

Examining the impact of informal contract between delivery of package by agents and their customers on shipping

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Abstract: Given the challenges that businesses have when it comes to adjusting to current circumstances and improving their door-to-door delivery processes, it has been observed that delivery agents are the primary cause of troubles. Ensuring reliable transportation of air-to-sea cargo on a global level continues to provide a significant and difficult obstacle. The absence of a formal contractual arrangement between worldwide air and sea freight intermediaries and their clients has resulted in the prompt settlement of various concerns, such as missing merchandise, shipment delays, and damaged goods. The current study used a quantitative research approach to examine three hypotheses by considering four variables: "Assurance," "Legal Risk," and "Informal Contract" as the independent variables, and "Delivery of package by agents" as the dependent variable. The results of the study demonstrate that all of the independent variables exerted a significant influence on the dependent variable. The study revealed that "assurance" and "perceived legal risk," exert a beneficial influence on the establishment of informal contracts between Malaysian international air and sea cargo-agents and their customers in the context of shipping. The variable of "assurance" has a notable influence on the "Delivery of package by agents". The findings also carry substantial significance for customers, as it offer valuable insights into the uncertainties and obstacles associated with the informal agreements between Malaysian international air and sea cargo agents and their customers pertaining to shipping.

1 Introduction

Informal contractual agreements and direct-to-home delivery services are prevalent in diverse regions across the globe, including Malaysia. The utilization of an informal commerce and distribution technique might yield both benefits and drawbacks [1]. This paper explores the notion of informal contractual agreements and direct-to-home delivery services, and their ramifications in many geographical contexts, with a specific focus on Malaysia. Informal contractual agreements pertain to business arrangements that lack formal legal documentation, instead relying on unwritten understandings or verbal agreements [2]. These agreements frequently depend on trust and interpersonal connections among the involved parties. The terms that may be incorporated encompass aspects such as pricing, delivery, payment methods, and product specs. Although lacking the legal enforceability typically associated with formal contracts, these agreements often retain binding power in numerous instances as a result of prevailing social and moral values. Direct-to-home delivery services refer to the practice of transporting goods directly to the households of clients, hence circumventing conventional retail channels [3]. The adoption of this methodology has garnered attention as a result of developments in e-commerce and logistics technologies. E-commerce offers clients enhanced convenience and enables businesses to expand their reach to a broader

demographic, eliminating the necessity of a brick-and-mortar establishment [4].

Personal relationships and trust are key factors in corporate dealings across various cultural contexts. Informal agreements may be more prevalent in such circumstances [5]. The rise of the informal sector can be influenced by various economic factors, such as the presence of small firms or cottage industries. These enterprises may face limitations in terms of their capacity to participate in formal contractual agreements [6]. The informal economies of Malaysia have played a key role throughout history, notably within areas such as agriculture and small-scale retail. Local marketplaces, street vendors, and certain online platforms are characterized by the presence of informal agreements and conventional distribution systems. Informal agreements have the potential to cultivate strong connections between customers and suppliers, thereby facilitating individualized customer experiences [7]. Direct-to-home delivery is a convenient solution for clients, as it enables them to receive products directly at their place of residence, hence minimizing the need for additional time and effort.

The research problem associated to delivery services and their agents, lies with the absence of adequate legal safeguards and the ability to enforce them may result in conflicts or violations of contractual obligations. Inconsistencies in quality control have the potential to impact consumer satisfaction and the overall reputation of

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the market. Insufficient market openness and competitiveness may result in inefficiencies. The dynamic nature of the environment is associated to the proliferation of e-commerce platforms has led to a progressive integration of digital tools for transactions and deliveries, even among informal firms [8]. Governments in different nations, such as Malaysia, may endeavour to achieve a harmonious equilibrium between promoting informal economies and ensuring legal safeguards for consumers and enterprises. Furthermore, the prevalence of informal contractual agreements and direct-to-home delivery services is observed in diverse countries, with their dynamics being influenced by cultural, economic, and technological variables. Although these methods include certain advantages, they also present issues that have the potential to influence market dynamics and consumer experiences. The delicate equilibrium between informal and formal procedures necessitates a sophisticated evaluation encompassing factors like as trust, legality, and the general efficiency of the market.

In order to gain a full understanding of the prevalence, characteristics, benefits, problems, and socio-economic repercussions associated with informal contractual arrangements and direct-to-home delivery services in various geographical regions, this study specifically focus on the context of Malaysia. The objective of this study is to offer a comprehensive understanding of the intricacies of informal contract associated to delivery services. The study also provides some implications for both firms and consumers, and the prospects of integrating informal activities with formal legal structures toward delivery services provided by delivery agents. Through an investigation into delivery services influence on informal contractual agreements and direct-to-home delivery services in various ways, this research contributes in analysing the variations in practices and identify common trends. By doing so, it also contributes to a comprehensive understanding of the dynamics of these agreements and services, their impact on different regions, and potential strategies for optimizing them within legal, regulatory, and technological frameworks.

