

OPEN ACCESS

Manuscript ID:
EDU-2026-140411162

Volume: 14

Issue: 4

Month: September

Year: 2026

P-ISSN: 2320-2653

E-ISSN: 2582-1334

Received: 02.06.2026

Accepted: 19.08.2026

Published Online: 01.09.2026

Citation:

Ratchatakulpat, T.,
Ratchatakulpat, M.,
Ratchatakulpat, T.,
Sutthivanich, K.,
Supasettaysa, G., Imngoen,
S., Sitthithum, V. &
Maisak, R. (2026). Learning
Information Technology
Acceptance and Logistics
Factors Affecting the
Decision to Choose Private
Logistic Service Provider
for Online Business
Entrepreneurs in Bangkok.
*Shanlax International
Journal of Education*, 14(4),
140–154.

DOI:

[https://doi.org/10.34293/
education.v14i4.11162](https://doi.org/10.34293/education.v14i4.11162)



This work is licensed
under a Creative Commons
Attribution-ShareAlike 4.0
International License

Learning Information Technology Acceptance and Logistics Factors Affecting the Decision to choose Private Logistic Service Provider for Online Business Entrepreneurs in Bangkok

Thanakon Ratchatakulpat

Rajamangala University of Technology Phra Nakhon, Thailand

 <https://orcid.org/0009-0008-4354-0871>

Maneerat Ratchatakulpat

Rajamangala University of Technology Phra Nakhon, Thailand

 <https://orcid.org/0009-0003-1325-3146>

Thanaphon Ratchatakulpat

Rajamangala University of Technology Phra Nakhon, Thailand

 <https://orcid.org/0009-0008-4962-9375>

Kasidech Sutthivanich

Rajamangala University of Technology, Thailand

 <https://orcid.org/0009-0008-1671-9147>

Gumporn Supasettaysa

Rajamangala University of Technology, Thailand

 <https://orcid.org/0000-0003-3961-1055>

Sujinda Imngoen

Rajamangala University of Technology, Thailand

 <https://orcid.org/0009-0003-6099-2339>

Varunya Sitthithum

Rajamangala University of Technology, Thailand

 <https://orcid.org/0009-0000-2522-7584>

Rattanavalee Maisak

Rajamangala University of Technology, Thailand

 <https://orcid.org/0009-0000-4477-054X>

Abstract

This study aims to examine the learning factors that influence the decision of online entrepreneurs in Bangkok to use private transport services. This study considers three main dimensions: organizational characteristics, information technology (IT) acceptance, and logistics factors. The methodology used was quantitative. A standardized questionnaire was disseminated to 400 Internet entrepreneurs. Multiple regression analysis was used to analyze the data. The results indicate that information technology acceptability and logistical considerations are the main predictors of the decision-making process ($p < 0.05$). However, organizational characteristics (company type, age, and size) were not significant. Delivery speed, real-time tracking, and service technology are the most critical drivers. The results indicate that logistics companies must focus on digital agility to satisfy the expectations of modern SMEs. Future research should investigate geographic and sectoral diversity, extending to rural or other regional e-commerce regions. Longitudinal tracking is necessary because technology and customer expectations are constantly changing. This longitudinal research strategy can be used by future researchers. Integration of Advanced Digital Parameters, which could be related to new technology variables. For example, artificial intelligence (AI) can be used for predictive routing, automated customer service bots, and green supply chain procedures.

Keywords: Decision Making, IT Acceptance, Logistics Factors, Online Entrepreneurs, E-commerce Logistics, Bangkok

Introduction

Logistics plays a strategic role in modern businesses. It is an essential component of achieving a competitive advantage in today's business environment. Careful selection of logistics services is of great importance for operational effectiveness, customer experience, and the image of the enterprise. Conversely, poor logistics decisions can increase operational and product costs.

E-commerce Meets Delivery Services The freight and delivery industry is inextricably tied to the e-commerce boom. The number of logistics operators in Thailand has increased in line with the growing online consumer demand to support this expanding market. Online small- and medium-sized enterprises (SMEs) depend heavily on private carriers.

Efficient transportation management relies heavily on information technology to manage the movement of goods from the point of origin to the point of consumption and back for a variety of reasons. To achieve this, transport providers must select transport modes and optimal routes to ensure compliance with regulations, customer trust, and timely delivery while controlling costs. [Kanpadee \(2013\)](#) stated that transportation Management Systems (TMS) are key tools to achieve this. It streamlines operations and transit, minimizes costs, and boosts profits. The private logistics sector utilizes many technologies, such as GPS for multi-channel data and video integration, Dash Cameras for live freight vehicle monitoring, TMS for route optimization and transport planning, and mapping technologies such as Google Maps for route identification and time saving. It also uses IoT, RFID, AIDC technologies, and Bluetooth connectivity. Real-time e-logistics are also used to supervise and manage transport and delivery ([Kanpadee, 2013](#)). The advent of online shopping has introduced new challenges for logistics operators, demanding swift, precise, and transparent services that guarantee the prompt delivery of goods, including tracking, damage insurance, and transparent information. However, there are still delivery problems such as late deliveries, high delivery and pick-up costs, damage of goods during transit, inaccurate routing systems, staff shortages due to high demand, and

inaccurate parcel tracking data that negatively affect e-commerce owners, as [Kanpadee \(2013, pp. 148-158\)](#) mentioned.

Research Gap, while previous literature acknowledges the importance of broad technological adoption in supply chain management. A distinct research gap remains regarding micro-level decision-making. Recent international studies highlight the need to understand technology acceptance in decentralized e-commerce. However, there is limited empirical research examining the intersection of Information Technology (IT) acceptance and core logistics factors. These directly influence the provider's selection of micro and small online entrepreneurs. Understanding this dynamic is particularly critical in rapidly developing urban hubs. Service capability and digital dexterity are often more important than traditional organizational features.

Localized studies are useful for providing insights into specific urban markets, but recent global research has demonstrated that the digital transformation of logistics is a universal driver for small and medium-sized enterprises (SMEs). There is a growing awareness across the globe that operational agility and logistics information technology (LIT) integration are no longer optional assets but are essential tools for business survival. For example, [Le et al. \(2026\)](#) recently found that order fulfilment systems are key determinants of logistics service quality in e-commerce, which, in turn, influences customers' repurchase intentions globally. This shows that the obstacles faced by Internet companies are not merely local logistical hurdles but are part of a global change where technological capability and service performance frequently matter more than traditional ones.

