

<https://doi.org/10.31705/ICBR.2024.14>

**Paper ID: 17**

## **WHAT IS THE EFFECT OF SUPERMARKET MANAGERS' BEHAVIOR ON FOOD WASTE?**

J.P.H.K.E. Jayathilake<sup>1\*</sup>, B.L.D. Seneviratne<sup>2</sup>, and H.L. Liyanage<sup>1</sup>

<sup>1</sup>*Department of Management of Technology, University of Moratuwa, Sri Lanka*

<sup>2</sup>*Department of Interdisciplinary Studies, University of Moratuwa, Sri Lanka  
harshijayathilake8@gmail.com\**

### **ABSTRACT**

*Despite a significant percentage of the world population facing chronic hunger, close to one-third of the food produced within a food supply chain is wasted annually. Predominately visible food waste occurs during harvesting, transportation, and consumption stages. Therefore, the supermarket sector, which contributes to a substantial amount of food waste, remains under-explored in academic research areas. This study employs a quantitative approach, grounded in the theory of planned behavior. The study investigates how food waste behavior is influenced within supermarkets by attitudes, subjective norms, perceived behavioral control, and situational factors. Additionally, the study explores the mediating role of intention within this context. The data were collected from 136 supermarket managers using the survey method and to analyze data multiple regression analysis was employed. The results indicate that Positive attitudes, favorable perceived behavioral control, and favorable intentions are the factors that positively significantly effect on food waste-reducing behavior of supermarket managers. Furthermore, the intention has a mediation effect between the independent variables and the dependent variable (food waste-reducing behavior). Moreover, the study concludes that the attitudes of managers are having a more substantial impact on food waste-reducing behavior rather than perceived behavioral control. The study findings assist top-level management of the supermarkets to identify the critical areas that need to be addressed to reduce food wastage in supermarkets and drive them to make more accurate decisions to minimize food wastage in supermarkets.*

**Keywords:** Food Loss and Waste, Food Supply Chain, Supermarket Industry

### **1. Introduction**

Food waste is a critical topic globally as many people suffer from chronic

hunger, statistically affecting 12% of the world population while food is being lost or wasted (Lohnes & Wilson, 2017). Despite many awareness programs implemented globally, waste in the food supply chain remains excessively high. A study (Cederberg, 2011) indicates close to 50% of perishable food items such as vegetables and fruits are being wasted throughout the supply chain which signals unsustainable food consumption and food production. Global Food Losses and Food Waste (2011) reveals that 33% of food is wasted intended for human consumption.

According to (Broekmeulen & van Donselaar, 2019) USA food waste varies between 11% to 4%. As per the 2019 World Food Program (WFP, 2019) assessment, Sri Lanka wastes 3%-18% of produced food at supermarket chains due to unhealthy practices and a lack of knowledge. On average Sri Lankan supermarkets generate waste 46% from vegetables, 40% from fruits 6% from fish, and 6% from meat. (Kumara et al., 2018).+ Previous studies on the retail sector had primarily focused on quantifying the visible food waste with less consideration given to the impact of individual attitudes on food waste. (Filimonau and Gherbin ,2017). Therefore, despite the fact the supermarket sector produces a substantial amount of food waste, the subject study area remains under-researched.

This situation led this research to study the elements influencing the intention to reduce food waste as well as the factors that influence food waste-reduction actions. Additionally, the study will investigate the mediation effect of intention between attitudes, subjective norms, behavioral control, situational factors, and food waste-reducing behavior.

## **2. Literature Review**

### **2.1. Attitudes of Supermarket Managers**

A latent disposition or tendency to respond favorably to a psychological object is known as attitude. (Johnson & Albarracin, 2018). Human attitudes are important in affecting people's behaviors, interactions, and general well-being. Understanding and correcting attitudes can aid in the promotion of constructive social change and make a better society. (Ajzen,1991) Therefore managers' attitudes towards waste reduction can influence many areas such as store pricing decisions to reduce waste. (Parfitt,2016.) The empirical study by (Ajzen,1991) supports that attitudes can directly impact behavior by influencing an individual's intention to engage in an activity.