2 Related work

The generalizability of findings pertaining to the evaluation of informal contractual agreements and direct-to-home delivery services, together with their consequences in different areas, such as Malaysia, may not be readily transferable to other contexts. Thorough examination of contextual elements is required in order to derive more comprehensive results. Several significant difficulties and obstacles that require attention have been discovered in the investigation. This paper aims to give a review of past empirical research pertaining to delivery services and informal contracts.

It has been determined that the optimization of cargo transportation efficiency is of paramount importance within the shipping business [9]. The study was conducted

to determine how shipping businesses make efforts to optimize their operations with the aim of minimizing costs. The finding reveals that decreasing transit times, and enhancing the overall efficiency of the supply chain improve the delivery services entirely. This encompasses several elements such as route optimization, container usage, port handling processes, and inventory management [10]. The optimization of cargo transportation not only yields advantages for the companies involved but also facilitates streamlined global trade patterns and mitigates carbon emissions [11]. The shipping sector is facing mounting pressure to embrace environmentally sustainable methods as a result of growing apprehensions regarding the detrimental effects of air and water pollution, greenhouse gas emissions, and their consequences on marine ecosystems [12].

According to Cichosz et al. [13], recent advancements have enabled the generation of more precise forecasts pertaining to the stochastic nature of cargo quantity and freight. Consequently, this has facilitated the handling of a larger volume of ships and cargoes within a given time frame, leading to enhanced efficiency and profitability in shipping systems. Furthermore, according to Broekhuis and Scholten [14], the social contract existing between buyers and suppliers has a significant impact on the formal contract and contract management. The authors argue that contract concerns pertaining to customer focus and buyer-supplier relationships play a crucial role in aligning the interests of buyers, suppliers, and customers. The study conducted by Saka et al. [15] examines the comprehension of material management and post-contract waste minimization among quantity surveyors, with the aim of optimizing value for money. The study employed a material management process model and employed a quantitative research approach. The findings suggest that quantity surveyors have a significant role in the management of materials within the context of informal contracts.

A previous study in this domain was undertaken by Susanty et al. [16]. The research was conducted within the context of small and medium-sized enterprises (SMEs) and provided evidence to support the notion that a considerable challenge encountered by several firms is the absence of effective coordination throughout their supply chain. The small and medium enterprises (SMEs) who specialize in Batik production, situated in Pekalongan, an area in Central Java, have faced challenges resulting from the influence of information exchange and informal contracts on the level of trust created between them and their raw cotton fabric supplier within the batik industry. The study adopted a mixed-methods approach, incorporating both qualitative and quantitative research tools. The results suggest that the practice of exchanging information and forming informal agreements has a significant influence on strengthening the degree of trust among small and medium-sized enterprise (SME) owners in the batik sector and their suppliers.

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As stated by Benítez-Ávila [17], there is a barrier related to the sequential operation of contractual and relational governance elements, as well as the incorporation of trust and relational standards. The research utilized the theoretical framework of contract design theory and employed a quantitative research approach. The results of the investigation indicate that the successful facilitation of contract agreements can be achieved by employing informal, social, and economic incentives. In their study, Vasan and Chavan [18] employed the concepts of "Vessel dwell time," "Terminal dwell time," and "Street dwell time" to examine the process of Indian customs green channel clearing within the jurisdiction of India. The researchers adopted a qualitative case study approach to analyse this phenomenon. The scope of this study is limited to examining the delivery time in India, with a specific focus on the duration it takes for a shipment to reach a port or airport within the country. The discovery implies that it would be beneficial to assess the performance of other nations both individually and collectively, in accordance with the Trade Facilitation Agreement (TFA) of the World Trade Organization (WTO), in future evaluations.

The main research gap in the context of both theoretical and practical perspectives pertains to the lack of a comprehensive comprehension and empirical evidence concerning the ramifications and outcomes of the widespread utilization of informal contracts associated to direct-to-home deliveries within Malaysia's commercial environment. The research gap may pertain to a more specific area or topic. An additional area of research that might be explored pertains to the insufficient investigation of the interplay between informal transactions and established legal frameworks, particularly with regard to the protection of consumer rights. Moreover, it is imperative to comprehend the various opportunities and problems that arise from informal commerce. The research

gap may pertain to an insufficient investigation of the ways in which established enterprises may effectively adjust to or capitalize on these practices, as well as the means by which potential obstacles, such as quality assurance or legal conflicts, can be effectively managed. This study aims to investigate the effects of informal contracts between package delivery agents and their customers on the shipping process.

3 Research methodology

The current investigation employed a quantitative research approach, characterized by the systematic examination of hypotheses derived from a theoretical framework [19]. This procedure entails the gathering of data on particular variables assisted by the utilization of standardized instruments. In contrast to qualitative techniques, which entail active engagement between the researcher and participants, quantitative methodologies adopt a more detached approach, allowing participants to be passive observers in the research process.