Moreover, the adoption of such logistics solutions is largely conditioned by the perception and interaction of entrepreneurs with new digital devices. Global empirical tests of the Technology Acceptance Model (TAM) in e-commerce reveal that the more sophisticated digital platforms become, the more the perceived usefulness of a system actively determines a user's long-term behavioral intention to use the service ([Wang et al., 2023](#)). More recent international frameworks incorporating TAM also

indicate that users adopt technology because of perceived internal value, ease of use, and enabling environments rather than external institutional constraints (Paiwithayasiritham et al., 2025). The analysis of micro-level decision-making by internet businesses in Bangkok is particularly important to the larger, worldwide discourse on incorporating these foreign paradigms into our background discussion, demonstrating that examining micro-level decision-making among online entrepreneurs in Bangkok. This is highly relevant to the broader global discourse on decentralized e-commerce and technology adoption.

To bridge this gap, this study investigates the level of IT acceptance and the specific logistics factors influencing the decision-making process of online business entrepreneurs in Bangkok when choosing private logistics service providers. The findings of this study will provide actionable insights for private transport operators and enable them to improve their services. This can be achieved by refining and elevating their services. They could offer to meet the specific technological and operational demands of modern e-commerce enterprises.

Research Objective

To investigate the organizational characteristics that influence the decisions of online entrepreneurs when selecting a private logistics service provider.

To examine the impact of information technology acceptance on the decisions of online entrepreneurs when selecting a private logistics service provider.

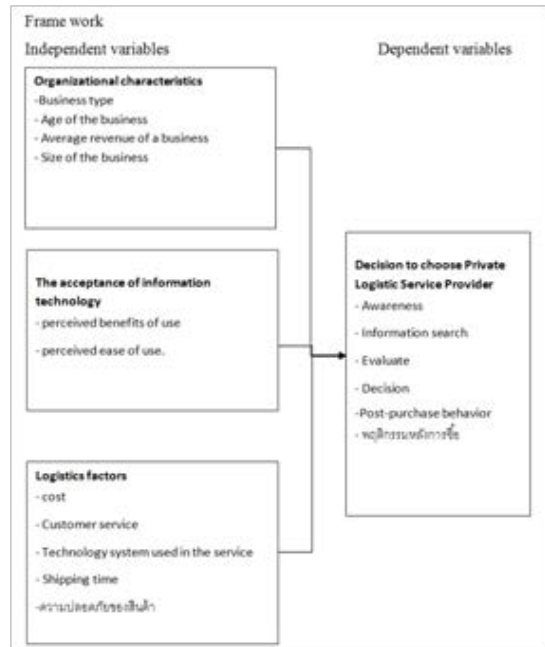
To analyze the logistics factors that affect the decisions of online entrepreneurs when selecting a private logistics service provider.

Research Hypothesis

H₁: Organizational characteristics significantly influence online entrepreneurs' decision-making process when selecting private logistics service providers.

H₂: The acceptance of information technology significantly affects the decision-making process of online entrepreneurs in selecting private logistics service providers.

H₃: Logistics factors significantly impact the decision-making process of online entrepreneurs in selecting private logistics service providers.



Acceptance of Information Technology Davis (1989) defines behavioral acceptance of information technology as an action that is directly affected by one's attitude towards using an information system. Such attitudes are also indirectly affected by two main cognitive constructs: perceived ease of use and perceived usefulness. These underlying attitudes strongly influence the specific behavioral manifestations of the system's use. Therefore, when a user has a positive attitude towards an information system, the user's behavioral acceptance and actual use of the system are highly probable. These underlying attitudes dictate specific behavioral manifestations. They are the likelihood of system adoption. In contemporary e-commerce and logistics, TAM remains a robust theoretical foundation. Recent empirical studies have highlighted the performance and global expansion of e-commerce enterprises. They rely heavily on digital channel adoption and technological agility (Agyeman et al., 2022). Logistics providers integrate seamless interfaces. These include real-time tracking, automated drop-offs, and intuitive management dashboards. Users develop a positive attitude. This ensured that behavioral acceptance and actual system usage were highly likely. Positioning technology is not only a supportive tool but also a direct enabler of business execution.

In modern commercial settings, effective logistics management plays a crucial role. They involve communication and various activities for acquiring raw materials, manufacturing, sales, and delivery. Transportation costs represent a substantial expense and directly impact the final cost of products or services ([Rudjanakanoknad, 2018](#)). Furthermore, logistics transportation can add value to goods and services by bridging geographical gaps. This allows consumers in remote locations to access the products they desire. Logistics enables the physical movement of goods from manufacturers to end consumers through intermediaries. These are indispensable components of business operations. Transportation plays a vital role in modern human lives. It is equally important to other core economic activities ([Asasongtham, 2019](#)). Recent global literature emphasizes the rapid evolution of these criteria under modern industry paradigms. Logistics service providers (LSPs) are expected to integrate advanced technological systems. These include cloud computing, IoT sensors, and automated quality checks. These are to ensure product integrity and operational agility. Consequently, the key logistics factors evaluated in business operations comprise customer service costs, technological systems utilized in service provision, transit time, and cargo safety ([Charoensitthipan & Kalanthapura, 2019](#); [Kongrakwet et al., 2013](#); [Permsuwan & Pisitkasem, 2012](#)). There is high variability or inconsistency in these areas. It directly threatens SME competitiveness. Stringent and data-driven provider evaluation is critical for online entrepreneurs ([Amiranto, 2024](#)). These factors could be concluded as logistics factors, including cost, customer service, technology system used in the service, and shipping time ([Kamolkitiwong & Suwannasup, 2022](#)).

Kotler and Keller's (2016) consumer buying decision process is a step-by-step framework encompassing five distinct stages. Within this specific business-to-business (B2B) context, the five-stage framework begins with the recognition of need. The entrepreneur identifies a specific delivery requirement. These are prompted by customer demand or operational bottlenecks. The second stage is information search, which involves gathering data on available LSPs. They focus heavily on their

technological capabilities and pricing structures. During the alternative evaluation, the entrepreneur critically compares competing providers. These are based on the aforementioned logistics factors and system usability. The purchase decision follows, resulting in a definitive choice of logistics partner. Finally, Post-Purchase Behavior occurs after utilizing the service. The entrepreneur evaluates the provider's actual performance against initial expectations. If the service quality falls short of expectations. Consumers are likely to be dissatisfied and avoid repeated usage. Conversely, if the service meets or exceeds expectations. It fosters satisfaction, encourages repeat purchases, and builds brand loyalty.