Attitudes will influence an individual's information processing and decisions. (Salancik and Pfeffer 1978). Policies and procedures that managers who are dedicated to cutting down on food waste are more likely to put into place. (Giroto and Alibardi, 2015). The strategies suggested by managers in the food entities will be finally implemented

by the decision-making entities. (Reitemeier et al., 2021). Therefore, it plays a vital role in the behavior of managers in the area under investigation of food waste-reducing behavior. According to the study (Aktas et al., 2018) when supermarket managers exhibit positive attitudes towards food waste reduction, they are likely to have higher intention to decrease food waste. According to the aforementioned literature, the following hypothesis is proposed.

H1: Attitude positively influences the intention to reduce food waste of supermarket managers in Sri Lanka.

## **2.2. Subjective Norms**

This refers to how an individual perceives societal norms from influential people, such as family and authority figures, regarding a particular behavior. (Ajzen,1991) Further subjective norms shape specific human behavior by reflecting social demands and expectations that can affect the actions of people depending on their significant other's agreement or disagreement (Conner and Armitage,2021).

Subjective norms are prominent determinants of behavioral intentions (Ajzen, 1991), as they relate to the perceived social influence from remarkable people either to engage in or refrain from specific conduct. (Ohtomo & Hirose, 2007). Empirical studies have shown that subjective norms significantly influence behavioral intention (Armitage & Conner, 2001).

According to research by (Huang et al., 2021), subjective norms are a strong predictor of food waste behavior and managers who are subjected to stronger social pressure to decrease food waste are more likely to participate in waste-reducing behaviors. Schanes et al. (2018), discovered that subjective norms influenced supermarket managers' attitudes toward food waste significantly and managers who had higher social expectations to decrease waste were likely to prioritize waste reduction. Following the aforementioned literature, the following hypothesis is proposed.

H2: Subjective norms positively influence the intention to reduce food waste of supermarket managers in Sri Lanka.

## **2.3. Perceived Behavioral Control (PBC)**

PBC is the personal belief in the ability to perform a particular behavior, which can be influenced by both internal and external factors. (Armitage & Conner, 2001). For instance, previous experiences, knowledge, and skills, as well as environmental factors can either facilitate or hinder specific conduct. (Ajzen,1991). PBC is a strong predictor of behavior in a variety of domains, including health behaviors, environmental behaviors, and consumer behaviors (Armitage and Conner,2021).

PBC refers to an individual's perception of ease or difficulty in carrying out or performing an action and has been found to influence the

intention to perform a behavior (Armitage & Conner, 2001). Furthermore, it relates to the perceived ability to control a specific behavior, such as reducing food waste (Rispo et al., 2015). Based on the above literature, the following hypothesis is presented.

H3: PBC positively influences the intention to reduce food waste of supermarket managers in Sri Lanka.

#### **2.4. Situational Factors**

Even though traditional behavioral theories focus on internal factors shaping the behavior, recent studies have suggested that situational factors too can significantly influence the behavior. For example, time facilities and a supportive environment (Armitage and Conner, 2001). The inclusion of situational elements in the TPB provides a more sophisticated understanding of how external conditions impact behavior (Davis et al. 2006). Researchers can build better techniques to understand behavior change by adding new aspects to the model. (Karim Ghani., 2013) However, in this study, the scope of situational factors, economic factors, and legal and regulatory factors are not included due to the complex and broad nature of the variable.

Situational factors, such as limited time and resource availability, are significant predictors of behavior (Boldero, 1995). Hence some Studies suggest that situational factors should be added as an extra variable to the original Theory of Planned Behavior (TPB) model (Davis et al., 2006). It is hypothesized that having positive situational factors leads to having a higher intention to prevent food waste. (Davis et al., 2006; Ajzen and Fishbein, 2005). These factors are likely to impact intention, making it essential to consider them in behavioral studies (Ajzen and Fishbein, 2005). The following hypothesis is proposed based on the aforementioned literature.

H4: Situational factors positively influence the intention to reduce food waste of supermarket managers in Sri Lanka

#### **2.5. Intention**

Intentions represent a person's willingness to perform a behavior, which demonstrates a person's motivation and willingness to be involved in a particular behavior. This can be recognized as the forecaster of a particular behavior (Ajzen,1991). (Armitage and Conner, 2021) represents in their study the strength of the relationship between intentions and behavior, giving empirical evidence for the importance intentions played in predicting a particular behavior.