3.1 Conceptualization and development of hypothesis

The basic paradigm proposed for this current research is depicted in Figure 1. This model is predicated on the premise that the research aims to construct a novel framework that incorporates factors derived from previous empirical studies. This study proposed the utilization of four key variables, specifically referred to as "Assurance (AS)," "Legal Risk (LR)," "Informal Contract (IC)," and "Delivery of package by agents (DE)" The study examines the relationship between the independent variables of "Assurance" and "Legal Risk," the mediating factor variable of "Informal Contract," and the dependent variable of "Delivery of package by agents".

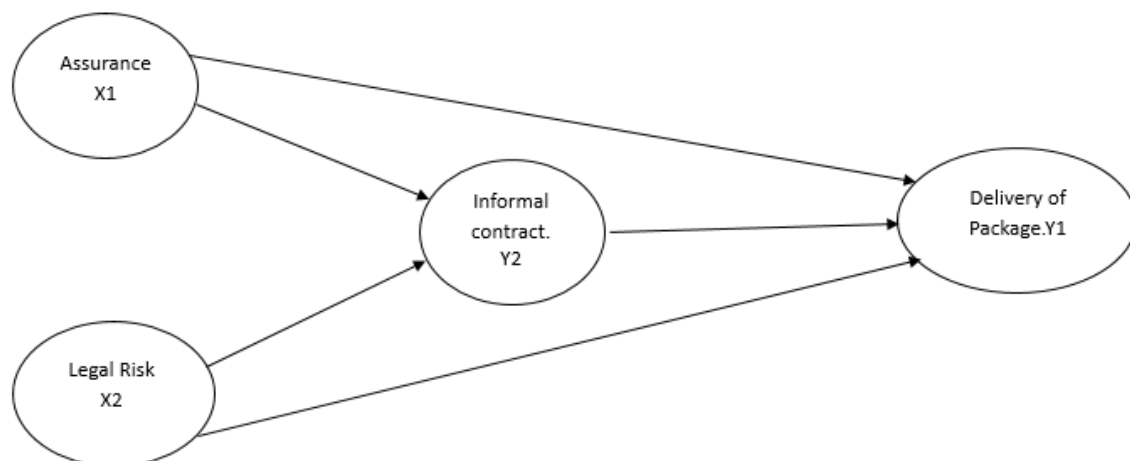


Figure 1 The proposed conceptual model

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The operational definition of the variable "Informal Contract" refers to an agreement between customers and cargo agents that is not documented in writing and is not legally binding.

The operational definition of the variable "Assurance" refers to the degree to which a customer is confident that his or her shipment will arrive at its destination on time and without experiencing any complications.

The operational definition of the variable "Legal Risk" Represents the level of potential legal complications or risks associated with formal contracts or transactions. It influences the decision to opt for an informal contract due to the desire to avoid legal complexities.

The beginning of the process known as "delivery of packages by agents" occurs when a customer and an agent come to an agreement regarding the delivery of a customer's package from the customer's country of sources to the country in which the package is to be delivered. This is the last variable.

3.1.1 The level of assurance associated to the delivery of package by agents

In the context of assuring the quality of delivery of package by agents, this study examines the relationship between the amount of assurance connected with the delivery process. The establishment of particular standards would enhance the level of confidence and certainty between clients and cargo brokers about package delivery. When dealing with a situation governed by an informal contract, it is necessary to thoroughly analyse the procedures involved. This research aims to examine the relationship between the level of assurance and the delivery of packages by cargo agents, which is considered a significant concern in this study. The rationale for this assertion stems from the notion that, in the context of package delivery, there exists a prevailing preference for a heightened degree of certainty, as it engenders a greater sense of confidence in the successful achievement of the intended outcomes [20]. The present study is driven to examine the impact of certainty levels on package delivery by utilizing informal contracts.

Furthermore, it is crucial to acknowledge that when the act of delivering anything is closely linked to a substantial degree of assurance, it indicates that appropriate steps, evaluations, and precautions have been put in place to minimize potential hazards, guarantee the excellence of the service, and bolster reliability. Nevertheless, it is crucial to evaluate the possibility of extending the scope of assurance to include scenarios in which it is relevant. This involves assessing the various processes, verifications, and protections that have been put in place to ensure the dependable transportation of commodities via informal contractual agreements. Kilic et al. [21] utilized the theoretical construct of "Assurance" to evaluate its impact on the perceived superiority and quality of assurance services rendered by accounting companies with official accreditation in comparison to those without such

recognition. This study recognizes the presence of both registered and unregistered firms within the Air and Sea freight agent industry, hence justifying the consideration of "assurance" as a variable for examination.

According to Kilibarda et al. [22], the sub-construct of "Assurance" can be classified as a constituent element of the broader construct of "Service Quality" within the domain of goods forwarding enterprises. These companies frequently offer a variety of services that demonstrate differences in their organizational structure and level of quality. The quality of service in this specific instance can be ascribed to the agent's level of skill in carrying out their tasks. The logic of the present study is consistent with the notion that conceptualizing Assurance as a determinant of service delivery is equivalent to asserting that Assurance has an impact on service quality, as posited by Kilibarda et al. [22]. Based on the aforementioned reasoning, the hypothesis 1 to 3 are formulated as follows:

H1: The level of assurance is positively associated with delivery of package by agents.

