

Food Safety Practices Among Establishments regarding Food Delivery Orders in Ohio

Research Thesis

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ABSTRACT

With the COVID-19 pandemic, there has been an influx of food delivery systems, both directly through the retail food service businesses and through third-party delivery companies. There are currently no regulations indicating who is responsible for food safety or what practices should be in place for retail food service establishment delivery systems. A cross-sectional survey was conducted to identify gaps in current knowledge and practices around food safety within food delivery systems. Retail food service establishments were recruited from the Ohio Restaurant Association membership list in January 2022 to complete an online survey about their establishment's food safety-related knowledge, practices, and policies for food deliveries. A total of 76 respondents, representing 291 retail food service establishments within Ohio, met the inclusion/exclusion criteria. The majority of respondents represented independent establishments (71.05%) and offered full-service dining (55.26%) as their main type of food service. Over half of establishments (55.26%) only used third party delivery systems whereas just over a third (35.53%) only used directly employed drivers; the remaining establishments (9.21%) used both methods (Mixed) of food delivery. The majority of respondents indicated that their establishments used some form of temperature control packaging (78.9%) and food order seal method (86.8%) for their food deliveries. These findings will inform the development of outreach and education efforts for food delivery system operators and, ultimately, improve food safety for customers of retail food service businesses.

INTRODUCTION

The COVID-19 pandemic has propelled the usage of food delivery systems through both retail food service businesses directly and third-party delivery services (Hong et al., 2021). Time and temperature control as well as holding times for cold and hot food are important factors for ensuring the safety of food during transportation (Schaffner et al., 2020). Federal regulations require that food products must be protected from physical, chemical, and microbial contamination during the process of transportation (Ackerley et al., 2010). However, there is not a set standard for who is responsible for food safety during the transportation and delivery of food when it comes to Direct-to-Consumer (DTC) or Third-Party Delivery (TPD) food delivery services (Schaffner et al., 2020). DTC food delivery services are delivery systems where retail food service establishments directly employ food delivery drivers. Direct employment allows establishments to mandate the driver to follow the establishment's practices. Retail food service businesses who use TPD services cannot mandate the delivery drivers to follow establishment practices because they are employed as contractors to the business.

The Ohio Food Code states that any employee or delivery persons entering the food preparation, food storage, and ware-washing areas within the establishment have the same food safety responsibilities as a level 1 person-in-charge (PIC) (Rule 3717-1-02.4 - Ohio Administrative Code | Ohio Laws, 2019). In Ohio, a level 1 PIC is responsible for effectively preventing foodborne illness by practicing standardized food safety practices within risk level I, II, III, and IV food service operations or retail food service establishments (*Food Safety Certification* | ODH, n.d.). A CDC study found that food safety certification is associated with increased food safety knowledge which assists in the prevention of foodborne illness (Brown et al., 2014). While training in food safety practices related to the transportation of food is not

mandated, establishments still apply their food safety knowledge to other aspects of their business, including their food delivery systems.

Research on food safety knowledge and practices around food safety within food delivery systems is limited even though it is crucial now more than ever. To address this gap, we conducted a cross-sectional survey of Ohio retail food service establishments. Findings from this study will inform the development of outreach and education efforts for food delivery system operators and, ultimately, improve food safety for customers of retail food service businesses.

METHODS

Owners and managers of retail food service establishments in Ohio that offer some form of food delivery were eligible to participate in the study. Study participants were recruited using the Ohio Restaurant Association's (ORA) membership list of 16,000 retail food service establishments. It was determined that a sample size of 376 establishments would provide a precision of 0.05 to estimate the proportion of retail food service establishments with specific food delivery practices using a 0.05 level of significance.

Recruitment emails were periodically sent out by ORA from January 5, 2022, to March 4, 2022. The survey was anonymous; therefore, no follow-up attempts were made beyond sending the periodic emails to the membership list. A digital consent form including the purpose of the study and the expectations and rights of participants was displayed within the survey form before the questions were prompted to the participants.

The survey was administered electronically through Qualtrics (Appendix 1). The survey was designed to take no more than 20 minutes including time to review the informed consent information. The questionnaire was partially developed using information from the Guidance

Document for Direct-to-Consumer and Third-Party Delivery Service Food Delivery document (Schaffner et al., 2020). Respondents were asked to complete a series of questions regarding their food safety-related policies, practices, and training to characterize the food delivery practices (I.e., packaging methods, time/temperature control practices and training requirements) of the establishment (Appendix 1).

Data were summarized overall and by delivery method using descriptive statistics. Analysis themes were identified based on the initial survey topics as well as the specific hypotheses made. Associations between establishment characteristics and their food delivery practices and knowledge were examined using logistic regression. Establishment characteristics included establishment type (chain/corporate, franchisee, independent), number of locations, food service type (bakery/ coffee shop, buffet, carry-out only, catering only, fast food, full-service dining, other), and delivery method (direct-to-consumer, third-party delivery services, mixed (DTC and TPD)). Franchise establishments are defined as chain businesses that have been separated from the corporation but retain the brand name. Food delivery practices included temperature control packaging methods, food order sealing methods, presence of delivery policies, and implementation of food safety training for delivery drivers. Analyses were conducted using SAS OnDemand for Academics (SAS Institute Inc., USA).

All procedures for this study were reviewed and determined to be exempt by the Institutional Review Board (IRB) of the Ohio State University. To ensure confidentiality, all data was stored on a password-protected computer that only researchers and the required oversight authorities would have access to, and all survey responses were completely anonymous as no potential identifiers were recorded. The survey responses and informed consent were obtained electronically within the survey platform in the place and time of the participants choosing. The

participants had the opportunity to exit out of the survey at any time they chose by closing their web browser.

RESULTS

A total of 163 representatives of retail food service establishments responded and, of these, 76 met the inclusion criteria and had complete data (Figure 1). Respondents represented 291 retail food service establishments within Ohio, including independent (71.05%), franchisee (22.37%) and chain/corporate (6.58%) establishments. Most respondents characterized full-service dining (55.26%) and fast food (17.11%) as their main type of food service offered (Table 1). Over half of establishments (55.26%) only offered TPD services whereas just over a third (35.53%) only offered DTC food delivery; the remaining establishments (9.21%) used both methods (Mixed) of food delivery (Figure 2). There were no associations found between establishment characteristics and the presence of delivery driver food safety training (results not shown).

Temperature Control Packaging

The majority of respondents (78.9%) reported using some form of temperature control packaging (Table 2). Insulated containers were the most commonly used (46.1%) followed by insulated delivery bags (42.1%) and foil wraps (38.2%). Establishments that use TPD services only were statistically significantly less likely to report the use of insulated delivery bags (OR=0.1563; 95% CI= (0.0536, 0.4554)) and coolants ((OR=0.0697 and CI= (0.008, 0.6057)) than establishments who use DTC food delivery methods (Figures 3 and 4). Franchisee establishments were statistically significantly more likely to use foil wraps to package food than independent establishments (OR= 3.1088; 95% CI= (1.0106, 9.5632)) (Figure 5).