Recent literature has emphasized the significance of technological acceptance and digital integration in modern e-commerce and logistics. Recent evaluations show the rapid growth of Industry 4.0 and emphasize the need for logistics service providers to embrace advanced digital lifecycle models and integrate sustainability elements to remain competitive in the burgeoning e-commerce market ([Tiwing et al., 2024](#)). The adoption of these digital e-commerce channels is strongly motivated by user expectations, and with the help of the Unified Theory of Acceptance and Use of Technology (UTAUT) framework, researchers have demonstrated the importance of both performance expectancy and effort expectancy for behavioural intentions and purchase decisions on these platforms ([Farhat et al., 2025](#)). This larger pattern of technological change implies that breakthroughs such as enhanced digital interfaces and automated deliveries will continue to fundamentally reshape the e-commerce logistics ([Chodak, 2024](#)).

Linking the Literature to the Study Gap There is a large body of research on macro-level logistics technology and general consumer behavior, but there is a clear research gap when moving to the micro-level. Much of the existing literature is within the basic TAM framework ([Davis, 1989](#)) and the more recent inclusion of Industry 4.0 and digital life cycle models ([Tiwing et al., 2024](#)). These are mostly focused on large-scale business adoption or consumer retail end users. However, there is a lack of empirical research on the overlap between these

disciplines. Existing research has not sufficiently examined the simultaneous balancing of IT adoption and traditional, hard-core logistics variables by micro and small online entrepreneurs in their own B2B decision-making process.

This leaves a significant gap in the existing academic debate. Large, inflexible organizations operate significantly differently from small online businesses in fast-developing urban centers. They are pragmatic and driven by instant service functionality and digital agility. Some contemporary studies, such as [Farhat et al. \(2025\)](#) and [Kamolkitiwong and Suwannasup \(2022\)](#), have taken efforts in investigated user expectations and logistics satisfaction independently. This research has not linked such notions sufficiently to show how they jointly determine provider selection for decentralized e-commerce players. By addressing this under explored intersection, this study bridges the gap between broad technological adoption theories and the practical and everyday realities of micro-level entrepreneurial decision-making.

Methodology

A quantitative survey research design was used to examine the acceptance of information technology and logistics factors affecting the decision-making of online entrepreneurs in Bangkok for private parcel delivery services. The methodological framework is organized as follows: 1) Population and Sample Selection, 2) Research Instrument, 3) Quality of Research Instrument, 4) Ethical and Data Collection Issues, and 5) Data Analysis ([Field, 2018](#)). The population is the target group. The population targets were online entrepreneurs in Bangkok who used private delivery services. The total number of participants was 72,109. The sample size was calculated using [Yamane's \(1967\)](#) formula with a confidence level of 95% and a precision level (margin of error) of 5%. The calculation resulted in 397.79; therefore, the researcher rounded up the sample size to 400 participants to be robust and to account for possible data gaps.

Sampling Strategy and Justification: Data were collected using Convenience Sampling. This is a non-probability sampling technique, and the target of 400 respondents was achieved. This method was

selected because it allows rapid and cost-effective data collection. This is highly suited to the fast-paced and dynamic nature of the e-commerce sector. However, exhaustive sampling frames are often difficult to obtain.

Sampling Limitations and Bias: While convenience sampling provided the necessary operational efficiency for this study. This study has limitations regarding generalizability. Respondents were selected based on accessibility and willingness to participate. There is a potential for sampling bias in this study. For example, the sample may over represent highly active individuals. the digitally engaged entrepreneurs who are more accessible through online channels. Other potentially exclude those with limited digital footprints.

The primary tool used to gather data was a structured questionnaire, which was categorized into four separate parts. Part 1) Organizational Characteristics Demographic and firmographic data such as business type, age of business, average monthly revenue, and business size (Format: Checklist) Part 2) IT Acceptance That Stress on Perceived Usefulness and Ease of Use. Part 3) Logistics Factors: Factors such as costs, customer service, service technology, delivery lead time, and product safety. Part 4) Decision-Making Process Information Search Evaluation of Alternatives Purchase Decision Post-purchase Behavior. Measurement Scale Parts 2, 3, and 4 used a 5-point Likertscale ranging from Strongly Disagree (1) to Strongly Agree (5).

Validity and reliability of the instrument were assessed. Content validity: The questionnaire was reviewed by three experts to determine the index of item-objective congruence (IOC). Items were scored based on relevance to the objectives (+1 for relevant, 0 for uncertain, and -1 for irrelevant). Thus, the IOC scores were between 0.67 and 1.00, with a mean of 0.97, which shows a high content validity. For the reliability Analysis, a pilot test was conducted with 30 participants with the same characteristics as the target population. Internal consistency was assessed using Cronbach's alpha coefficient. The results were acceptance of IT 0.893, Logistics Factors 0.909, and Decision Making 0.848; all values were higher than the minimum threshold of 0.70 ([Byrne, 2016](#)).

Data were gathered using an online survey via Google Forms and distributed using QR codes and web links. Data were collected in accordance with international ethical standards: 1) Respect for Persons: Participants were fully informed of the purpose of the study. Participation was entirely voluntary, and participants could withdraw at any time without penalty. 2) Beneficence: Minimal risk was imposed on the participants (only 10-15 minutes of their time). All responses were confidential and used only for academic purposes of this study. 3) Justice: Inclusion criteria were clearly defined (experience with parcel delivery services and age > 18 years).

Data were analyzed using statistical software through two main approaches: descriptive and inferential statistics. Descriptive statistics were used to summarize the organizational characteristics and variable levels using percentages, means, and standard deviations (S.D.). Inferential statistics, specifically the independent samples t-test and one-way analysis of variance (ANOVA) (F-test), were used to test the differences in decision-making based on business type, age, revenue, and size. Multiple Regression Analysis (MRA) was used to determine the influence of logistics factors and IT acceptance on the decision-making process of online entrepreneurs.