H2: The level of assurance is positively associated with informal contract between delivery of package by agents and their customers.

H3: Informal contract mediate the relationship between the level of assurance and delivery of package by agents.

3.1.2 The level of legal risk associated to delivery of package by agents

The concept of "legal risk" refers to the probability that an organization or an individual would face legal difficulties or unfavourable consequences due to their failure to comply with applicable laws, regulations, or contractual obligations [16]. The rationale behind examining the correlation between legal risk and package delivery stems from a recent study endeavour that has investigated the difficulties faced by Freight Forwarding Agents in meeting client expectations. According to Narunart and Panjakajornsak [23], the study has specifically identified legal concerns, such as disputes pertaining to delivery and parcel damage, as noteworthy elements that contribute to customer discontent. Insufficient decision-making and operational procedures, encompassing substandard logistic practices and inaccuracies in service delivery, equipment management, cost estimation, and booking and delivery services, have the potential to result in financial losses for all stakeholders [24]. Hence, it is crucial to optimize logistical operations, including responsibilities such as organizing deliveries, sending freight, and selecting transportation modes. Dua and Sinha [25] argue that the achievement of market domination necessitates the prioritization of low cost and responsiveness as crucial factors for attaining success.

The contractual agreement between the logistics service provider and the client acknowledges the existence of product liability as a potential legal and financial risk that might affect both parties. Product liability pertains to

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the legal accountability associated with defective goods. The hypothesis that can be derived from the aforementioned argument is as follows:

- H4:** Legal risk is positively associated with delivery of package by agents.
- H5:** Legal risk is positively associated with informal contract between delivery of package by agents and their customers.
- H6:** Informal contract mediate the relationship between the legal risk and delivery of package by agents.

3.1.3 Informal contract relationship to delivery of package by agents

The consideration of the correlation between informal contracts and the delivery process holds significant importance within the domain of courier services. Previous research study underscored the need of cultivating trust between suppliers and customers to foster a connection between informal contracts and delivery [16]. This highlights the importance of the level of informality in contractual agreements. Despite the absence of legal enforceability, informal contracts can exert a substantial influence on the transportation of parcels through many mechanisms. From another perspective prior research uses this type of relation on the comprehension of delivery terms, which was revealed that casual agreements can establish a reciprocal comprehension between the courier agent and the customer concerning the delivery conditions [26]. This includes factors such as the time taken for delivery, instructions for handling, and any specific requirements or preferences. In situations where a formal written contract is not present, the participating parties may nonetheless choose to abide by an informal agreement as a guiding framework for their behaviour during the course of the delivery process. The utilization of informal contracts can facilitate the establishment of the expected level of service and performance in service expectations. According to Atiku et al. [27], it is possible for the courier agent and the client to develop a shared understanding of the expected standard of service quality. The required information for delivery of package by agents include the designated state of delivery, the chosen method of delivery, and any additional services that may be desired, such as signature confirmation or insurance.

The utilization of informal contracts can provide a certain level of flexibility and allow for alterations to be made during the course of the delivery process. In the case of unforeseen circumstances, such as a change in the designated delivery location or a delay in the recipient's availability, the informal agreement can provide a basis for negotiating alternative arrangements or developing solutions that accommodate the interests of both parties [16]. Informal contracts can be utilized as a reference point for settling disagreements or difficulties that may occur during the delivery process within the framework of dispute resolution. Although informal agreements do not

possess legal enforcement, they can nonetheless be valuable in clarifying the objectives and expectations of all parties involved. This can facilitate productive discussions and negotiations with the goal of reaching a mutually agreeable resolution [28].

It is important to acknowledge that informal contracts may have some limitations when compared to formal written contracts, as they lack legal validity and may lack specified terms and conditions. Therefore, it is advisable for courier agents and clients to consider formalizing their agreements through written contracts to guarantee improved legal protection and clarity [16]. Generally speaking, while informal contracts may not possess the same level of legal enforceability as formal contracts, they can nonetheless significantly impact the delivery process by setting mutual expectations, adaptability, and a basis for addressing possible issues. The aforementioned argument gives rise to the development of a hypothesis below:

- H7:** Informal contract is positively associated with delivery of package by agents.