Food service type was also associated with the type of temperature control packaging used. Establishments that offer either carry-out only (OR=9.6; 95% CI= (1.667, 55,286)) or fast food service (OR=7.2; 95% CI= (1.8199, 28.484)) were statistically significantly more likely to use insulated delivery bags than establishments who offer full-service dining (Figure 6). Establishments that only offer catering were statistically significantly more likely to use insulated delivery bags ((OR= 6.4; 95% CI= (1.0165, 40.294)) and coolants ((OR= 13 and CI= (1.7861, 94.621)) than establishments that offer full-service dining (Figures 6 and 7).

There was no association between the presence of temperature control packaging methods and the type of food safety training, number of locations, or the role the respondent holds within the business (results not shown).

Food Order Seal Methods

The majority of retail food service establishments (86.8%) reported using some form of food order seal packaging (Table 2). The use of stickers or tape over package opening were the most common form used (46.1%) followed by tying bags (42.1%) and staples (22.4%). Establishments that use a combination of TPD and DTC food delivery methods were statistically significantly more likely to tie delivery bags as a seal form than establishments that only directly employ food delivery drivers (OR= 7.1429 and CI= (1.1209, 45.518)) (Figure 8).

There was no association between the presence of food order seal packaging methods and the type of establishment, type of food safety training, number of locations, or the role the respondent holds within the business (results not shown).

DISCUSSION

With the lack of surveillance and regulation in the food delivery system, the results of this study are meant to provide preliminary data which can be used to inform the outreach and education efforts lead by regulatory agencies.

The popularity of TPD services among retail food service establishments could suggest decisions around food delivery are based on cost efficiency. Businesses who directly employ drivers have additional expenses beyond employee salaries that must be considered. For example, if retail food service establishments use company vehicles for deliveries, they must pay insurance, gas, and maintenance expenses. If retail food service establishments use employee vehicles for food deliveries, they would need to provide mileage payments for their employees. Another possible reason for the popularity of TPD services is the COVID-19 pandemic. TPD began offering no-contact deliveries and drivers did not have to interact with the employees of the food business, posing fewer health concerns than DTC services.

Temperature control and food order seal packaging methods are important factors when looking at food safety within the food delivery industry. Food delivery can increase the risk of the food being contaminated. For example, retail food service establishments must consider how long the food is without temperature control or if the process of delivery could involve chemical, physical, or microbial hazards. Temperature control packaging can reduce the risk of temperature abuse and seal packaging can reduce the risk of cross-contamination during delivery.

The use of foil wraps by franchise establishments could suggest sustainability is a factor in selecting a temperature control method. Large corporations are often pressured to choose more environmentally sustainable methods for packaging their food. Aluminum foil is one of the most recyclable materials today, providing financial benefits to both corporations and food order customers (*Sustainability – Recycling: Aluminum Association 2021*). Franchise establishments

also have larger buying power, which would reduce the cost of foil wraps and make this option more cost-efficient long term. Fast food, carry-out and catering food retail establishments were more likely to use insulated bags and coolants for temperature control than other types of establishments, particularly full-service dining establishments. Before the pandemic, food delivery was already a main source of revenue for fast-food, carry-out and catering businesses whereas full-service dining establishments were not as concerned with offering delivery. The inclusion of delivery into their business plan could indicate a reason for using insulated bags more often than full-service dining establishments. Catering businesses would also be more likely to use coolants than full-service dining establishments because caterers are required to use temperature control methods by the Ohio Food Code (Rule 3717-1 Ohio Administrative Code | Ohio Laws, 2019). Catered events also must consider time and temperature control because events may take place over many hours and always involve travel time.

Insulated delivery bags and coolants were not widely used by establishments using TPD services. This might mean that establishments are not willing to invest in reusable packaging methods. Third-party delivery drivers are contractors and do not have to follow specific establishment policies. In particular, there would be no way to guarantee TPD drivers would return the insulated delivery bags and coolants once the delivery was complete. Retail food service establishments who offer a mixed form of food delivery (i.e., DTC and TPD) were more likely to tie their food order bags than establishments with only DTC food delivery. This may be because tied knots are harder to tamper with than stickers or tape. TPD services have a lack of surveillance on their drivers so preventing contamination from anywhere is very important. Tied bags also present fewer potential hazards than other sealing methods such as staples and are often more cost effective than stickers or tape.

There are several limitations to this study. First, the sample size was smaller than expected, which limits the interpretability and generalizability of the conclusions. Second, the online format of the survey may have created participation bias since participants would self-select their participation. While we worked with ORA to send out frequent recruitment emails to increase participation, the results are not generalizable to the entire Ohio population due to the small sample size. Improvements such as including a larger sample size and using multiple outlets of recruitment strategies would improve the generalizability of the findings of this study.

While specific packaging and delivery policies are not yet required, certain practices are starting to become more widely used within the food delivery industry. It is important to continue monitoring food safety practices within different food delivery methods and across establishment types so that regulatory agencies can develop policies that are feasible for all retail food service businesses. We would recommend future research to focus on having companies complete a third-party review of their delivery practices so there is an unbiased analysis of information regarding food safety within the industry.

Acknowledgements

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REFERENCES

1. Ackerley, N., Sertkaya, A., & Lange, R. (2010). Food Transportation Safety: Characterizing Risks and Controls by Use of Expert Opinion. *Food Protection Trends*, 30(4), 212–222.
2. Brown, L. G., Le, B., Wong, M. R., Reimann, D., Nicholas, D., Faw, B., Davis, E., & Selman, C. A. (2014). Restaurant manager and Worker Food Safety Certification and Knowledge. *Foodborne Pathogens and Disease*, 11(11), 835–843.
<https://doi.org/10.1089/fpd.2014.1787>
3. Hong, C., Choi, H. (Hailey), Choi, E.-K. (Cindy), & Joung, H.-W. (David). (2021). Factors affecting customer intention to use online food delivery services before and during the COVID-19 pandemic. *Journal of Hospitality and Tourism Management*, 48, 509–518.
<https://doi.org/10.1016/j.jhtm.2021.08.012>
4. Ohio Department of Health. *Food Safety Certification*. Retrieved October 29, 2021, from <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/food-safety-program/food-safety-certification/>
5. Rule 3717-1- Ohio Administrative Code | Ohio Laws, Rule 3717-1 Ohio Uniform Food Safety Code (2019). <https://codes.ohio.gov/ohio-administrative-code/chapter-3717-1>
6. Rule 3717-1-02.4 - Ohio Administrative Code | Ohio Laws, Rule 3717-1-02.4 Ohio Uniform Food Safety Code (2019). <https://codes.ohio.gov/ohio-administrative-code/rule-3717-1-02.4>
7. SAS Institute, Inc. (2018) SAS Studio 3.8 (Enterprise Edition) for Linux [Computer software]. Cary, NC
8. Schaffner, D., Espinoza, A., Auffray, A., Beyer, N., Bongo-Box, C., Brown, R., Feeney, C., Friel, C., Graham, J., Hernandez, C., LaFleur, R., Madamba, V., Millwood, C., Navin, J., Patton, T., Rogers, J., Yang, L., & Zetlau, J. (2020). *Guidance Document for Direct-to-*

Consumer and Third-Party Delivery Service Food Delivery. Conference for Food Protection.

http://www.foodprotect.org/issues/packets/2020Packet/attachments/III_004_content_c.pdf

9. *Sustainability – Recycling: Aluminum Association*. Aluminum Association. (2021). Retrieved April 5, 2022, from <https://www.aluminum.org/Recycling>

TABLES

Table 1. Response demographics.

