) which can be divided into five points following in-depth discussions with the management of the supermarkets selected for this study. The five halal critical points for a supermarket is illustrated in Figure 2.

**Figure 2.** Retail Halal Control Points Guideline in Supermarket



HCP 1 encompasses the process of finding and selecting suppliers, placing orders, managing inventory, receiving and distributing orders, and providing an effective storage process. The supermarket management needs to manage this process first and the process must follow the guidelines provided by JAKIM. Next is HCP 2 which encompasses activities related to processing all goods that have been accepted for sale to customers and executed according to permitted specifications. The supermarket management must ensure that every process in this section is handled properly, which includes sorting, controlling and storing. This is important because it is the beginning of contamination in the supermarket. For example, things might not happen the way they were planned for the process of breaking down bulks into smaller packs. In such a case, contamination can intrude easily.

Next, the process in HCP 3 involves employees arranging goods on the shelves for customers to pick their choice to buy. For this task, the management needs to ensure that each supermarket employee is receiving training on the jobs that they do. For example, training is critical to ensure fresh goods like meat, vegetables, milk, and etc. are preserved at the appropriate temperature so that they stay fresh for some time. Apart from that, the mixing of halal and non-halal goods should also be emphasised, that is, not mixing them. Otherwise, customers are not confident to buy the halal food and most importantly the supermarket explicitly does not comply with the Shariah laws.

HCP 4 follows next which involves managing the flow of customers in the supermarket. In this context, it is feared that effluence may occur which have been caused either by the supermarket employees or customers intentionally or unintentionally. The final point is HCP 5, which is involved with managing the equipment and machines used in the supermarket. It is important to note that each HCP is related to one another. This means that the supermarket management needs to ensure that the respective approaches under each HCP are carried out properly, beginning with HCP 1. This is because if the approach in HCP 1 is not carried out and monitored properly, it is likely that the following HCP, that is, its process will not guarantee the desired results. Hence, the RHCP is a critical requirement as it will make the entire supply chain system in the supermarket easy to manage and can detect contamination very early.

Consumers nowadays are attentive so they will buy foods that are fresh, healthy and safe to consume. Hence, the supermarket management should provide more services than before. Specifically, they need to come out from their comfort zone and structure their supermarket operations catching up with the latest standard operating procedures introduced by the industry and technology. The latest standard would have the efficiency element such as the RHCP and this can enhance the image of food supply chain in the supermarket. By looking at the latest challenges, trends and findings from research works, it is evident that an efficient retail supply chain management will be the pulse of future success of a supermarket. It can also make a supermarket fail if it is not acted upon. However, this does not mean that technology is downplayed in the stages of the RHCP. For example, for a supermarket, the setting up of an efficient supply system that allows for one-touch movements or “truck to shelf” delivery is essential as this can enhance profitability. Hence, a Digital RHCP is something that is needed to be adopted by a supermarket management for competitive purposes. Nonetheless, the supermarket management needs to understand its limitations too. As the business environment is very dynamic in the sense that it is very sensitive to changes in consumer demographics and psychographics, as well as the effects of external factors, like Covid-19 pandemic, the RHCP is the most efficient procedure a supermarket management can adopt. This is because it can reduce the risk of contamination in supermarkets and enhance the capabilities of the entire supermarket supply chain. Thus, this study can be used as a starting point for those who want to make their retail supermarket business adopt the Shariah principles. In addition, these guidelines are open to other supermarkets, as this method can be used to prevent the transmission of Covid-19.

## 6. Suggestions for future research

It is evident from the earlier sections that the RHCP is the system to adopt by supermarkets as it shields/protects the operations from contamination due to pollution or viruses; and it is also compliant with the Shariah as it can be considered to have the ‘*uruf*’ element. ‘*Uruf*’ is something that has been set, recognized and accepted or something that is practiced in everyday life which determining halal or haram for any form of food in the Islamic society. However, benefits that it can bring need to be further investigated. For example, research need to be carried out for the verifications in other contexts, apart from the supermarket. Additionally, there are other areas of the RHCP that need to be explored for its other benefits that can be offered to improving the quality of life/mankind and life, as well as other matters related to Shariah compliance and Islamic teaching. All these aspects need future research with the expectation/hope that the RHCP guidelines can be widely used throughout the country and not just in certain areas. As of now, the RHCP guideline is suitable to be applied in supermarkets and possibly grocery stores. Therefore, future research needs to consider also the RHCP requirements in grocery stores. Last, but not least, the behavioural element which is the willingness of retailers to adopt the RHCP guidelines is also an area worth investigating in future research.

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