As per the Theory of Planned Behavior (TPB), intention is the key variable in predicting behavior (Ajzen, 1991). Food waste reduction behavior is linked to a person's decision, willingness, and readiness to engage in the behavior (Kharat et al., 2017). Based on the preceding literature, the following hypothesis is proposed.

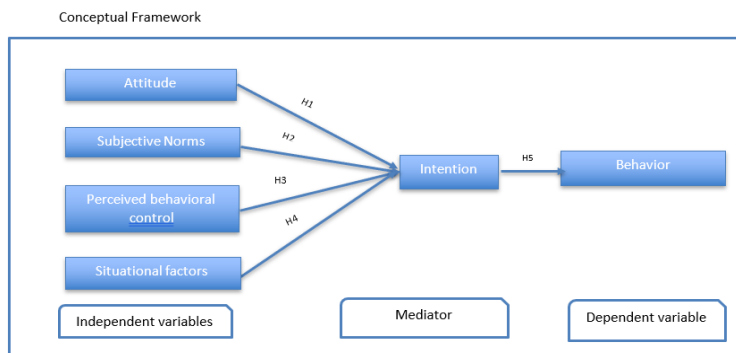
H5: The intention to reduce food waste positively influences the food waste-reducing behavior of supermarket managers in Sri Lanka.

According to TPB, intention is the central variable influencing behavior and serves as a mediator between other factors and actual behavior (Ajzen, 1991), and therefore, the following hypothesis is proposed.

H6: There is a mediating effect from intention between independent variables (Attitude, Subjective norms, Situational factors, perceived behavioral control) on the dependent variable (Food waste-reducing behavior).

## 2.6. Theory of Planned Behavior (TPB) in Understanding Food Waste Reducing Behavior

TPB is a well-known concept for forecasting and understanding the behavior of humans. Intention is identified as the closest determinant of behavior. Human conduct is shaped by three main constructions. Attitudes, subjective norms, and perceived behavioral control. A person's behavioral actions are entirely under their command, yet may alter due to outside influences (Ajzen, 1991). The inclusion of situational elements in the TPB provides a more sophisticated understanding of how external conditions impact behavior (Davis et al., 2006). Further attitudes, subjective norms, perceived behavioral control, and situational factors concerning food waste-reducing conduct are identified as attitudes towards food waste-reducing behavior.



**Figure 1:** The Conceptual Framework.

## 3. Methodology

### 3.1. Sample

The survey method was employed considering the target population which is the supermarket managers who are directly involved in supermarket outlet operations of five leading supermarkets, accounting for 96% of market coverage in Colombo district, Sri Lanka. With the use of a convenient sampling approach which covered the Colombo district,

Sri Lanka. Using a self-administered questionnaire, responses were collected from supermarket managers.

### 3.2. Measures

Attitude, subjective norms, perceived behavioral control, situational factors (independent variables), and food waste-reducing behavior (dependent variable) were measured using a 5-point Likert scale. The questionnaire was tested using a pilot study. Then, the final questionnaire was distributed. The data analysis was conducted through SPSS software.

**Table 1:** Operationalization Table.

Construct	Dimension	Source
Attitude	Affective attitude, Outcome evaluation, Behavioral belief	(wan Azlina wan AB, Karim Ghani, Iffah Farizan Rusili, Dayang Radiah Awang Biak, Azni Idris, 2012)
Subjective norms	Normative beliefs of an individual, Motivation to comply with others.	(Kautonen et al., 2013) (Armitage & Conner, 2001)
Perceived Behavioral control	Perceived power, Perceived likelihood to perform.	(Kautonen et al., 2013) (Armitage & Conner, 2001)
Situational factors	Respondent's view of certain factors as a barrier to performing food waste reduction in supermarkets.	(wan Azlina wan AB, Karim Ghani, Iffah Farizan Rusili, Dayang Radiah Awang Biak, Azni Idris, 2012)
Intention to avoid food waste	Intention to reduce food waste.	(Sally V. Russella,*, C. William Younga, Kerrie L. Unswortha, Cheryl Robinso, 2017)
Food waste-reducing behavior	How actions affect food waste reduction in supermarkets.	(wan Azlina wan AB, Karim Ghani, Iffah Farizan Rusili, Dayang Radiah Awang Biak, Azni Idris, 2012)

## 4. Results and Discussion

### 4.1. Respondent Profile

136 valid responses were collected using the questionnaire. According to the study findings, over half of the respondents were Aged 36-46 (44.9%) while aged 25-35 (25.7%), aged 46-55 (20.6%) above 55 (8.8%), and below 25 (0%). Regarding the gender distribution, 69.9 % of responses were from male managers and 30.1 % were from female managers.