Demographics	Total N (%)	Delivery Method		
		Directly Employed Drivers Only	Mixed	Third-party Only
		N (%)	N (%)	N (%)
Establishment Type				
Chain/Corporate Location	5 (6.6%)	2 (40.0%)	1 (20.0%)	2 (40.0%)
Franchisee	17 (22.4%)	2 (11.8%)	4 (23.5%)	11 (64.7%)
Independent	54 (71.1%)	23 (42.6%)	2 (3.7%)	29 (53.7%)
Food Service Type				
Bakery/ Coffee Shop	1 (1.3%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Buffet	1 (1.3%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Carry-out only	8 (10.5%)	4 (50.0%)	0 (0.0%)	4 (50.0%)
Catering only	6 (7.9%)	6 (100.0%)	0 (0.0%)	0 (0.0%)
Fast Food	13 (17.1%)	5 (38.5%)	5 (38.5%)	3 (23.1%)
Full-Service dining	42 (55.3%)	10 (23.8%)	2 (4.8%)	30 (71.4%)
Other	5 (6.6%)	2 (40.0%)	0 (0.0%)	3 (60.0%)
Establishment Representative				
Manager	4 (5.3%)	2 (50.0%)	0 (0.0%)	2 (50.0%)
Owner	45 (59.2%)	16 (35.6%)	4 (8.9%)	25 (55.6%)
Owner and manager	27 (35.5%)	9 (33.3%)	3 (11.1%)	15 (55.6%)
Number of Locations				
1	47 (61.8%)	19 (40.4%)	2 (4.3%)	26 (55.3%)
2-5	18 (23.7%)	6 (33.3%)	1 (5.6%)	11 (61.1%)
6-10	5 (6.6%)	2 (40.0%)	1 (20.0%)	2 (40.0%)
>10	6 (7.9%)	0 (0.0%)	3 (50.0%)	3 (50.0%)
Driver Training				
Yes	17 (22.4%)	14 (82.4%)	3 (17.6%)	-
No	17 (22.4%)	13 (76.5%)	4 (23.5%)	-
No DTC	42 (55.3%)	-	-	42 (100.0%)

Table 2. Packaging methods across all responses and the types of delivery services.

Packaging Methods across Delivery Methods	Total N (%)	Delivery Method		
		Third-party Only	Mixed	Directly Employed Drivers Only
		N (%)	N (%)	N (%)
Used temperature control packaging				
Yes	60 (78.9%)	30 (50.0%)	6 (10.0%)	24 (40.0%)
No	16 (21.1%)	12 (75.0%)	1 (6.3%)	3 (18.8%)
Foil wraps				
Yes	29 (38.2%)	15 (51.7%)	5 (17.2%)	9 (31.0%)
No	47 (61.8%)	27 (57.4%)	2 (4.3%)	18 (38.3%)
Insulated delivery bags				
Yes	32 (42.1%)	10 (31.3%)	4 (12.5%)	18 (56.3%)
No	44 (57.9%)	32 (72.7%)	3 (6.8%)	9 (20.5%)
Insulated containers				
Yes	35 (46.1%)	21 (60.0%)	3 (8.6%)	11 (31.4%)
No	41 (53.9%)	21 (51.2%)	4 (9.8%)	16 (39.0%)
Coolants				
Yes	8 (10.5%)	1 (12.5%)	0 (0.0%)	7 (87.5%)
No	68 (89.5%)	41 (60.3%)	7 (10.3%)	20 (29.4%)
Other method of temperature control				
Yes	4 (5.3%)	0 (0.0%)	1 (25.0%)	3 (75.0%)
No	72 (94.7%)	42 (58.3%)	6 (8.3%)	24 (33.3%)
No additional methods of temperature control packaging				
Yes	16 (21.1%)	12 (75.0%)	1 (6.3%)	3 (18.8%)
No	60 (78.9%)	30 (50.0%)	6 (10.0%)	24 (40.0%)
Used food order seal packaging				
Yes	66 (86.8%)	38 (57.6%)	6 (9.1%)	22 (33.3%)
No	10 (13.2%)	4 (40.0%)	1 (10.0%)	5 (50.0%)
Tied bags				
Yes	32 (42.1%)	20 (62.5%)	5 (15.6%)	7 (21.9%)
No	44 (57.9%)	22 (50.0%)	2 (4.5%)	20 (45.5%)
Folded edge of bag				
Yes	16 (21.1%)	8 (50.0%)	2 (12.5%)	6 (37.5%)
No	60 (78.9%)	34 (56.7%)	5 (8.3%)	21 (35.0%)
Stickers or tape				
Yes	35 (46.1%)	21 (60.0%)	5 (14.3%)	9 (25.7%)
No	41 (53.9%)	21 (51.2%)	2 (4.9%)	18 (43.9%)
Staples				
Yes	17 (22.4%)	7 (41.2%)	3 (17.6%)	7 (41.2%)
No	59 (77.6%)	35 (59.3%)	4 (6.8%)	20 (33.9%)

Other method of seal packaging				
Yes	5 (6.6%)	1 (20.0%)	0 (0.0%)	4 (80.0%)
No	71 (93.4%)	41 (57.7%)	7 (9.9%)	23 (32.4%)
No additional methods of seal packaging				
Yes	11 (14.5%)	4 (36.4%)	1 (9.1%)	6 (54.5%)
No	65 (85.5%)	38 (58.5%)	6 (9.2%)	21 (32.3%)

FIGURES

Figure 1. Screening flow chart for data analysis.

