Singapore Productivity Centre
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Singapore Productivity Centre **Research and Business Insights**

FOOD DELIVERY STUDY:
HOW TO SET THE RIGHT PRICE

Finding the balance

To capitalise on the change in consumer behaviour and the evolving food business, restaurant operators must be sensitive to customers' responses to the structure of pickup and delivery charges.

Singapore Productivity Centre (SGPC) and Professor Sherri Kimes, visiting professor in National University of Singapore (NUS) Business School, an expert in revenue management, set out to gather more insights on the costs associated with the shift from dining out to eating in. A survey was conducted in July 2020 with 321 respondents who had ordered takeaway or delivery services in the past six months.

Consumers perceptions towards the structure of Takeaway and Delivery Charges

Generally consumers were willing to pay delivery charges that they considered fair, notably flat fees and distance-based fees. Hefty minimum order requirements were not well received, but consumers were willing to pay higher prices for delivery than for pickup, provided that the lower pickup charges were framed as a discount.

TYPES OF DELIVERY FEES

How do respondents rate the fees?

Respondents were asked to rate how familiar were they and their perceived level of fairness with the different types of delivery fees.

Familiarity

- **Distance-based Fees: 2.74** out of 5
- **With Minimum Order Size: 2.78** out of 5
- **Flat Fees: 2.48** out of 5

Fairness

- **Distance-based Fees: 3.47** out of 5
- **With Minimum Order Size: 3.12** out of 5
- **Flat Fees: 3.40** out of 5

Different Pricing:

Restaurants try to cover the Delivery Service Providers' (DSPs) commission by charging higher menu prices for delivery business than for takeout or dine-in business.

FINDING:
Customers generally accept a 15% delivery fee.

Delivery fees on a $30 order

How consumers view pricing differences

Premium Framing
Respondents informed that menu prices for delivery were
+20%
higher than for takeout

Premium Framing

Respondents saw that menu prices for takeouts were
-20%
lower than for delivery

Discount Framing

So?

Respondents in the discount framing treatment rated the perceived fairness, acceptability and reasonableness as significantly better than those in the premium framing treatment, even though the actual prices were exactly the same.

TIP FOR OPERATORS:
Frame your takeout prices as lower than delivery!

KEY RECOMMENDATIONS FOR OPERATORS

Pricing strategy
Feel comfortable charging higher prices for delivery and promote takeaway prices as a discount from delivery prices

Menu engineering
Curate delivery menus that are high in profit and low in cost

Data analytics on food delivery sales and costs
To analyse trending consumers' behaviours and refine delivery menu

Optimising store layout for food delivery operations
To improve productivity and turnover for deliveries

Digital marketing
Increase brand awareness to boost delivery sales

Job and process redesign
Enhance and enrich job roles of employees to manage food delivery operations efficiently

Improving digital literacy of workforce
To handle orders across multiple platforms productively

More insights on attributes influencing consumers' decisions

To help operators gain more clarity for a tactical delivery pricing model, the study also analysed attributes that may influence consumers' perceptions and decisions.

The trade-off among four attributes were assessed:

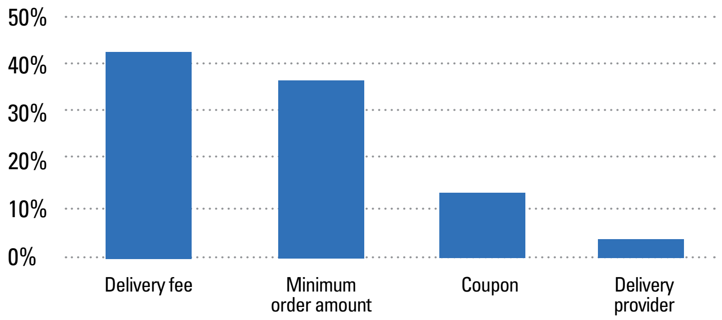
Delivery fee | **Minimum order amount** | **Coupon amount** | **Delivery service provider**

Respondents were presented with six pairs of randomly generated choices and asked to indicate which of the two presented choices they preferred.