### 4.2. Validity Measurement

This is used to determine the construct validity of certain indicators.

Since there is only one factor known to be extracted none of the rotation methods were applicable. The commonality value of variables was more than 50%. Therefore, no variables were removed.

### 4.3. Reliability and Validity Tests

**Table 2:** Reliability and Validity Test.

Variable	Cronbach's Alpha value	P value
Attitudes	0.907	0.00
Subjective norms	0.815	0.00
Perceived behavioral control	0.836	0.00
Situational Factor	0.859	0.00
Intention to reduce food waste	0.800	0.00

Cronbach's Alpha value is  $\geq 0.7$  with a p-value of less than 0.005 (Cronbach, 1951; Pallant, 2013). According to Table 2qwf, Cronbach's alpha values in all the variables are greater than 0.7 at the p-values of less than 0.005. Hence reliability has been established.

### 4.4. Regression Analysis

During multiple regression analysis, the stepwise method was used. In model summary (1), analysis output is generated by only four independent variables, and in model 2 along with the independent variables mediator variable(intention) is included.

**Table 3:** Model Summary.

Mod el	R	R Square	Adjusted R Square	Std. Error of Estimate	Change Statistics				Durbin-Watson	
					R Square Change	F	df1	df2		Sig.
1	.878 <sup>a</sup>	.772	.765	.363773	.772	109.84	4	131	<.000	
2	.888 <sup>b</sup>	.789	.781	.35094	.017	10.64	1	129	.000	1.985

a. Predictors: (Constant), Perceived\_Behav, Subjective\_Norms, Attiude, Situational\_FactorsAA

b. Predictors: (Constant), Perceived\_Behav, Subjective\_Norms, Attiude, Situational\_FactorsAA, Intention

c. Dependent Variable: Behaviour

In the model, Durbin Watson's value is 1.985. The values are around 2 and the data points are independent. In model 1, the R square value is 77.2%, with a statistical significance of  $P < 0.05$ . In model 2, the R square value is 78.1%, with a statistical significance of  $p < 0.05$ . This indicates that 78.9% of the variance in behavior of supermarket managers including the mediator variable is predicted, which can be considered as a good level of prediction.

### 4.5. Hypothesis Review

As per the analysis, the results statistically significant relationship is

evident in H1, H3, and H5. Paradoxically, no significant relationship is evident in H2 and H4.

Hypothesis	Sig (P)	Alternative Hypothesis
H1	0.001	Accepted
H2	0.316	Rejected
H3	0.007	Accepted
H4	0.865	Rejected
H5	0.001	Accepted

#### 4.6. Baron and Kenny Test for Mediation

Baron and Kenny's method was used to analyze the mediator impact of the relationship between supermarket managers' attitudes and waste-reducing behavior.

**Table 4:** Baron and Kenny Test Results.

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.514	.217		-2.369	.019
	Personal_Attitude	.576	.087	.537	6.601	<.001
	Subjective_Normes_Final	-.028	.127	-.023	-.218	.828
	Perceived_Behaviour_Final	.233	.072	.197	3.224	.002
	Situational_Factor_Final	.308	.111	.251	2.761	.007
2	(Constant)	-.507	.209		-2.419	.017
	Personal_Attitude	.502	.087	.467	5.745	<.001
	Subjective_Normes_Final	.133	.132	.110	1.007	.316
	Perceived_Behaviour_Final	.195	.071	.165	2.754	.007
	Situational_Factor_Final	-.025	.148	-.021	-.170	.865
	Intention_Final	.319	.098	.272	3.263	.001

a. Dependent Variable: Behavior\_of\_Supermarket\_Managers

Without the presence of a mediator, Other than subjective norms all other independent variables are significant at the 5% confidence level. With the presence of a mediator, at the 5% confidence level, personal attitude, and perceived behavioral control are significant with a lesser T value. This indicates there is a partial mediation between intention and personal attitude and, intention and perceived behavioral control. Situational factors have become insignificant with the presence of a mediator. Which indicates that there is no full mediation effect.