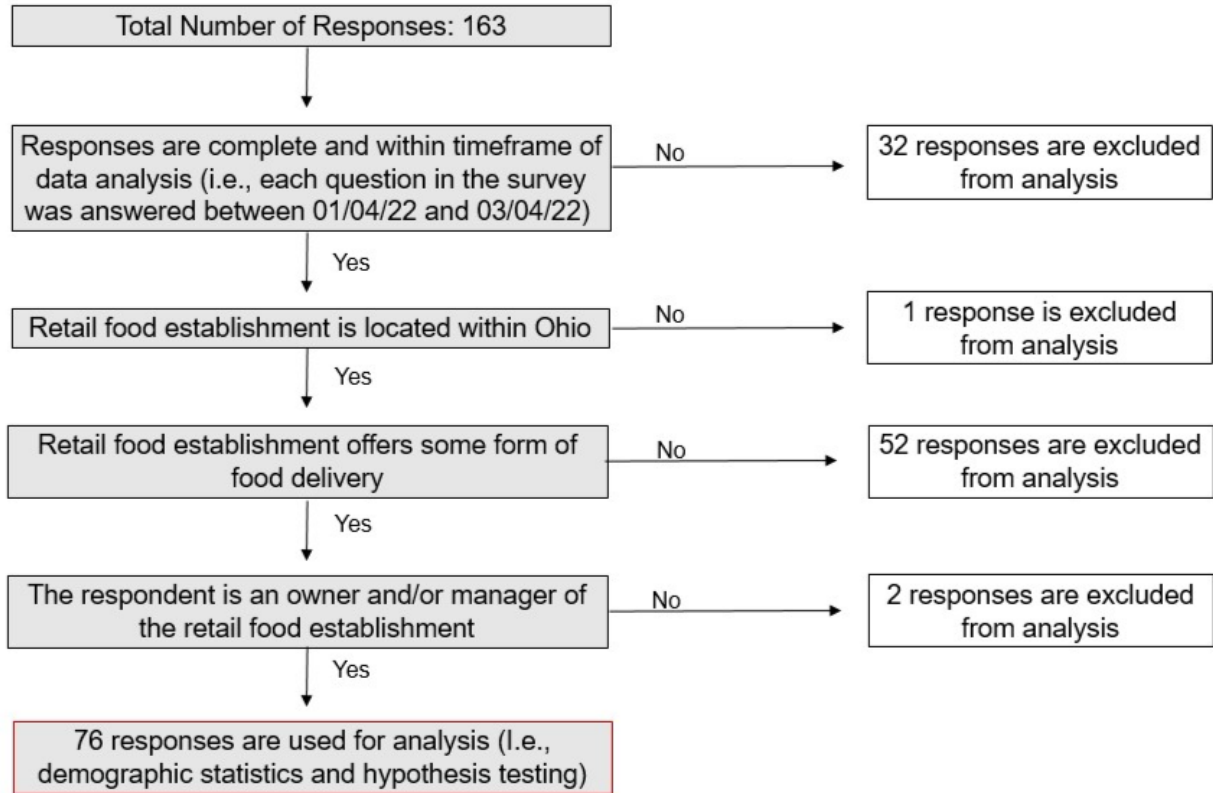


Figure 2. Method of delivery across all establishments.

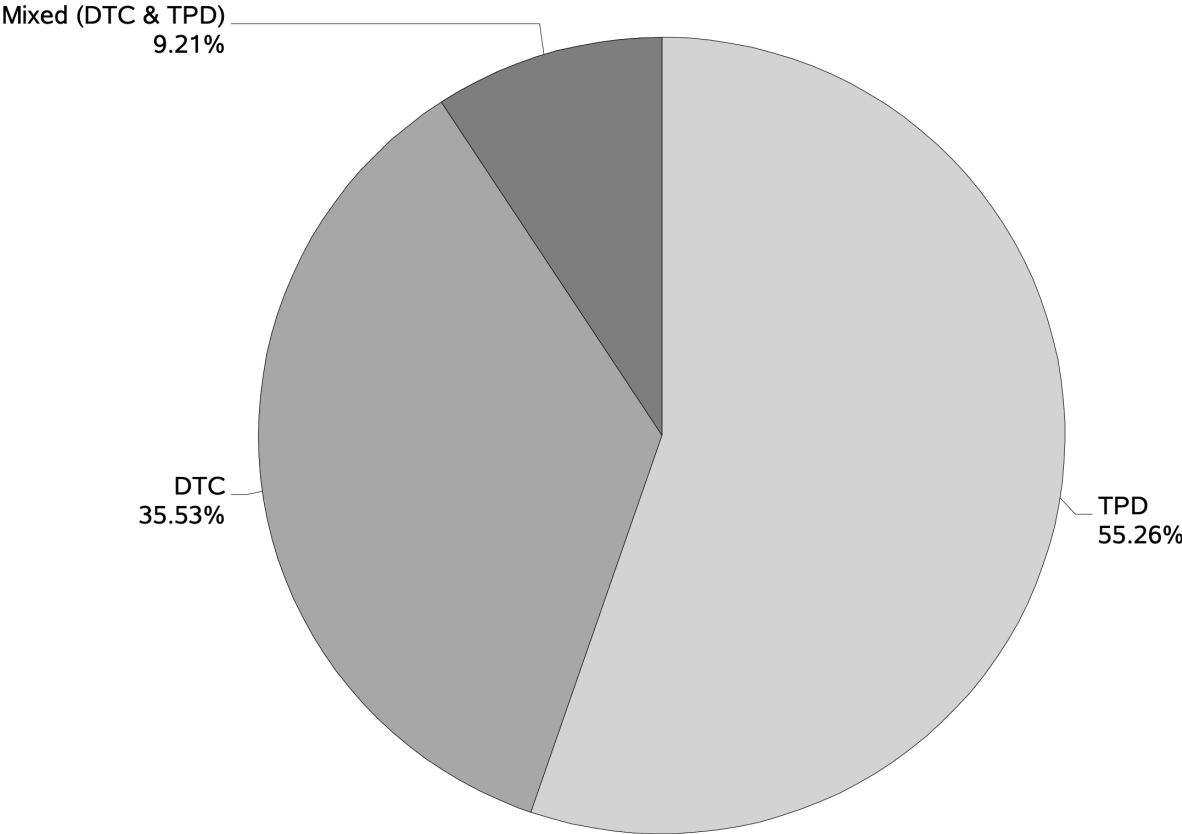


Figure 3. Odds ratio plot of Delivery Method vs Insulated Delivery Bag usage.