Results

A total of 400 valid responses were collected from online entrepreneurs in Bangkok, Thailand. The data were analyzed using descriptive statistics to profile the participants and inferential statistics (Multiple Regression Analysis) to test the research hypotheses. 1) Participant and organizational profiles: The majority of the surveyed online businesses belong to the fashion and apparel sector (37.00%), followed by health and beauty (26.25%). Most enterprises are relatively young, with 38.00% operating for 2–3 years and 32.50% operating for less than a year. In terms of financial scale, the largest segment reported an average monthly revenue between 100,001 and 150,000 THB (39.25%). 50,000 to 100,000

THB (39.00%). Notably, the sample is dominated by micro-enterprises, with 92.00% of businesses employing 10 or fewer staff members.

Descriptive analysis of study variables, which were measured on a 5-point Likert scale. Overall, the respondents expressed a high level of agreement across all primary constructs. The variable of information technology acceptance was evaluated through perceived usefulness ($x = 4.21$, S.D. = 0.404) and perceived ease of use ($x = 4.29$, S.D. = 0.337). The highest-rated item was the effectiveness of the app as a trading channel ($x = 4.39$). This suggests that online entrepreneurs prioritize functional integration over purely aesthetic features. Regarding logistics factors, the logistics performance of private providers was rated highly ($X = 4.04$, S.D. = 1.015). Delivery lead time was the most critical factor ($x = 4.40$). This was followed by service technology ($x = 4.05$). Conversely, Customer service received the lowest relative score ($x = 3.80$), indicating a potential area for provider improvement. Variable of Decision-Making Process, the overall decision-making score was high ($X = 4.30$, S.D. = 0.313). The strongest influence on post-purchase behavior was the staff service impression ($X = 4.44$), significantly drove the intent to reuse the service. Value for money ($X = 4.35$) also plays a primary role in the selection phase.

Inferential Analysis as Multiple Regression Analysis (MRA) prior to conducting the Multiple Regression Analysis. The core statistical assumptions were also assessed. To ensure the model validity. Normality was verified using skewness and kurtosis metrics. All of these fell within the acceptable standard ranges for normal distribution. To rule out multicollinearity, Tolerance and Variance Inflation Factor (VIF) values were examined. All predictors demonstrated tolerance values well above the 0.10 threshold. VIF values were significantly below the strict cutoff of 10.0 (ranging between 1.10–1.35). This confirms that the independent variables were not overly correlated with each other. Finally, the assumption of independent errors was met.

Multiple Regression Analysis (n = 400)

Independent Variables	Unstandardized B	Standardized Beta	t-value	Sig. (p-value)	Tolerance	VIF
Organizational Characteristics	.015	.020	.405	.686	.854	1.17
IT Acceptance	.128	.124	2.735	.007*	.789	1.26
IT Acceptance	.128	.124	2.735	.007*	.789	1.26

*Note: Adjusted $R^2 = .542$, $F = 39.288$, $p < 0.05$

Analysis of the Model, 1) Model Fit: The model successfully predicts the dependent variable ($F = 39.288$, $p < .001$). The Adjusted R^2 of .542 indicates that IT Acceptance and Logistics Factors account for 54.2% of the variance in the entrepreneurs' decision-making process. 2) Significant Predictors: * Logistics Factors ($\beta = .384$, $p < .001$) had the strongest positive influence on decision-making. IT

Acceptance ($\beta = .124$, $p = .007$) was also a significant positive predictor. 3) Non-Significant Predictors: Organizational Characteristics ($p = .686$) did not statistically influence the decision-making process, suggesting that service choice is driven by functional performance and technology rather than the size or type of the business

Hypothesis	result
Information Technology Acceptance and Logistics Factors affecting the Decision to choose Private Logistic Service Provider For Online Business Entrepreneurs	
H ₁ : Organizational characteristics significantly influence the decision-making process of online entrepreneurs in selecting private logistics service providers.	Rejected
H ₂ : The acceptance of information technology significantly affects the decision-making process of online entrepreneurs in selecting private logistics service providers.	Accepted
H ₃ : Logistics factors significantly impact the decision-making process of online entrepreneurs in selecting private logistics service providers.	Accepted

Logistics plays a strategic role in modern businesses. It is an essential component of achieving a competitive advantage in today's business environment. Careful selection of logistics services is of great importance for operational effectiveness, customer experience, and the image of the enterprise. Conversely, poor logistics decisions can increase operational and product costs. Limitations of the Study, While this research provides valuable insights into the decision-making processes of online entrepreneurs. Several scope and methodological limitations must be acknowledged. 1) Geographical Scope: The investigation is strictly limited to the Bangkok metropolitan area. Logistics infrastructure, consumer behavior, and technology access in Bangkok. These are very different from rural or suburban areas. Therefore, the findings may not be fully generalizable to entrepreneurs beyond large urban hubs. 2) Sample Characteristics, the data are largely skewed towards micro-enterprises (92%

of the sample), particularly in the fashion, apparel, health, and beauty sectors. The operating needs and logistical demands of larger business entities or those dealing in perishable items, heavy machinery, and specialized sectors may vary substantially from the current sample. 3) Cross-Sectional Nature (The study uses cross-sectional data obtained at one point in time; it provides a particular picture of entrepreneurial behavior. It cannot account for long-term behavior. This is because behavioral shifts could be caused by future technological disruptions or changes in economic conditions.

Discussion

The results showed that the characteristics of the organization did not influence the decision to choose the service of a private goods forwarding company of the online operator. The operator's consideration of the efficient freight service provided to customers and the customer's satisfaction with the

transportation service do not influence the decision to select a freight forwarding company.

Acceptance of information technology affects the decision to choose the services of a private freight forwarding company for online entrepreneurs. The results of the research show that the acceptance of the use of information technology affects the decision to choose the service of a private freight forwarding company, consisting of the perception of ease of use and the benefits of the system. These are the factors that influence online entrepreneurs' decision to use the services of a private goods forwarding company. This is in accordance with [Kotchada and Ueachanachit \(2023\)](#), who studied the characteristics of good information systems and acceptance of the use of information system technologies. Influences the success of the computer accounting system. of local government agencies in metropolitan areas (e-LAAS). The adoption of information system technology involves the perception of ease of use, perception of the benefits of the system, and attitude towards use. positively influences the success of the computer accounting system. This is also consistent with [Buaban et al. \(2023\)](#), who investigated the acceptance of technology and the success of information systems that influence the intention to use user satisfaction as a transmission variable. A case study of the Krungthai NEXT application. The results of the study showed that acceptance of technology in terms of perceived benefits and perception of ease of use directly affects user satisfaction and indirectly affects user satisfaction. In addition, the dominance of utility-associated technology factors over static organizational characteristics is consistent with changing paradigms in integrated behavioral frameworks.