#### 4.7. Sobel Test

The Intention is taken as IV and the behavior of supermarket managers as DV is 8.41. Sobel's test result is > 1.96 and the P value is less than 0.05, which indicates the relationship between the Intention and behavior of supermarket managers is significant.



**Table 5: Sobel Test Results.**

Dependent variable	Independent Variable	Sobel test result	Significance P Value
Behavior of supermarket managers	Intention	8.41	<.001
	Attitude	8.51	<.001
Intention	Perceived behavioral control	7.84	<.001
	Situational Factors	11.09	<.001
Intention	Subjective norms	8.53	<0.001

#### 4.8. Discussion

As per the data analysis results, a moderately significant link between attitudes and intention to food waste-reducing behavior, and between PBC and intention to perform food waste-reducing behavior are evident. However subjective norms and situational factors do not significantly influence the intention to reduce food waste. It is probably because managers are working according to the specific guidelines provided by the specific supermarket. Hence, the perception of others is irrelevant while managers are on duty as within the organization's culture the guidelines of the supermarket are considered as the standards. Furthermore, many situational factors inside the supermarkets are decided by ownership of the supermarkets and they are out of the control of supermarket managers. Due to the above reasons subjective norms and situational factors do not have a significant link with the food waste-reducing behavior of managers in the Sri Lankan supermarket sector.

As per the data analysis result of the study, subjective norms were not a significant variable in food waste-related behavior. Since there is no significant impact on food waste-related behavior when the mediator is not present, the impact of subjective norms in the presence of the mediator cannot be discussed. Further, in the presence of a mediator, situational factors do not significantly impact food waste-related conduct. Hence it is concluded that subjective norms and situational factors do not significantly impact on actual food waste-reducing behavior of managers in the Sri Lankan supermarket sector.

In Table 3, the R-value of the 1st model is 75.2% R-value of the second model is 76.8%. R square has increased from 16% when the mediator variable was added. Therefore, we can conclude that there is a mediating effect.

With the 'Sobel test' results, with intention as a mediator the relationship between attitudes, subjective norms, perceived behavioral control and situational factors, and actual behavior related to reducing food waste is evident. Therefore, it can be concluded that intention serves as a mediator between the above-mentioned factors.

## 5. Conclusion

Food waste is a global concern with economic, environmental, and social implications. Even though various initiatives are taking place, food waste remains excessively high in some parts of the food supply chain, such as in the retail sector. In the pursuit of mitigating food wastage in supermarkets, management focuses on procedural enhancements. However, paying less attention to the impact of supermarket manager's behavior. Due to a lack of literature, with this background, this study focuses on the impact of attitudes of supermarket managers on food waste in supermarket outlets.

By testing the hypothesis of the study, four hypotheses were accepted out of six developed hypotheses. According to the results, Positive attitudes favorable perceived behavioral control, and favorable intentions are the factors that positively significantly affect food waste-reducing behavior when intention has a mediation effect between the tested variables. Moreover, there is no significant positive relationship between favorable subjective norms and food waste-reducing behavior. Therefore, according to the results, it can be concluded that there is no impact of subjective norms on food waste-reducing behavior. Furthermore, there is a significant positive relationship between situational factors and food waste-reducing behavior. However, with the mediation effect of intention, the relationship between situational factors and food waste-reducing behavior is not significant.

Moreover, according to the regression results the attitudes of managers have more impact on food waste-reducing behavior than PBC. The intention to lessen food waste has been identified as a perfect mediating variable between attitudes and food waste-reducing behavior and between PBC and food waste-reducing behavior. Therefore, supermarkets should improve positive attitudes and favorable perceived behavioral control of managers to shrink food waste.

## 6. Recommendation

Based on the findings, the recommendations are proposed under three main categories.