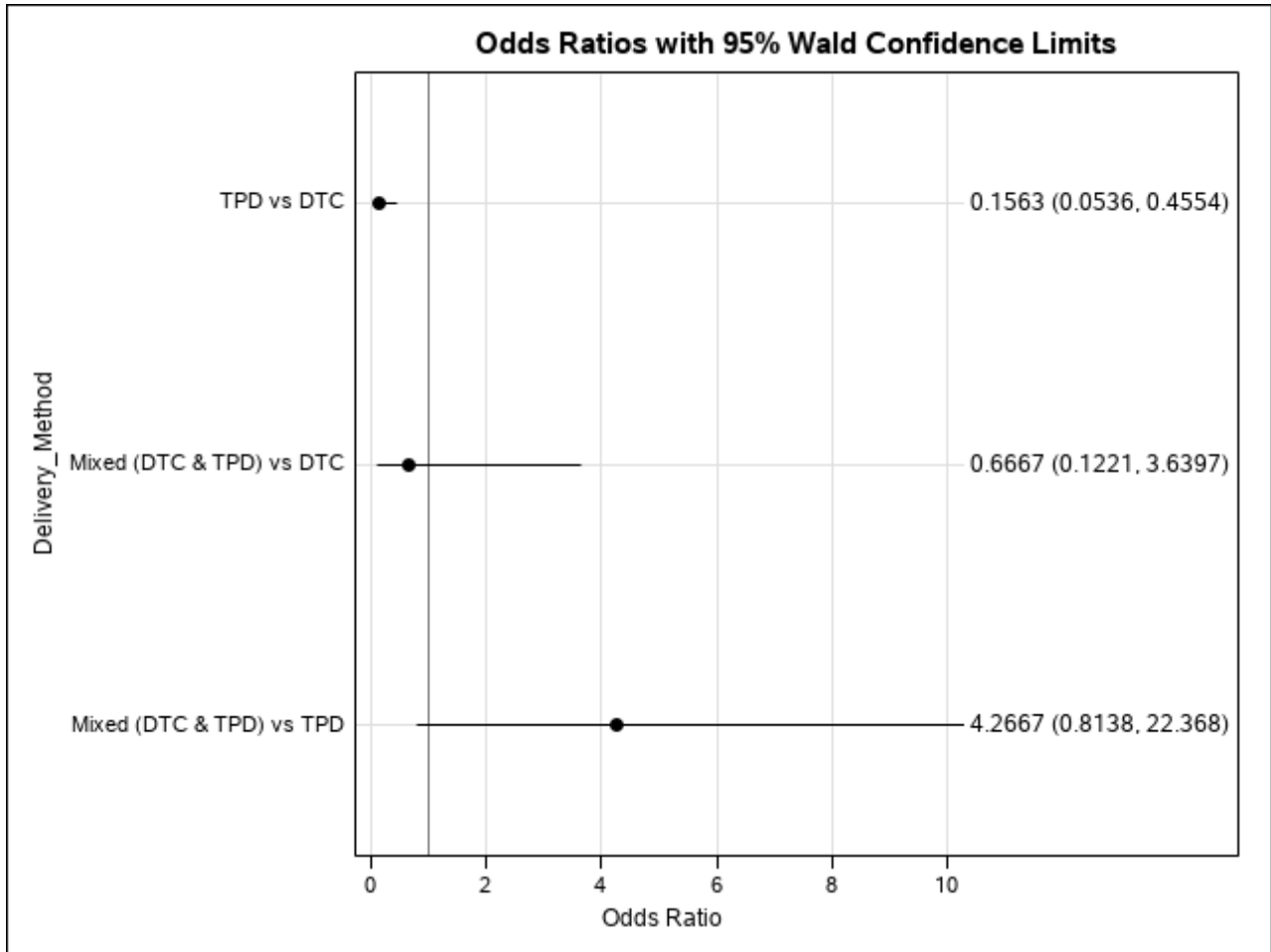


Figure 4. Odds ratio plot of Delivery Method vs Coolant usage.

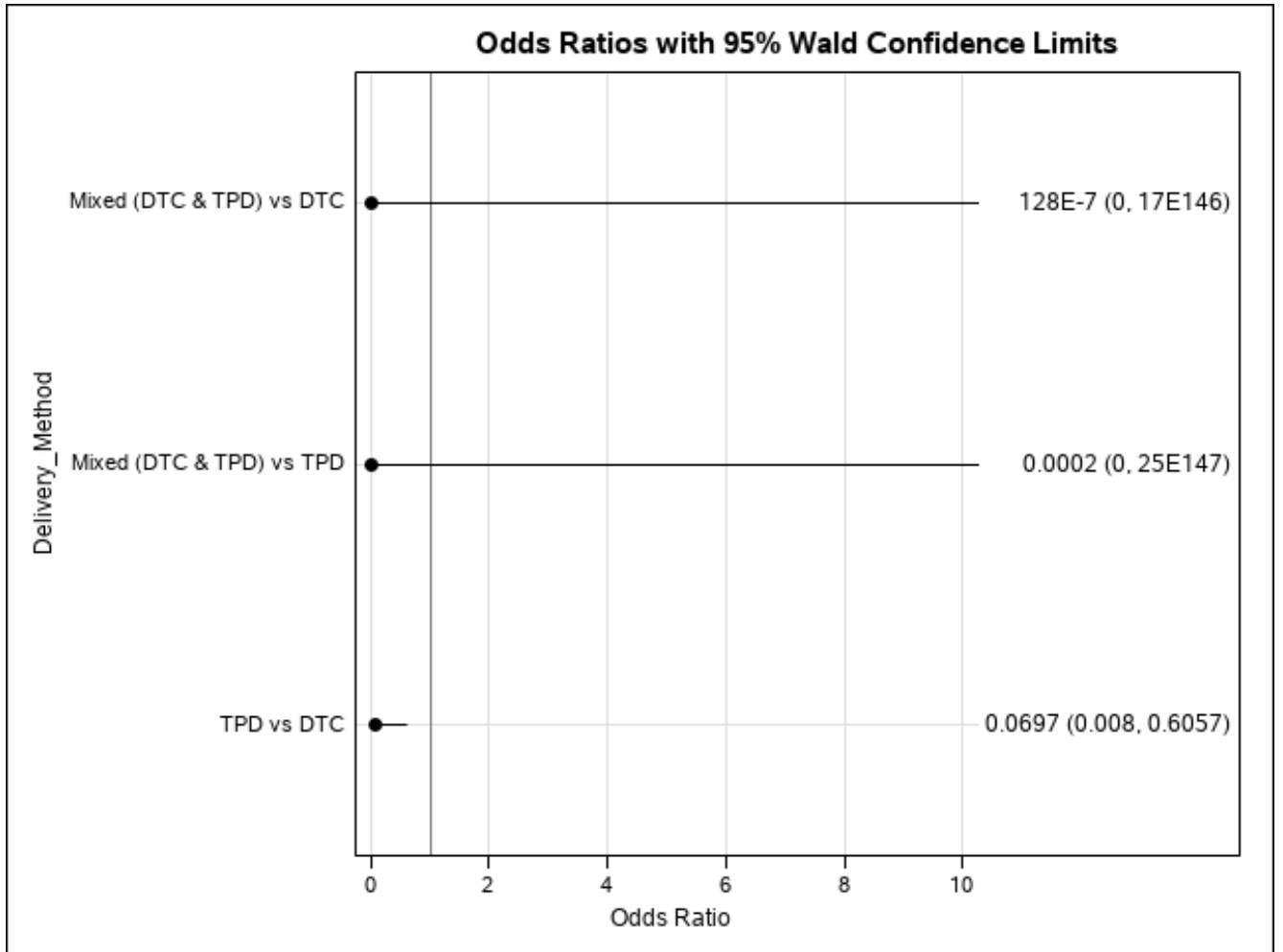


Figure 5. Odds ratio plot of Establishment Type vs Foil Wrap usage.