3.2 Instrumentation, research population, sampling and data collections

This research employs questionnaires as a method of data collection from participants in relation to delivery service agents and clients. When constructing a survey, it is crucial to offer respondents a diverse range of possibilities for option choice and to restrict the number of questions per variable to ensure a meaningful interpretation of the variable [29]. To deal with that, the present study employed the Likert scale ranging from 1 to 5 (1=strongly disagree – to - 5 = strongly agree). According to Hair et al. [19], it is advisable to ensure a sufficient number of items per variable prior to doing factor analysis. This measure is implemented to mitigate any potential adverse effects on the overall study instrumentation in the event that it becomes necessary to exclude specific items throughout the analysis. Consequently, the questionnaire was constructed to encompass all the variables adopted from the previous studies, namely Informal Contract, Legal Risk, and Assurance. Additionally, a separate set of questions was formulated specifically for the variable "Delivery of package by agents" The questionnaire consists of a range of 6 to 10 questions per variable. The study utilized the questionnaire developed by Susanty et al. [16] to evaluate the prevalence of informal contracts in delivery service involving agents and consumers. These contracts encompass implicit agreements between agents and customers that prioritize the preservation of a favourable reputation characterized by integrity and fairness for both sides, as opposed to asserting undue dominance. The variable known as "Legal Risk" encompasses situations where there is a lack of regulation or uncertainty regarding legal status, which has the potential to undermine the protection and well-being of all

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parties engaged in an air and sea cargo transaction. The variable in question has been derived from the research conducted by Wasiuzzama et al. [30]. The variables within the category of "Assurance" pertain to the quantification of the degree of certainty both customers and agents possess regarding the successful and punctual delivery of shipments to their intended destinations, free from any complications or difficulties. These items were derived from the research conducted by Kilic et al. [21].

The survey instrument includes a section that addresses demographic information, covering questions that are essential for comprehending the respondent's traits and overall opinions. The other part of the survey question involves a "variables questions". The questions sets underwent pre-testing, followed by a pilot test, in which the validity and reliability of the questions were assessed prior to proceeding with final data collection.

The concept of a "study population" encompasses all individuals or subjects that are the central focus of a research investigation, and from whom a subset, known as a sample, will be selected for the purpose of the study. This study focuses on those who utilize the services offered by delivery service agents and their clients. To obtain an approximate figure for the population in question, it is noteworthy that the number of delivery services and their agents be extracted first, hence, in Malaysia in 2022 there are out 6000 delivery agents from a total of 115 courier licenses listed in the "List of Non-Universal Service Licensees." An approximate of 10 to 30 customers per year per agents was estimated. As a result, this study estimated a total population of 180000 people from which a sample as extracted.

Simple random sampling technique was chosen for this study based on the fact that it is sampling design procedure, where in each member of the population has a nonzero chance of being chosen for sample, that is there is an equal opportunity for every member of the population to participate in the research [31]. Krejcie and Morgan's sample size formulation technique was chosen for extracting the sample size required, because previous studies frequently cited as a reference for establishing the appropriate sample size in educational research [32] From the Krejcie and Morgan's sample size determination table, which presents a comprehensive analysis of population sizes and their corresponding sample sizes for different confidence levels the sample size for this present study should consist of 384 samples as the target. This is because from the table any population that is more than 100,000 should use a minimum sample size of 384. Immediately after setting up the target samples, an online data collection questionnaire was developed. Delivery of package by agents are invited as well as requesting them to forward the question to their customers. Furthermore, the questionnaire is broadcasted through emails, social media platforms and to related groups.

4 Analysis and presentation of the results

The assessment of collected data is a critical step in extracting significant insights and reaching informed conclusions pertaining to the topic or intervention being investigated. The choice of analytical techniques and methodologies is dependent on the specific characteristics of the research inquiry and the data that has been collected. The utilization of the analysis employed in the present study is in accordance with the specific research objectives. The study employed descriptive analysis for the demographic variable and inferential analysis for the research variables as recommended by Hair et al. [19]. It is suggested that a comprehensive variable analysis should commence with the administration of reliability tests and factor analysis, then proceeding to the examination of the interrelationships among the variables. The user provided a numerical reference without any accompanying text.

4.1 The profile of the respondent and response rate

The analysis of response rate and participant characteristics was conducted using a descriptive statistical approach, and the findings have been clearly delineated. A total of 411 valid replies were gathered for the purpose of conducting analysis. The demographic profile of the participants indicated that a majority of the respondents, around 62%, belonged to the age group of 25 to 34 years, making it the most prominent segment. In contrast, approximately 20% of the participants fell into the age category of 34 years and older. This discovery indicates that individuals belonging to the younger age group demonstrate a higher degree of receptiveness towards these matters. In the context of gender, it was observed that male participants shown a greater rate of response in comparison to their female counterparts, comprising around 57% of the overall responses. The bulk of participants, namely more than 82%, hold a Bachelor's degree level of education.

The results indicated that a significant majority of the participants, around 87%, agreed with the proposition that utilizing a deliberate and planned approach is essential for effectively encouraging and promoting the acceptance and utilization of delivery services among agents and their consumers. In a comparable manner, the findings of the study demonstrate that a substantial majority, precisely 91%, exhibited endorsement for delivery services conducted through informal contracts as it serves as an indication of reliability and should be cultivated with meticulous attention to the customer's requirements, inclinations, and challenges. This suggests that the implementation and use of Informal contract on delivery services require a more substantial advancement beyond subjective viewpoints or beliefs.