### **Cultivating positive attitudes**

Statistically proven, the cultivation of favorable attitudes is the factor that can influence the intention to reduce food waste most. Therefore, the senior management should highly focus on promoting favorable attitudes among the staff.

### **Cultivating favorable perceived behavioral control (PBC)**

PBC is identified as a pivotal determinant that can have a notable influence in improving favorable intention to reduce waste in supermarkets. Hence, the senior management has to educate and provide the necessary skills and knowledge on food waste reduction to the supermarket managerial staff.

## **Creating a supportive work environment**

A supportive working environment plays a key role in shaping favorable attitudes and perceived behavioral control towards behaviors such as food waste reduction. Therefore, the administration should create a supportive working environment and allocate necessary resources to promote waste reduction. Further, adding food waste reduction to the key performance indicators as a parameter for incentives of staff will create a positive intention to reduce food wastage.

### **6.1. Limitations**

The findings should be interpreted with the understanding that, instead of a simple random sampling study, convenient sampling is used. This selection emanated from the absence of comprehensive criteria to delineate a clear demarcation between supermarkets and large-scale retail establishments within the current context. However, it will contaminate generalizing the study results.

Furthermore, the organizational policies and practices prevent supermarket managers from expressing the correct situation due to the fear of the consequences of their responses which can affect their employment adversely.

### **6.2. Future Research Implications**

The final model, despite its comprehensive inclusion of independent and mediator variables, describes only 75% of the effectiveness of food waste-related behavior. The residual 25% unanticipated variance underscores the requirement for future research endeavors to identify additional latent constructions that could potentially exert influence upon food waste reduction behavior.

Future related studies can be extended and increase the elements of a sample by increasing the sample size and also can expand the geographical area as the current study is limited to the Colombo District.

Furthermore, the study can extend its focus to encompass small and medium-sized enterprise (SME) retail establishments. Also, the research could engage in understanding the impact of each minor factor of attitudes on food waste-reducing behavior.

## **Acknowledgment**

Special thanks to everyone who supported us throughout the research.

## **References**

- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.  
[https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)  
 Aktas, E., Sahin, H., Topaloglu, Z., Oledinma, A., Huda, A. K. S., Irani, Z., Sharif, A.

- M., van't Wout, T., & Kamrava, M. (2018). A consumer behavioural approach to food waste. *Journal of Enterprise Information Management*, 31(5), 658–673.  
<https://doi.org/10.1108/jeim-03-2018-0051>
- Armitage, C. J., & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: a meta-analytic Review. *British Journal of Social Psychology*, 40(4), 471–499.
- Boldero, J. (1995). The Prediction of Household Recycling of Newspapers: The Role of Attitudes, Intentions, and Situational Factors1. *Journal of Applied Social Psychology*, 25(5), 440–462.  
<https://doi.org/10.1111/j.1559-1816.1995.tb01598.x>
- Broekmeulen, R. A. C. M., & van Donselaar, K. H. (2019). Quantifying the potential to improve food waste, freshness, and sales for perishables in supermarkets. *International Journal of Production Economics*, 209, 265–273. <https://doi.org/10.1016/j.ijpe.2017.10.003>
- Davis, G., Phillips, P. S., Read, A. D., & Iida, Y. (2006). Demonstrating the need for the development of internal research capacity: Understanding recycling participation using the Theory of Planned Behaviour in West Oxfordshire, UK. *Resources, Conservation and Recycling*, 46(2), 115–127. <https://doi.org/10.1016/j.resconrec.2005.07.001>
- Filimonau, V., & Gherbin, A. (2017). An exploratory study of food waste management practices in the UK grocery retail sector. *Journal of Cleaner Production*, 167(167), 1184–1194.
- Fishbein, M., & Ajzen, I. (1975). Fishbein & Ajzen (1975). Umass.edu.  
<https://people.umass.edu/aizen/f&a1975.html>
- Giroto, F., Alibardi, L., & Cossu, R. (2015). Food Waste Generation and Industrial Uses: a Review. *Waste Management*, 45(0956-053X), 32–41.  
<https://doi.org/10.1016/j.wasman.2015.06.008>
- Global food losses and food waste. (2011). [www.fao.org](http://www.fao.org); Food and agriculture organization of the United Nations.  
<https://www.fao.org/4/mb060e/mb060e00.htm>
- Gustavsson, J., Cederberg, C., U. Sonesson, R. Van Otterdijk, & A. Meybeck. (2011, January 1). Global Food Losses and Food Waste- Extent, Causes and Prevention.
- Huang, I., Manning, L., James, K., Grigoriadis, V., Millington, A., Wood, V., & Ward, S. (2021). Food waste management: a review of retailers' business practices and their implications for sustainable value Food waste management: a review of retailers' business practices and their implications for sustainable value. In *Journal of Cleaner Production* (p. 285).  
<https://hau.repository.guildhe.ac.uk/id/eprint/17611/1/Iona%20Huang%20Food%20waste%20management%20upload.pdf>
- J, P. (2016). Final report.  
[https://www.farminguk.com/content/knowledge/Quantification-of-food-surplus-waste-and-related-materials-in-the-grocery-supply-chain\(4040-684-286-3476\).pdf](https://www.farminguk.com/content/knowledge/Quantification-of-food-surplus-waste-and-related-materials-in-the-grocery-supply-chain(4040-684-286-3476).pdf)
- Johnson, B. T., & Albarracin, D. (2018). *The Handbook of Attitudes, Volume 1: Basic Principles*. 678.
- Karim Ghani, W. A. W. Ab., Rusli, I. F., Biak, D. R. A., & Idris, A. (2013). An