Conjoint analysis was used to determine the relative weight that respondents placed on each of the attributes when choosing between alternatives.

Attribute Weights

More than 1/3 of the respondents considered the delivery fee and minimum order amount to be the most important attributes.



Utility Findings

Conjoint analysis also calculates the relative utility of each of the attribute levels, i.e. a value that shows how much an attribute level influences the customer's decision to select it.

The utility findings were as follows:

Attribute	Importance	Level	Utility Value
Delivery fee	44%	$4	0.79
		$7	0.03
		$10	-0.75
Minimum order amount	38%	$0	0.49
		$20	0.44
		$30	-0.13
		$40	-0.80
Coupon for future use	14%	No coupon offered	-0.28
		$3	0.08
		$8	0.20
Delivery service provider	3%	Delivery company	0.05
		Restaurant	-0.05

Delivery fees:

Respondents derived the most utility from the $4 delivery fee and viewed the $10 fee negatively.

Minimum order amount:

Respondents derived more utility from a less restrictive minimum.

Coupon value:

The higher the coupon value, the higher the customer utility.

Delivery service provider:

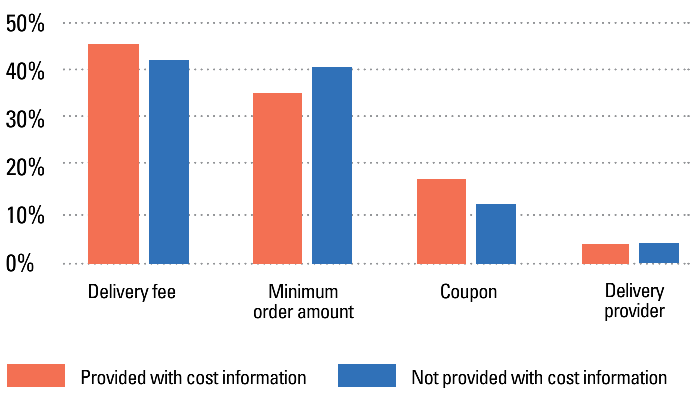
Respondents seemed to show no particular preference for delivery by the DSP or the restaurant.

Attribute Weights by Scenarios

The survey presented respondents with one of two scenarios where basic information on their order details and amount were shown.

Approximately half of the respondents were shown a scenario that included a reminder of the delivery fee the restaurant would incur. The rest of the respondents were not shown such cost information.

What matters more to you?



Scenario

You'd like to have dinner and decide to order delivery. You find a restaurant that you have ordered from before. You liked their food and decided to order from them. Most restaurants that offer delivery have to pay a fee of 20% to 30% to delivery providers.

On average, it costs about $15 for a main course, $5 for a side dish, $5 for a dessert and $5 for a beverage.

The restaurant has a minimum order size and also charges a delivery fee. They sometimes offer coupons that can be redeemed as credit on future orders.

The results were most significant when respondents were shown the scenario above. Respondents placed significantly less weight on the min. order amount. Respondents placed similar weights as the other group of respondents who were not shown the cost information on the delivery fee, the coupon value and the delivery provider.

Variable Pricing

Charging higher menu prices for delivery orders

Restaurants can try to cover the DSP's commission by charging higher menu prices for delivery business than for takeaway or dine-in services. Respondents surveyed generally find such practice to be fair, acceptable and reasonable.

Fairness*

53% found such a practice to be **extremely fair or fair.**

22% are **neutral.**

15% found it to be either **unfair or extremely unfair.**

Acceptability*

66% found such a practice to be **extremely acceptable or acceptable.**

20% are **neutral.**

14% found it to be either **unacceptable or extremely unacceptable.**

Reasonableness*

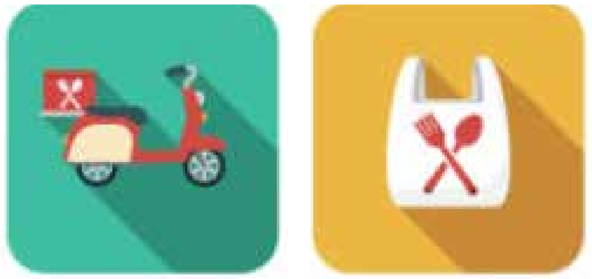
66% found such a practice to be **extremely reasonable or reasonable.**

21% are **neutral.**

13% found it to be either **unreasonable or extremely unreasonable.**

*No significant difference by gender, age or order frequency.