[Paiwithayasiritham et al. \(2025\)](#) combined the Technology Acceptance Model (TAM) with behavioral determinants to model user adoption patterns in a study published in the Shanlax International Journal of Education. The structural equation modelling (SEM) of the study proved that people adopt system technologies based on their internal perceived value, self-efficacy, and a supportive environment that reduces the friction of usage; that is, they make highly rational, calculated decisions to adopt system technologies, not

based on external institutional pressures or socio-structural constraints. This expansion is evident in the international academic landscape. The recent Scopus-indexed research confirms that logistics Information Technology (LIT) compatibility is no longer merely an optional asset but a mandatory survival tool for modern SMEs

[Le et al., \(2026\)](#). Moreover, technology acceptance frameworks remain highly robust in predicting the adoption of digital logistics and e-commerce tools. For instance, structural equation modeling has been applied to logistics platforms in Thailand. This demonstrates that performance expectancy (the belief that the system will improve efficiency) and effort expectancy (ease of use) are the strongest positive predictors of adopting freight forwarding platforms ([Pinyanitikorn et al., 2024](#)). Similarly, global empirical evaluations of TAM in e-commerce reveal that digital platforms are becoming increasingly sophisticated. The perceived usefulness of a system directly dictates an entrepreneur's attitude and long-term intention to use a service ([Wang et al., 2023](#)). In short, the technology system is no longer a passive tool; rather, it is an active partner in business execution.

This explains why H1 (Organisational Characteristics) was rejected, whereas H2 (IT Acceptance) was accepted when mapped onto the context of e-commerce logistics. Online entrepreneurs are pragmatic and do not impose rigid corporate demographics or organizational scales on their selection criteria. They value systemically, rather. They seek value from the system, that is, platforms that are the most efficient to run, with low effort barrier metrics (perceived ease of use) and service optimization (perceived benefits). Therefore, the technology system itself is an active enabler of business execution, with traditional organizational characteristics secondary to direct functional performance.

To build on the interplay between technology acceptance and logistics, recent high-impact literature has highlighted how traditional provider evaluation is rapidly changing. While classical metrics such as shipping cost and basic transit time have always mattered, modern e-commerce demands a more dynamic approach. For instance, a recent

systematic literature review of third-party logistics (3PL) selection criteria by [Setyawan and Rizkyah \(2024\)](#) shows a clear industry transformation. Their analysis indicates that companies are not just looking for cheap delivery anymore. They actively seek providers who use advanced technological systems to ensure operational resilience and sustainability. For micro and small online entrepreneurs it means that choosing a private goods forwarding company is not just sending a parcel from point A to point B. It is about finding a technology-enabled partner. This improves the overall customer experience and protects the company's competitive advantage in a rapidly moving market.

E-commerce Meets Delivery Services The freight and delivery industry is inextricably tied to the e-commerce boom. The number of logistics operators in Thailand has increased in line with the growing online consumer demand to support this expanding market. Online small- and medium-sized enterprises (SMEs) depend heavily on private carriers.

Efficient transportation management relies heavily on information technology to manage the movement of goods from the point of origin to the point of consumption and back for a variety of reasons. To achieve this, transport providers must select transport modes and optimal routes to ensure compliance with regulations, customer trust, and timely delivery while controlling costs. [Kanpadee \(2013\)](#) stated that transportation Management Systems (TMS) are key tools to achieve this. It streamlines operations and transit, minimizes costs, and boosts profits. The private logistics sector utilizes many technologies, such as GPS for multi-channel data and video integration, Dash Cameras for live freight vehicle monitoring, TMS for route optimization and transport planning, and mapping technologies such as Google Maps for route identification and time saving. It also uses IoT, RFID, AIDC technologies, and Bluetooth connectivity. Real-time e-logistics are also used to supervise and manage transport and delivery ([Kanpadee, 2013](#)). The advent of online shopping has introduced new challenges for logistics operators, demanding swift, precise, and transparent services that guarantee the prompt delivery of goods, including tracking,

damage insurance, and transparent information. However, there are still delivery problems such as late deliveries, high delivery and pick-up costs, damage of goods during transit, inaccurate routing systems, staff shortages due to high demand, and inaccurate parcel tracking data that negatively affect e-commerce owners, as [Kanpadee \(2013\)](#), pp. 148-158) mentioned.

Research Gap, while previous literature acknowledges the importance of broad technological adoption in supply chain management. A distinct research gap remains regarding micro-level decision-making. Recent international studies highlight the need to understand technology acceptance in decentralized e-commerce. However, there is limited empirical research examining the intersection of Information Technology (IT) acceptance and core logistics factors. These directly influence the provider's selection of micro and small online entrepreneurs. Understanding this dynamic is particularly critical in rapidly developing urban hubs. Service capability and digital dexterity are often more important than traditional organizational features.

Localized studies are useful for providing insights into specific urban markets, but recent global research has demonstrated that the digital transformation of logistics is a universal driver for small and medium-sized enterprises (SMEs). There is a growing awareness across the globe that operational agility and logistics information technology (LIT) integration are no longer optional assets but are essential tools for business survival. For example, [Le et al. \(2026\)](#) recently found that order fulfilment systems are key determinants of logistics service quality in e-commerce, which, in turn, influences customers' repurchase intentions globally. This shows that the obstacles faced by Internet companies are not merely local logistical hurdles but are part of a global change where technological capability and service performance frequently matter more than traditional ones.