- application of the theory of planned behaviour to study the influencing factors of participation in source separation of food waste. *Waste Management*, 33(5), 1276–1281.  
<https://doi.org/10.1016/j.wasman.2012.09.019>
- Kautonen, T., van Gelderen, M., & Tornikoski, E. T. (2013). Predicting entrepreneurial behaviour: a test of the theory of planned behaviour. *Applied Economics*, 45(6), 697–707.  
<https://doi.org/10.1080/00036846.2011.610750>
- Kumara, A. M. I. U., Jayathilake, W. G. A. N., Drechsel, P., & Fernando, S. (2018). Poster Session Supermarket Food Waste and Current Waste Reduction, Resource Recovery and Reuse Practices-Case Study from Colombo Metropolitan Area, Sri Lanka.  
<http://dr.lib.sjp.ac.lk/bitstream/handle/123456789/8242/Supermarket%20Food%20Waste%20and%20Current%20Waste%20Reduction%20Resource%20Recovery%20and%20Reuse.pdf?sequence=1&isAllowed=y>
- Lohnes, J., & Wilson, B. (2017). *Bailing out the food banks? Hunger relief, food waste, and crisis in Central Appalachia*. Sagepub, 20.
- Ohtomo, S., & Hirose, Y. (2007). The dual process of reactive and intentional decision-making involved in eco-friendly behavior. *Journal of Environmental Psychology*, 27(2), 117–125.  
<https://doi.org/10.1016/j.jenvp.2007.01.005>
- Reitemeier, M., Aheeyar, M., & Drechsel, P. (2021). Perceptions of Food Waste Reduction in Sri Lanka's Commercial Capital, Colombo. *Sustainability*, 13(2), 838. <https://doi.org/10.3390/su13020838>
- Rispo, A., Williams, I. D., & Shaw, P. J. (2015). Source segregation and food waste prevention activities in high-density households in a deprived urban area. *Waste Management*, 44, 15–27.  
<https://doi.org/10.1016/j.wasman.2015.04.010>
- Salancik, G. R., & Pfeffer, J. (1978). A Social Information Processing Approach to Job Attitudes and Task Design. *Administrative Science Quarterly*, 23(2), 224–253.
- WFP. (2019). 2019 - World Food Programme: Overview - World | ReliefWeb. Reliefweb.int.  
[https://reliefweb.int/report/world/2019-world-food-programme-overview?gclid=EAlaIqobChMl4uqx83j\\_QIVwJ1LBR3mfAB5EAAYASAAEgIDIfD\\_BwE](https://reliefweb.int/report/world/2019-world-food-programme-overview?gclid=EAlaIqobChMl4uqx83j_QIVwJ1LBR3mfAB5EAAYASAAEgIDIfD_BwE)