More Insights to the Framing of the Price Differential Policy



Respondents were randomly assigned to either premium framing or discount framing groups.

Respondents in the premium treatment were told that menu prices for delivery were 20% higher than takeout prices.

Respondents in the discount treatment saw that menu prices for takeout were 20% lower than menu prices for delivery.

How did consumers rate the pricing?

Variable	Premium	Discount
Fairness	2.64	2.22
Acceptability	2.58	2.29
Reasonableness	2.56	2.28

Based on a 5-point scale with 1 being extremely fair, acceptable and reasonable and 5 being extremely unfair, unacceptable and unreasonable:

*Results are statistically significant

Respondents in the **discount framing treatment** rated the perceived fairness, acceptability and reasonableness as **significantly better** than those in the **premium framing treatment**, even though the actual prices were exactly the same.

This implies that restaurants should frame their takeout prices as being lower than their delivery prices (rather than framing delivery as an add-on charge)

As the food industry in the COVID-19 era becomes increasingly reliant on delivery platforms, food businesses that offer delivery need to address the delivery-associated costs in sustainable and tenable ways.

Additional revenue can be generated by charging higher menu item prices for delivery, by charging a delivery fee, or by having a minimum order size for delivery orders.

1. **Charging higher prices for delivery**: Operators should feel comfortable charging higher prices for delivery, and that they should promote their takeaway menu as a discount from delivery prices.
2. **Type of delivery fee**: Operators should consider charging either a flat fee or one based on the distance traveled.
3. **Delivery-fee tradeoff**: Contingent shipping fees that require a minimum order amount should be avoided as well in view of respondents' negative reactions to it.

Conclusion

The food economy looks set to shift in the favour of restaurant delivery. Restaurant operators must be able to understand and find nuanced ways to make delivery more profitable (or less costly). This study has shown invaluably how operators should consider customers' preferences regarding pricing options and delivery mechanisms. In particular, restaurateurs need to establish appropriate framing for the extra costs of delivery to better appeal to customers.

The findings in this publication are the results of a survey conducted together with Prof. Sheryl E. Kimes.

Sheryl E. Kimes is an Emeritus Professor of Operations Management at the Cornell University School of Hotel Administration and a Visiting Professor of Analytics and Operations at the Business School at the National University of Singapore. Sherri Kimes is a globally recognised leading expert in Revenue Management for the hospitality and service industries. She has been teaching, conducting research and providing consulting services in this area for over 25 years. She has published over 100 articles and book chapters and has received multiple awards for her research including the Lifetime Achievement Award by the College of Service Operations of the Production and Operations Management Society and the Industry Relevance Award by the Cornell University Center for Hospitality Research in 2010, 2012 and 2014.

How Singapore Productivity Centre (SGPC) can help

Companies can tap on our comprehensive range of solutions targeted at boosting productivity and building capabilities. Together with Enterprise Singapore, we offer various assistance schemes that cover areas such as service design, digital transformation, workflow redesign, job redesign, automation, central kitchen implementation and shared services.

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With a focus on the retail, food services and hotel sectors, SGPC's vision is to be the go-to experts for enterprise excellence, playing leading roles to guide small and medium-sized enterprises (SMEs) in creating a roadmap for growth.

SGPC provides a comprehensive range of services and programmes including in-depth productivity consultancy, workshops, study missions, benchmarking for best practices and industry insights. Through its expertise and services, SGPC helps enterprises to be future-ready in and beyond Singapore by creating value through innovation, productivity improvement and capability building.

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