Moreover, the adoption of such logistics solutions is largely conditioned by the perception and interaction of entrepreneurs with new digital devices. Global empirical tests of the Technology Acceptance Model (TAM) in e-commerce reveal that

the more sophisticated digital platforms become, the more the perceived usefulness of a system actively determines a user's long-term behavioral intention to use the service (Wang et al., 2023). More recent international frameworks incorporating TAM also indicate that users adopt technology because of perceived internal value, ease of use, and enabling environments rather than external institutional constraints (Paiwithayasiritham et al., 2025). The analysis of micro-level decision-making by internet businesses in Bangkok is particularly important to the larger, worldwide discourse on incorporating these foreign paradigms into our background discussion, demonstrating that examining micro-level decision-making among online entrepreneurs in Bangkok. This is highly relevant to the broader global discourse on decentralized e-commerce and technology adoption.

To bridge this gap, this study investigates the level of IT acceptance and the specific logistics factors influencing the decision-making process of online business entrepreneurs in Bangkok when choosing private logistics service providers. The findings of this study will provide actionable insights for private transport operators and enable them to improve their services. This can be achieved by refining and elevating their services. They could offer to meet the specific technological and operational demands of modern e-commerce enterprises.

Research Objective

To investigate the organizational characteristics that influence the decisions of online entrepreneurs when selecting a private logistics service provider.

To examine the impact of information technology acceptance on the decisions of online entrepreneurs when selecting a private logistics service provider.

To analyze the logistics factors that affect the decisions of online entrepreneurs when selecting a private logistics service provider.

Furthermore, there is a strong relationship between technology acceptance and actual business outcomes. The present paradigm for forecasting in e-commerce strongly supports this assertion. Recently, Wu et al. (2024) integrated logistics service quality measures with the Technology Acceptance Model (TAM). The precise mechanisms

of the impact of digital interfaces on consumer and B2B behavior. They found factors such as perceived utility, informativeness, and system usability. These are some of the best predictors of purchase intention and ongoing partnerships. When used by online operators to choose a goods forwarder. This provides significant evidence for our findings. That a provider's technology is not merely a background tool. Instead, the "perceived benefits" of a seamless tracking dashboard. These are booking apps that are straightforward to use. It immediately dictates the mentality of an entrepreneur and their desire to continue with the service. Therefore, the acceptability of IT is a critical bridge. This makes standard logistics capabilities truly accessible. This is valuable to modern online businesses.

Logistics factors affecting the decision to use private freight forwarding services by online operators and results of the research show that logistics factors affecting the decision to use private freight forwarding services of online operators include cost, customer service, technology systems used in services, transportation time, and product security. This study aimed to examine the factors that affect the satisfaction of online clothing retailers in Bangkok and its surrounding areas. All logistics factors were highly correlated with the level of satisfaction with the use of private freight forwarding companies at the 0.05 statistical significance level. The service factor was the most important, followed by logistics costs, product safety, freight time, and information technology systems used to provide services.

Conclusion and suggestions

In conclusion, this study demonstrates that when online operators select a private freight forwarding service, operational efficiency and retail customer satisfaction completely eclipse the organizational characteristics. The decision-making process of e-commerce entrepreneurs is driven by two main factors. First, Technology Acceptance as a logistics provider's digital infrastructure serves as a vital entry point. Operators prioritize platforms that offer high perceived ease of use and perceived benefits, which directly drive user satisfaction. Second, Logistics Performance, as the core logistics factor, was

significantly correlated with operator satisfaction (at the 0.05 level). However, this research establishes a clear hierarchy of priorities, starting with the most critical. These are customer service, logistic cost, product safety, freight time, and information technology systems. Ultimately, while intuitive technology serves as a necessary gateway for system adoption, superior customer service and competitive pricing remain the ultimate determinants of long-term B2B partnerships. To succeed in the e-commerce marketplace.

Theoretical Contributions The paper makes important theoretical contributions to the supply chain management and behavioral adoption model sectors. 1) TAM Integration with B2B Logistics: Integrating the Technology Acceptance Model (TAM) with operational logistics quality indicators. This study provides a successful link between pure behavioral information systems theory and operational B2B decision-making in practice. 2) Redefining micro-enterprise behavior: This is a fundamental theoretical breakthrough of this study. The exclusion of organizational factors as significant determinants of company choice. Corporate theories generally presume that a company's size, age, and income determine its operational tactics. This study re-casts that narrative by revealing the micro-scale of Internet entrepreneurship. They are extremely functional and pragmatic. Decentralized digital economies: platform utility and transactional agility. These entirely bypass traditional structural constraints. It offers an updated perspective on how modern small businesses form strategic alliances.

While this study offers valuable insights into the decision-making processes of e-commerce entrepreneurs, a few scope and methodological limitations should be acknowledged. First, the geographical scope of this investigation was confined to the Bangkok metropolitan area. Bangkok has a specific logistics infrastructure, access to sophisticated technology, and distinctive consumer behavior. These findings may not easily generalize to small firms in rural or suburban settings. Second, our sample characteristics are biased towards micro-enterprises, which account for 92% of the data. They are particularly popular in the fashion, clothing, and health and beauty sectors. The operational

requirements and logistical needs of larger corporate units. Those who deal in specialty commodities, such as perishable products and large machinery, are also included. They may differ significantly from our sample. Finally, our data are cross-sectional, which measures entrepreneurial behavior at only one point in time. Therefore, this finding cannot explain long-term behavioral changes driven by future macroeconomic shifts or rapid technological disruptions. These limits provided a transparent and realistic framework for the study, and provide a clear basis for future research directions.

Future research should focus on the following directions. 2) Geographical and Sectoral Diversification. Future studies should expand beyond the urban setting of Bangkok to rural or regional areas where e-commerce is taking place, but logistic infrastructures may be less developed. These could be examined in specialized areas such as perishables or high-value electronics. They can expose different sets of logistical hierarchies. 2) Longitudinal Tracking, as technology and customer expectations grow swiftly. It uses a longitudinal research design, which allows future researchers to observe. The evolution of technology adoption over time and the point in time when the e-commerce market becomes fully saturated. 3) Integration of Advanced Digital Variables, logistics technologies, and future empirical frameworks. These should incorporate emerging technological variables. This includes the implementation of artificial intelligence (AI) in predictive routing. Automated customer support bots are also used. More over the growing demand for green (environmentally sustainable) supply chain practices

Suggestions and Recommendations, based on the empirical findings of this study regarding how Information Technology (IT) acceptance and logistics factors influence the decision-making of online entrepreneurs in Bangkok, the following actionable recommendations are proposed.