4.2 The reliability and factor analysis

The analysis of the relationship among the variables was performed. It begins with an extensive evaluation of

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variables by the implementation of reliability testing and factor analysis. This is followed by the analysis of the interrelationships that exist among these variables. The research conducted an analysis to assess the reliability of the study's variables, resulting in a Cronbach's alpha coefficient of 0.821 when all variables were aggregated. The resultant Cronbach's alpha value obtained from the analysis can be viewed as a measure of the degree of internal consistency. Consequently, given that this signifies the preliminary phase following the gathering of data, the reliability analysis was also conducted on the four main variables. The Cronbach's coefficient values found in this study are as follows: IC (0.916), LR (0.926), AS (0.823), and DE (0.787) (see Table 1). At present, the variables IC, LR, AS, and DE contain 7, 8, 7, and 7 items correspondingly. The subsequent stage entails the execution of factor analysis.

Table 1 The result of the reliability study

Latent	Cronbach's	Cronbach's Alpha Based on	No of
IC	0.916	0.922	7
LR	0.926	0.928	8
AS	0.823	0.831	7
DE	0.787	0.798	7

The Exploratory Factor Analysis (EFA), was carried out, by assessing the results of the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's sphericity test on the variables AS, LR, IC, and DE. The findings of these tests are provided in Table 2. Hair et al. [19] suggest that the appropriateness of values for exploratory factor analysis (EFA) can be assessed by evaluating the Kaiser-Meyer-Olkin (KMO) values, which should exceed 0.55. In the present investigation, all variables exhibited KMO values exceeding 0.5. Furthermore, the Bartlett's test of sphericity yielded statistically significant findings ($p < 0.001$), providing additional evidence for the dependability of the model's fit.

Table 2 Results of examination of constructs for exploratory factor analysis suitability

Construct	KMO (> 0.50)	Bartlett's Test of Sphericity
IC	0.792	0.00
LR	0.841	0.00
AS	0.799	0.00
DE	0.828	0.00

Table 3 displays the outer loading values for all variables, this is the baseline indication of the factor loading required (see Figure 2). The validity of the items was determined based on their factor loadings, which were

considered acceptable if they were within the range of 0.50 and above, as suggested by Hair et al. [19]. Additionally, the items were also evaluated based on their eigenvalues, which were required to be greater than 1, as indicated by the same authors. All the variables evaluated had an explanatory capacity of 61.909%, above the recommended threshold of 60% total variance elucidated by Hair et al. [19]. Nevertheless, any value below the specified threshold is deemed unacceptable, resulting in the exclusion of items falling inside that range.

Table 3 The results of the outer loading values

	Assurance	Delivery of package by agents	Informal Contract	Legal Risk
AS1	0.851			
AS2	0.884			
AS3	0.800			
AS4	0.812			
AS5	0.845			
AS6	0.765			
DE1		0.921		
DE2		0.937		
DE4		0.907		
DE5		0.846		
IC1			0.682	
IC2			0.672	
IC3			0.647	
IC4			0.785	
IC5			0.778	
IC6			0.788	
IC7			0.682	
LR1				0.878
LR2				0.825
LR3				0.774
LR4				0.712
LR5				0.756
LR6				0.849

In nearly all instances, there exists a set of elements that are excluded, with the exception of the data pertaining to the ICC variables (see to Table 4). The objective of conducting factor analysis was to enhance the overall accuracy and interpretability of the factor structure. This was achieved by the removal of specific components. However, the omission of these components from the measurement has the potential to impact the credibility and reliability of the instrument. Therefore, it is crucial to acknowledge this aspect. Subsequently, following the completion of the Exploratory Factor Analysis (EFA), an additional iteration of the Reliability test was administered.

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Table 4 Reliability analysis results for all the variable after EFA

Variables	Number of Items (Before items deletion)	Cronbach's Alpha	Number of Items (After items deletion – EFA)	Cronbach's Alpha
IC	7	0.916	7	0.916
LR	8	0.926	5	0.941
AS	7	0.823	6	0.886
DE	7	0.787	4	0.897