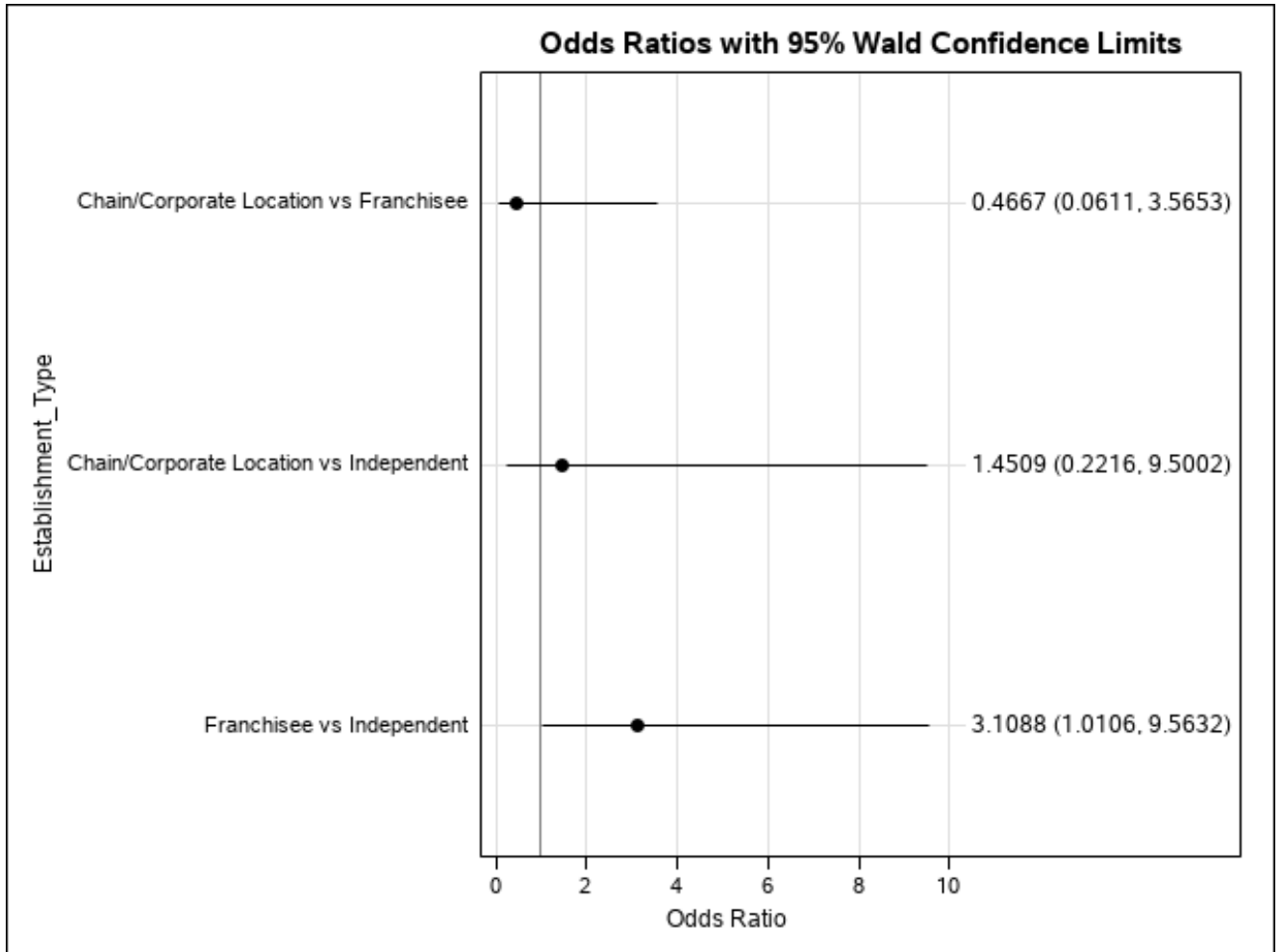


Figure 6. Odds ratio plot of Food Service Type vs Insulated Delivery Bag usage.

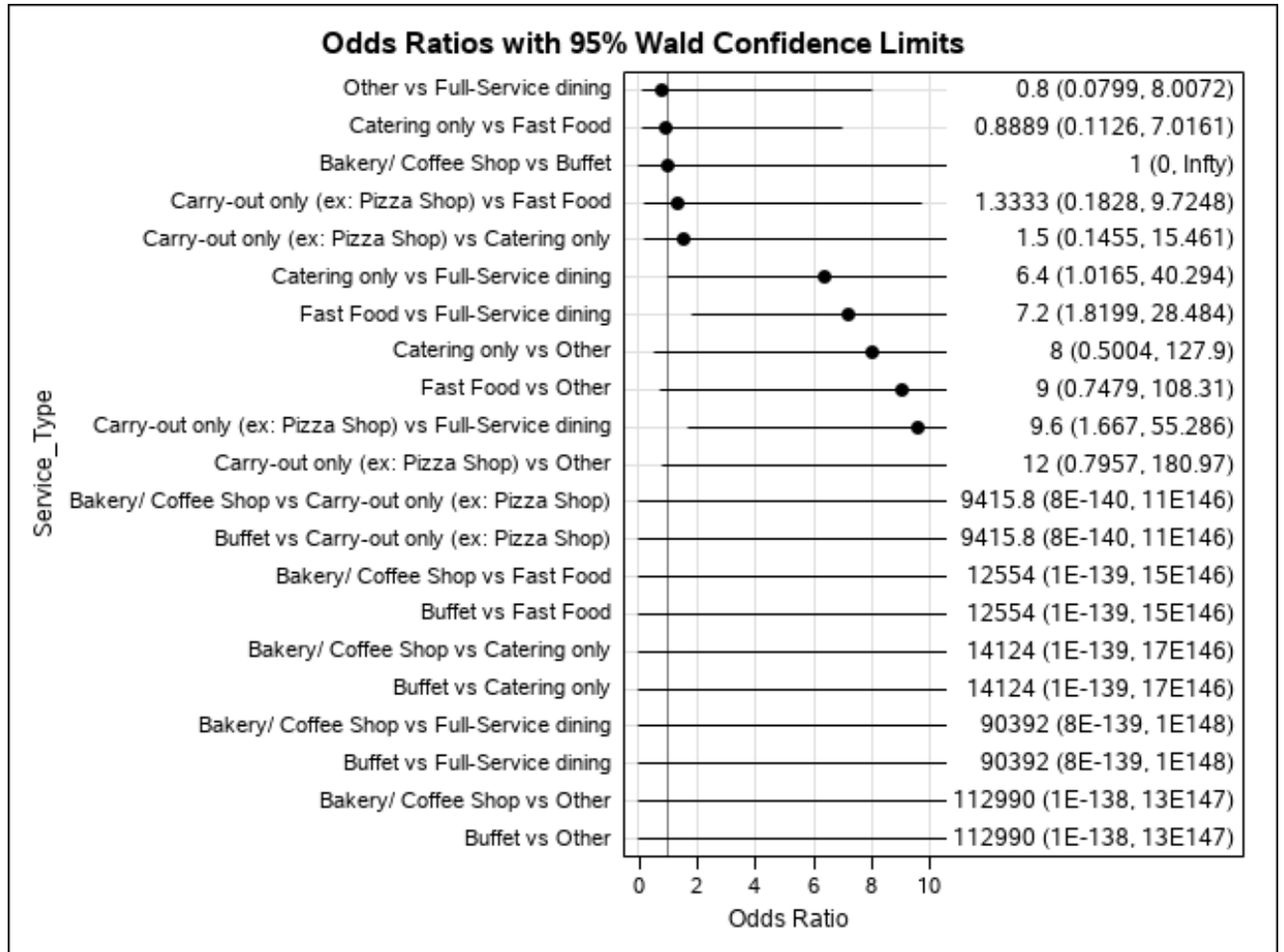


Figure 7. Odds ratio plot of Food Service Type vs Coolant usage.