Recommendations for Logistics Companies (Service Providers): First, private logistic service providers should be aware of the acceptance of the use of information technology, which includes recognition of ease of use and the benefits of the system. Private transportation companies should

focus on designing information systems for customers to use in delivery services. Customers and users expect target technology to be easy to use and free of effort. Any technology that is easy to use and convenient has a high possibility of being accepted by users. Perceived ease of use influences the acceptance of information technology. In addition, the perception of the benefits of the system is the belief of an individual who is aware of the use of information systems or any special systems to increase work efficiency and offer valuable options for operations, including the use of technology to achieve quality work or to complete work quickly. It is an indicator of a person's acceptance of the use of technology, and both the perception of ease of use and the perception of the benefits of the system affect the choice of transportation services.

Second, private Logistic Service Providers should pay attention to logistics factors because they are in the logistics industry. 1) Therefore, the ability to manage and control costs in the most effective way is an important issue that manufacturers or entrepreneurs should consider in their operational planning. As a result, executives in the organization see various unnecessary expenses and find ways to prevent or correct them from occurring in the business operation process. To manage a successful business. 2) Customer service is also important because transportation companies are classified as service businesses; therefore, any activity to meet customer needs is a measure of the performance of the system of a private transportation company that chooses to use the service to create utility for the organization's products and services. 3) The technology system used in the service is a system of use. The technology of private transportation companies that can bring goods from the sender to the recipient using new technologies and systems to develop services has created more convenient and modern services, such as calling for services through the Internet. Pick-up and delivery of goods to the appointment location and determination of the date and time of transportation of goods. Cash on delivery Up-to-date operational tracking 4) The transportation time or the amount of time it takes to process the transportation and the transportation plan to deliver the goods according to the needs and in urgent cases is

the key to choosing a service provider. It must focus on what is stated in the agreement, guarantee the operation, and ensure that the distribution of goods is efficient and can be managed professionally. This allows customers to obtain the products they need at the right time and place. 5) Safety while transporting goods is something that all service users pay great attention to. This is because employers expect their products to reach the recipient or customer in full. There is no loss or damage because customers may refuse to pay for the product in trade dealings. When the transported goods are found to be incomplete, lost, damaged, or not in the condition agreed upon in the contract.

Recommendations for Policymakers: Foster a robust e-commerce ecosystem and support the growth of micro and small enterprises. Government bodies and regulatory agencies should consider standardizing logistics and insurance frameworks. Promote Digital Literacy and Infrastructure and Support Urban Logistics Optimization. Standardize Logistics and Insurance Frameworks: Policymakers should establish clear and standardized regulations for cargo insurance, liability, and consumer protection in the express delivery sector. This provides a safety net for microentrepreneurs. These would mitigate the financial impact of lost or damaged goods.

Promote digital proficiency and infrastructure, as modern businesses are highly dependent on IT adoption. The government should focus its initiatives on providing subsidies for digital devices and training programs for SMEs. Enhancing digital proficiency among local entrepreneurs will empower them to compete. for SMEs to be more integrated into innovative logistics platforms. To support urban logistics optimization, authorities can collaborate with commercial logistics corporations. To improve urban traffic management and provide specific loading/unloading zones in high-density places such as Bangkok. This reduces carbon footprints and improves total transportation times.

Recommendations for Future Researchers Although this study offers some basic information, future academic research should build on these findings to advance the understanding of e-commerce logistics. This could be achieved by expanding the geographical scope, adopting mixed-methods

approaches, and investigating emerging variables. Broaden the geographic scope of the study. Future research could include internet entrepreneurs outside the Bangkok area. Contrasting city centers with rural or suburban areas could show differing logistical hurdles and acceptance of technology. Mixed-methodology approaches with qualitative research methods, such as in-depth interviews or focus groups with Internet operators, should be applied. They may offer more detailed and nuanced insights into the causes of their decision-making behaviors. We could identify their pain points by utilizing logistics technologies. Researchers should integrate new independent variables and explore Emerging Variables into the framework. These variables could include factors such as environmental sustainability (green logistics) and the integration of Artificial Intelligence (AI) in customer service. The impact of social media reviews on provider selection. This offers highly relevant insights into future market trends.

New Knowledge and the Effects on Society and Communities

Impact on Communities and Society. The linkages between Bangkok's microenterprises and private logistics providers extend beyond business figures, having tangible ripple effects on urban society and community structures. First, the Micro-Enterprise Safety Net Stabilization. In terms of demographics, 92.00% of the surveyed businesses were microenterprises, employing 10 or fewer people, with a significant proportion earning between 50,000 and 150,000 THB per month. These are the economic backbones of Bangkok at the community level, family businesses, independent creators, and young entrepreneurs. This research identifies the exact logistics levers that make these micro-businesses efficient (lead times, tech integration, cost) and builds a roadmap for making this fragile safety net for entrepreneurs more resilient. Second, the transformation of urban labor and employment, as these businesses are small and lean and rely heavily on the outsourced infrastructure of private couriers. Logistics providers' service technology optimization (e.g., on-demand package drop-offs, digital tracking) allows micro-enterprises to conduct business entirely

from residential neighborhoods or home-offices. This decentralizes employment opportunities across Bangkok, allowing community members, especially women and youth, who dominate the fashion and beauty sectors, to generate sustainable income without commuting to centralized commercial hubs.

Third, consumer trust standards in digital commerce are elevated. The study revealed that online operators assess logistics companies based on product safety protection and delivery commitment. Such entrepreneurs select providers based on the satisfaction of their end retail customers. Therefore, competition between private logistics companies raises the shipping standards throughout the city. For society at large, this means fewer lost packages, fewer transit disputes, and a safer, highly reliable e-commerce ecosystem that helps everyday citizens.

4. A Cultural Shift Towards Easy Tech Adoption Scoring exceptionally high on both perceived ease of use and usefulness. The research shows that Bangkok's commercial community has a mature appetite for using digital tools. Private logistics companies can build effortless technology, and in doing so, they inadvertently accelerate the digital literacy of the overall community. This further normalizes mobile-first operations, making society more receptive to future smart city applications, digital governance, and cashless ecosystem integrations.

Acknowledgment

Information Technology Acceptance and Logistics Factors affecting the Decision to choose Private Logistic Service Provider for Online Business Entrepreneurs in Bangkok project. We would like to Thank you Rajamangala University of Technology PhraNakhon for funding this research and the Faculty of Business Administration for supporting the facility and equipment.