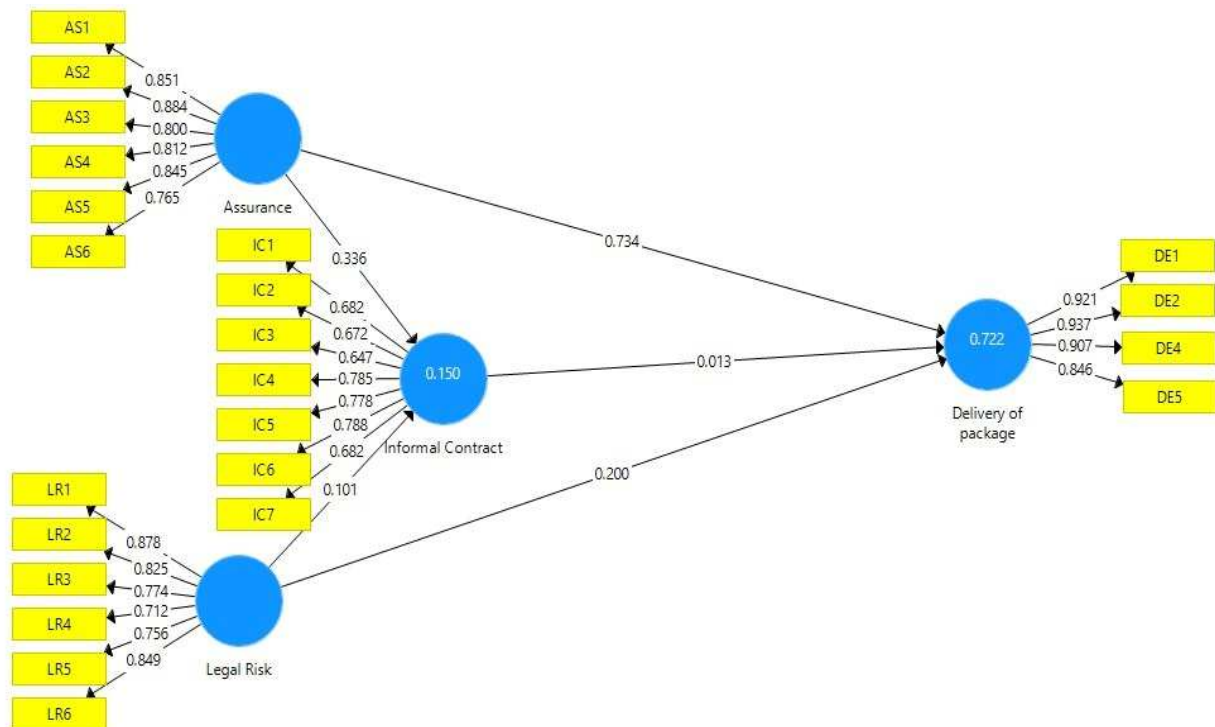


Figure 2 The results of the outer model

4.3 The analysis of the hypothesis testing

The findings demonstrate if there are statistically significant associations between the variables in question (see Table 5. The column labeled "Relationship Status" provides information regarding the nature of the relationship, indicating whether it is positive or negative. On the other hand, the column labeled "Hypothesis" serves to determine whether the null hypothesis is accepted or rejected, with the decision being based on the p-value. There is a statistically significant positive correlation between Assurance and delivery of package by agents. This finding implies that there is a positive correlation between the level of Assurance and the utilization of delivery of package by agents. The statistical analysis reveals a substantial positive correlation between Assurance and Informal Contract. This suggests that there is a positive correlation between an escalation in Assurance and a rise in the prevalence of Informal Contract agreements. Moreover, the impact of informal contracts on the association between assurance and delivery of package by agents has been found to diminish the strength of the relationship, resulting in a lack of statistical significance.

The responsibility of reducing the relationship status falls within the purview of the mediator. Consequently, the hypothesis is deemed valid, suggesting that the association between Assurance and delivery of package by agents is mediated by an Informal Contract.

There exists a statistically significant positive correlation between Legal Risk and delivery of package by agents. This implies that there is a positive correlation between the escalation of Legal Risk and the growth of delivery of package by agents. The statistical significance of the positive association between Legal Risk and Informal Contract is observed in a similar manner. This suggests that there is a positive correlation between the escalation of Legal Risk and the prevalence of Informal Contract arrangements. Moreover, the presence of an Informal contract has been found to moderate the association between Legal risk and Delivery of package by agents, resulting in a decrease in the strength of the link. However, this moderation impact is not statistically significant. The responsibility of reducing the relationship status falls upon the mediator. Consequently, the hypothesis is deemed valid, suggesting that the association

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between Legal risk and Delivery of package by agents is mediated by Informal Contract.

The statistical analysis reveals that there is no significant correlation between the Informal Contract and Delivery of package by agents, indicating a lack of

meaningful association between Informal Contract and Delivery of package by agents, however it is positive. This implies that but customers and agents are quite satisfy with their transaction, but are aware anything can happen that is not right.

Table 5 The result of the hypothesis testing

Types of Influence	Original Sample (R^2)	T Statistics	P Values	Relationship Status	Hypothesis
H1: AS->DE	0.734	7.676	0.000	Positive	Accepted
H2: AS->IC	0.336	3.282	0.000	Positive	Accepted
H3: AS->IC->DE	0.004	0.041	0.046	Positive	Accepted
H4: LR->DE	0.200	2.341	0.000	Positive	Accepted
H5: LR->IC	0.101	1.563	0.001	Positive	Accepted
H6: LR->IC->DE	0.001	0.013	0.325	Positive	Accepted
H7: IC->DE	0.013	0.185	0.061	Positive	Accepted

5 Discussion and implication of the study

This study examined assurance, legal risk, informal contracts, and delivery of package by agents. It has provided many valuable insights on these interrelated elements in commercial settings. This study's findings include: Influencing Factors: The study showed how assurance, legal risk, and informal contracts affect delivery of package by agents. This study quantifies and analyzes package delivery service quality and customer satisfaction aspects. Decision-Making: Empirical Evidence The empirical findings help package delivery sector decision-makers make strategic decisions. These insights can help organizations strategically deploy resources to assurance systems, efficiently manage legal risks, and tailor their informal contract strategy to service outcomes. Study outputs offer practical advice for improving operational performance. Organizations can improve assurance and legal risk management processes to meet consumer expectations and improve service quality.