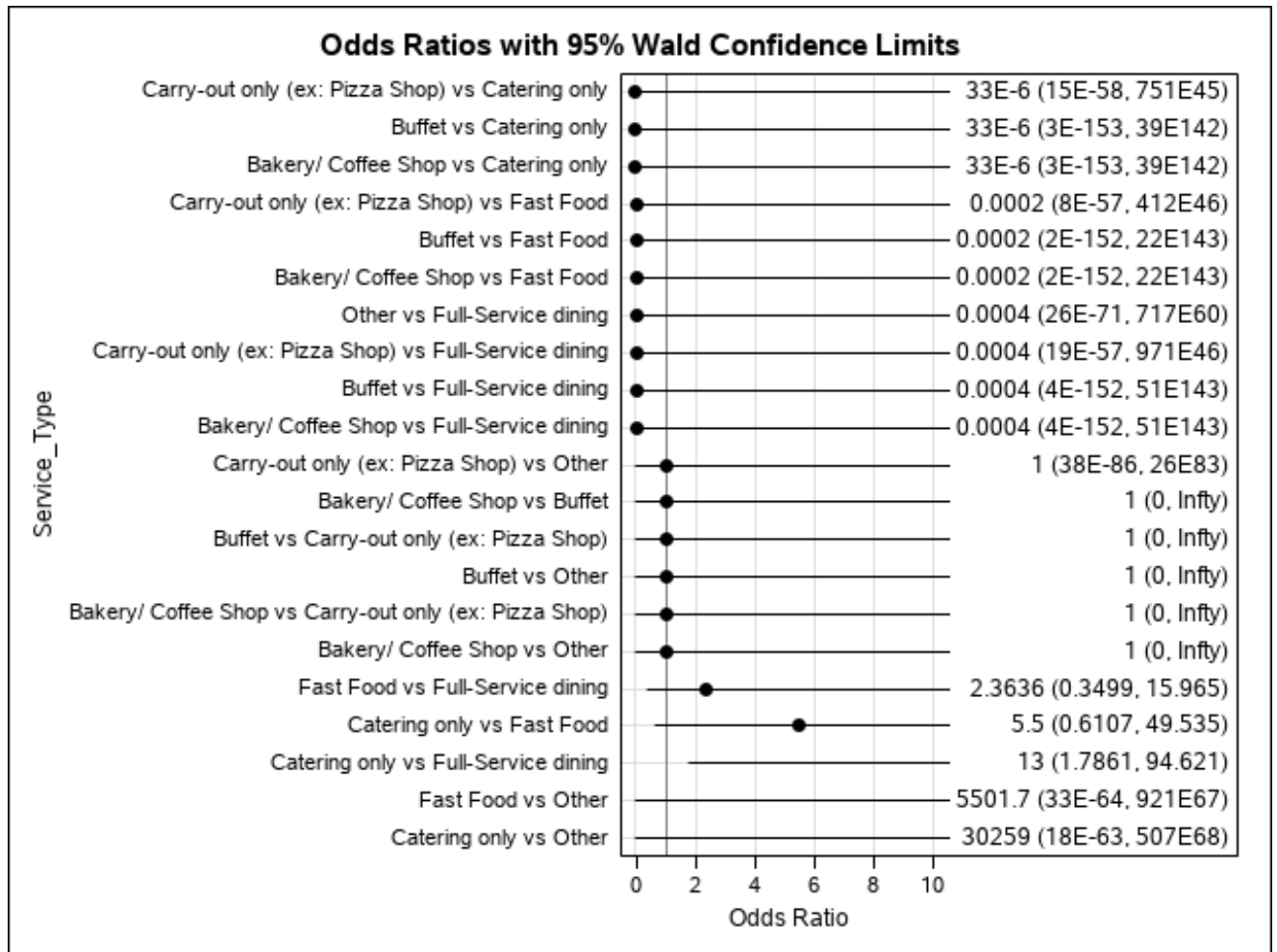
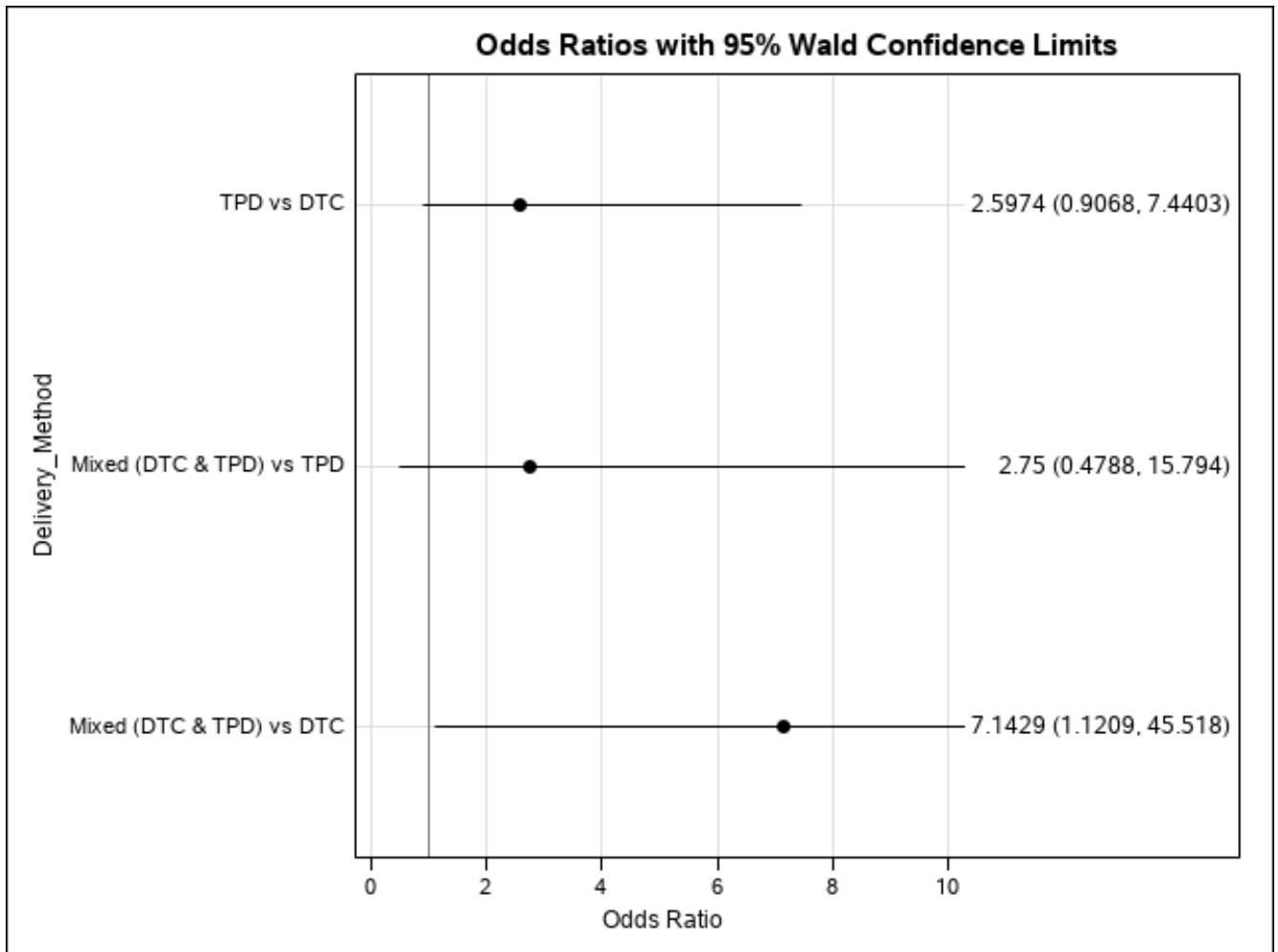


Figure 8. Odds ratio plot of Delivery Method vs Tied Bags practice.



