

## Readiness to Reduce Plastic Waste in Food Delivery and E-Commerce Sectors in Thailand

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### **Abstract:**

The rise of online food delivery and e-commerce during the COVID-19 crisis has led to increased plastic waste. This research aims to predict plastic waste levels and assess the readiness to reduce waste in Bangkok's food delivery and e-commerce sectors, as well as explore factors influencing pro-environmental behavior. Data collection involved questionnaires and interviews.

In 2024, predicted plastic waste from food delivery in Bangkok ranges from 0.3 to 121.4 million kilograms per year, and from e-commerce, it ranges from 3.7 to 12 million kilograms per year. Most food delivery consumers are willing to reduce plastic usage, although some expect government or stores to lead. While platforms allow customers to reject plastic cutlery, most restaurants are not proactive in reducing waste or adopting alternative packaging. E-commerce readiness is lower due to concerns over product damage, highlighting the need for alternative, biodegradable cushioning materials.

Pro-environmental behavior is influenced by subjective norms, perceived behavioral controls, and behavioral intentions, accounting for 87.2% of the variance. Reducing plastic waste requires coordinated efforts from government, platform providers, packaging manufacturers, and consumers, along with promoting reusable packaging.

### **Keywords:**

Food delivery, E-commerce, Pro-Environment Behavior, Single- use plastic.