The study examines the individual and group consequences of assurance, legal risk, and informal contracts to better understand their interplay. A holistic approach helps understand the dynamics of the package delivery sector. This study lays the groundwork for future investigation. This study provides a platform for investigating several factors that may affect package delivery services. Future studies could include technological integration, personnel training, and consumer engagement. Service Improvements: This research can help businesses optimize service delivery. Organizations may use the insights to create tailored plans to improve their package delivery services, boosting customer satisfaction and loyalty. Legal risk affects service outcomes, the study says. Businesses need this knowledge to anticipate and resolve legal issues. This reduces disagreements and improves service quality. Research may help organizations differentiate themselves from competition through strategic differentiation. Assurance and legal risk management can help package delivery companies build trust and credibility. The research

provides significant insights into the intricate interaction of key factors that affect service quality and customer satisfaction. Academia and industry practitioners who want to understand and manage assurance, legal risk, informal contracts, and their effects in package delivery services will benefit from the above contributions.

The hypothesis testing results could inform assurance, legal risk, package delivery, and informal contract strategy. Assurance (AS) improves delivery of package by agents (DE) and Informal Contract (IC). This shows the importance of building company trust. Due to their commitment to quality and dependability, companies that reassure customers may increase consumer satisfaction and loyalty. Legal Risk: Legal risk management and compliance can improve package delivery services, according to the data. Proactive legal risk management can boost reputation, reduce future conflicts, and strengthen customer relations. Assurance and Informal Contracts did not affect delivery of package by agents (DE). This implies that while assurance can build trust, it may not directly boost service quality from informal contracts. Beyond these two requirements, organizations should prioritize service-enhancing components. The hypothesis on the combined impacts of Legal Risk and Informal Contracts on Delivery of package by agents (DE) was equivocal, suggesting that legal risk management may not significantly affect informal contract effects on service quality. Businesses should look beyond these affiliations to provide excellent service. The low impact of informal contracts on Delivery of package by agents (DE) implies that while informal agreements may help create business ties, other factors may have a greater impact on service quality. Organizations must prioritize service performance and client happiness. The findings show that assurance, legal risk, informal contracts, and delivery of package by agents are interconnected. Businesses must assess how these factors affect their operations, customer interactions, and organizational effectiveness. To make strategic decisions, you need a complete understanding of the service delivery ecosystem. The research sheds light on

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assurance, legal risk, informal contracts, and delivery of package by agents. However, restrictions may alter the generalizability and interpretation of these results. The study may have occurred in a specific location or industry. Thus, these research may not apply to numerous places or industries with different regulatory frameworks, cultural norms, and commercial practices. The study illuminate's assurance, legal risk, informal contracts, and delivery of package by agents services. However, it is important to acknowledge and account for these limitations when interpreting and extrapolating the results to wider contexts. Future research should aim to overcome these constraints and better understand the sector's complex dynamics.

6 Conclusion

The study examined the complicated interactions between assurance, legal risk, informal contracts, and package delivery services. This study sheds light on the complicated dynamics of package delivery interactions. This study used empirical analysis and hypothesis testing to better understand how these factors affect service quality and customer satisfaction. The package delivery service sector now relies on assurance. The study found that a strong assurance structure improves package delivery and informal contracts, boosting customer trust and loyalty. This emphasizes the importance of organizations developing processes that represent reliability and quality to their customers. The research also showed how legal risk affects service quality and customer attitudes. Legal risk management can reduce disagreements and improve package delivery. The study found that informal contract relationships did not consistently affect service results. This suggests that while informal agreements shape commercial relationships, their impact on service quality may be more complicated than imagined. This study's constraints—context-dependent results and the difficulty of establishing causal relationships—must be acknowledged. This study only examined particular features, which may have excluded other important factors that could have affected the sector. This study has far-reaching effects. Package delivery companies can use their insights to make strategic decisions to improve service quality, trust, and legal obligations. The findings can also be used to study equivalent links in other sectors. As the package distribution business evolves, this study provides a foundation for future research. Adding more variables, studying more industrial dynamics, and using longitudinal studies to capture temporal oscillations could expand this research. These efforts will deepen understanding of the complex interactions between service quality, client satisfaction, and organizational success. This research expands the knowledge of assurance, legal risk, informal contracts, and delivery of package by agents. This research is useful for organizations trying to navigate the intricate interconnections that are essential to providing excellent services and building long-term client relationships in light of the changing business landscape.

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