References

- Agyeman, F. O., et al. (2022). Comprehending the globalization and performance of e-commerce businesses: Evidence from e-commerce companies. *Asian Journal of Advances in Research*, 14(1), 13-28.
- Amiranto, A. H. (2024). Improving delivery service

- quality of local logistic service provider (LSP) company using the Six Sigma DMAIC methodology. *International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration*, 4(4), 2142-2150.
- Asasongtham, J. (2019). Technologies for modern logistics. *Executive Journal*, 2(15), 8–14.
- Buaban, N., Hansanti, T., & Jaengjenkit, C. (2023). Technology acceptance and information system success affecting intention to use, mediated by user satisfaction: A case study of the Krungthai NEXT application. *Applied Business Kasetsart Journal*, 17(27), 1–20.
- Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming (3rd ed.)*. Routledge.
- Charoensitthipan, N., & Kalanthapura, O. (2019). Satisfaction of people on the service quality of PTT station: A case study PTT station, Pak Kret, Nonthaburi. *Thai Interdisciplinary and Sustainability Review*, 3(1), 228–244.
- Chodak, G. (2024). *The Future of E-commerce*. Springer Nature Switzerland.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Farhat, R., Yang, Q., Ahmed, M. A. O., & Hasan, G. (2025). E-Commerce for a Sustainable Future: Integrating Trust, Product Quality Perception, and Online-Shopping Satisfaction. *Sustainability*, 17, 1431.
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics (5th ed.)*. SAGE Publications.
- Kamol kittiwong, K., & Suwannasup, N. (2022). Logistics factors affecting the satisfaction of online clothing entrepreneurs in the Bangkok metropolitan area in using private freight forwarding services. *Valaya Alongkorn Review of Management Science*, 3(3), 53–63.
- Kanpadee, W. (2013). A study of delay problems affecting the efficiency management of express mail service (EMS) at a branch post office, Sri Racha Postal Center, Thailand Post Co., Ltd. *Phranakhon Rajabhat Research Journal*, 4(1), 148–158.
- Kongrakwet, U., Chaipayat, P., Wasusri, T., Kritcharoen, T., & Puthongsiriporn, J. (2013). Efficiency comparison of logistics service providers between Malaysia and Thailand. *MUT Journal of Business Administration*, 10(1), 59–79.
- Kotchada, S., & Euachanajit, D. (2023). The Characteristics of good information systems and technology acceptance affecting the success of the computerized accounting system (e-LAAS) of local government organizations in the metropolitan area. *Journal of Public Administration Suan Sunandha Rajabhat University*, 6(2), 422–435.
- Kotler, P., & Keller, K. L. (2016). *Marketing management (15th Global ed.)*. Pearson.
- Le, D. T. A., Khoa, B. T., & Ngo, M. T. (2026). Logistics service quality in e-commerce: The impact of order fulfillment systems on customer repurchase intention. *Journal of Distribution Science*, 24(1), 45–56.
- Paiwithayasiritham, C., Mingsiritham, K., Sinthaworn, W., & Meesakul, P. (2025). Modeling the Determinants of AI Adoption in Authentic Online Assessment: An Integrated TPB–TAM Framework for Teachers in Technology-Enhanced Learning Contexts. *Shanlax International Journal of Education*, 13(4), 8–18.
- Permsuwan, P., & Pisitkasem, P. (2012). How to manage an effective packaging logistics. *Executive Journal*, 32(1), 130–137.
- Pinyanitkorn, N., Atthirawong, W., & Chanpuypetch, W. (2024). Examining the Intention to Adopt an Online Platform for Freight Forwarding Services in Thailand: A Modified Unified Theory for Acceptance and Use of Technology (UTAUT) Model Approach. *Logistics*, 8(3), 76.
- Rudjanakanoknad, J. (2018). *Transportation system*. Transportation Institute, Chulalongkorn University.
- Setyawan, I., & Rizkyah, A. E. (2024). Criteria for selecting third-party logistics service providers: Systematic Literature Review. *Operations Excellence: Journal of Applied Industrial Engineering*, 16(2), 188–203.
- Tiwong, S., Woschank, M., Ramingwong, S., &

- Tippayawong, K. Y. (2024). Logistics Service Provider Lifecycle Model in Industry 4.0: A Review. *Applied Sciences*, 14, 2324.
- Wang, C., Ahmad, S. F., Bani Ahmad Ayassrah, A. Y. A., Awwad, E. M., Irshad, M., Ali, Y. A., Al-Razgan, M., Khan, Y., & Han, H. (2023). An empirical evaluation of technology acceptance model for Artificial Intelligence in E-commerce. *Heliyon*, 9, e18349.
- Wu, C. F., Zhang, K., Lin, M. C., & Chiou, C. C. (2024). Predicting Consumer Electronics E-Commerce: Technology Acceptance Model and Logistics Service Quality. *International Journal of Interactive Multimedia and Artificial Intelligence*, 8(7), 66-85.
- Yamane, T. (1967). *Statistics: An introductory analysis (2nd ed.)*. Harper & Row.

Author Details

Thanakon Ratchatakulpat, Rajamangala University of Technology Phra Nakhon, Thailand,

Email ID: thanakon.r@rmutp.ac.th

Maneerat Ratchatakulpat, Rajamangala University of Technology Phra Nakhon, Thailand,

Email ID: maneerat.r@rmutp.ac.th

Thanaphon Ratchatakulpat, Rajamangala University of Technology Phra Nakhon, Thailand,

Email ID: thanaphon.r@rmutp.ac.th

Kasidech Sutthivanich, Rajamangala University of Technology, Thailand, **Email ID:** kasidech.s@rmutp.ac.th

Gumporn Supasettaysa, Rajamangala University of Technology, Thailand, **Email ID:** gumporn.s@rmutp.ac.th

Sujinda Imngoen, Rajamangala University of Technology, Thailand, **Email ID:** sujinda.i@rmutp.ac.th

Varunya Sitthithum, Rajamangala University of Technology, Thailand, **Email ID:** varunya.k@rmutp.ac.th

Rattanavalee Maisak, Rajamangala University of Technology, Thailand, **Email ID:** rattanavalee.m@rmutp.ac.th