APPENDIX 1: Survey Questionnaire

Question	Sub Questions
<p>Is this retail food service establishment located in Ohio?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No 	<p>If 'No' is selected, end of survey.</p>
<p>Which of the following food delivery services does this retail food service business use? (Select all that apply)</p> <ul style="list-style-type: none"> <input type="radio"/> This business does not offer any form of delivery <input type="radio"/> Drivers directly employed by the business <input type="radio"/> GrubHub <input type="radio"/> DoorDash <input type="radio"/> UberEats <input type="radio"/> Postmates <input type="radio"/> EatStree <input type="radio"/> Other (Please Specify) 	<p>If 'This business does not offer any form of delivery' is selected, end of survey.</p>
<p>Designate your role regarding this retail food service establishment.</p> <ul style="list-style-type: none"> <input type="radio"/> Owner <input type="radio"/> Manager <input type="radio"/> Owner and manager <input type="radio"/> None of the above 	<p>If 'None of the above' is selected, end of survey.</p>
<p>What is the zip code of this retail food service business?</p> <p><input type="text"/></p>	
<p>What type of retail food service establishment is this?</p> <ul style="list-style-type: none"> <input type="radio"/> Independent <input type="radio"/> Chain/Corporate Location <input type="radio"/> Franchisee <input type="radio"/> Other 	
<p>What is the main type of service this establishment provides?</p> <ul style="list-style-type: none"> <input type="radio"/> Full-Service dining <input type="radio"/> Fast Food <input type="radio"/> Carry-out only (ex: Pizza Shop) <input type="radio"/> Catering only <input type="radio"/> Buffet <input type="radio"/> Institution (school, hospital, assisted living) <input type="radio"/> Bakery/ Coffee Shop <input type="radio"/> Concessions <input type="radio"/> Convenience Store <input type="radio"/> Grocery Store/ Market <input type="radio"/> Other 	
<p>How many different locations does this retail food service business operate within Ohio?</p>	

<p>○</p> <p>How long have you been the owner and/or manager of this retail food service business?</p> <ul style="list-style-type: none"> ○ Less than 2 years ○ 2-4 years ○ 5-7 years ○ 8-10 years ○ Greater than 10 years 	
<p>Have you ever received food safety training or certification (ServSafe, Learn2Serve, Super SafeMark, TAPSeries, NEHA, StateFoodSafety, local health department, etc.)?</p> <ul style="list-style-type: none"> ○ No ○ Yes 	<p>If 'Yes' is selected, then ask:</p> <p>What is the highest level of food safety training you have received?</p> <ul style="list-style-type: none"> ○ Level 1 (Person-In-Charge) ○ Level 2 (Certified Food Protection Manager) ○ Other (Please Specify) _____ <p>When was the most recent time you received training and/or re-certification?</p> <ul style="list-style-type: none"> ○ Less than 1 year ago ○ 1-2 years ago ○ 3-4 years ago ○ 5-6 years ago ○ Greater than 6 years ago <p>What program did you receive your most recent training and/or re-certification from?</p> <ul style="list-style-type: none"> ○ ServSafe ○ Learn2Serve ○ Super SafeMark ○ TAPSeries ○ NEHA ○ StateFoodSafety ○ Local Health Department ○ Other (Please Specify) _____
<p>Does this retail food service business have any written policies in place for interacting with delivery orders?</p> <ul style="list-style-type: none"> ○ Yes ○ No 	
<p>Does this retail food service business use any of the following to keep foods hot or cold for food delivery? (Select all that apply)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Foil wraps <input type="checkbox"/> Insulated delivery bags <input type="checkbox"/> Insulated containers <input type="checkbox"/> Coolants (ice packs, frozen gel packs, dry ice, etc.) <input type="checkbox"/> Other (Please Specify) _____ <input type="checkbox"/> None of the above 	

<p>In what way does this retail food service business use additional methods to seal food orders for delivery? (Select all that apply)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Tied bags <input type="checkbox"/> Folded edge of bag <input type="checkbox"/> Stickers or tape over bag/box opening <input type="checkbox"/> Staples <input type="checkbox"/> Other (Please Specify) _____ <input type="checkbox"/> None of the above 	
<p>Are delivery order times tracked from the time the food is prepared to the time the order is delivered?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No 	
<p>Does Time/Temperature Control for Safety (TCS) food sit in a temperature controlled environment utilizing approved equipment (ie. refrigeration, heat lamp, warmer, etc) before delivery pickup?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No 	<p>If 'No' is selected, then ask:</p> <p>On average, how long after TCS food orders are prepared do the drivers pick up the order for delivery?</p> <ul style="list-style-type: none"> <input type="radio"/> Less than 0.5 hours <input type="radio"/> 0.5 - 1 hours <input type="radio"/> 1 - 1.5 hours <input type="radio"/> 1.5 - 2 hours <input type="radio"/> Greater than 2 hours <p>What is the maximum amount of time that TCS food delivery orders will be held for pickup?</p> <ul style="list-style-type: none"> <input type="radio"/> Less than 1 hour <input type="radio"/> 1 - 1.5 hours <input type="radio"/> 1.5 - 2 hours <input type="radio"/> Greater than 2 hours <p>Are there any written policies in place for interacting with TCS food delivery orders that have not been picked up within 4 hours?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No
<p>Does this retail food service business require any training or certification for delivery drivers employed by the establishment?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> This retail food service business does not directly employ delivery drivers. 	
<p>Bacteria grows fastest within a temperature range of?</p> <ul style="list-style-type: none"> <input type="radio"/> 0°F (-18°C) and 220°F (104°C) <input type="radio"/> 0°F (-18°C) and 135°F (57°C) <input type="radio"/> 41°F (5°C) and 135°F (57°C) <input type="radio"/> 41°F (5°C) and 220°F (104°C) <input type="radio"/> I prefer not to answer. 	

How long can you hold HOT food without temperature control before it needs to be thrown out?

- 30 minutes
- 1 hour
- 2 hours
- 4 hours
- 6 hours
- I prefer not to answer.

How long can you hold COLD food without temperature control before it needs to be thrown out?

- 30 minutes
 - 1 hour
 - 2 hours
 - 4 hours
 - 6 hours
 - I prefer not to answer.
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