Understanding The Influence and Service Type of Trusted Third Party on Consumers’ Online Trust: Evidence From Australian B2C Marketplace

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ABSTRACT
In this study, the trusted third party (TTP) in Australia’s B2C marketplace is studied and the factors influencing consumers’ trust behaviour are examined from the perspective of consumers’ online trust. Based on the literature review and combined with the development status and background of Australia’s e-commerce, underpinned by the Theory of Planned Behaviour (TPB) and a conceptual trust model, this paper expatiates the specific factors and influence mechanism of TTP on consumers’ trust behaviour. Also this paper explains two different functions of TTP to solve the online trust problem faced by consumers. Meanwhile, this paper summarizes five different types of services provided by TTPs during the establishment of the trust relationship. Finally, the present study selects 100 B2C enterprises by the simple random sampling method and makes a detailed analysis of their TTPs, to verify the services and functions of the proposed TTP in the trust model. This study is of some significance for comprehending the influence mechanism, functions and services of TTPs on consumers’ trust behaviour in the realistic Australian B2C environment.

CCS Concepts
• Applied computing→Electronic commerce→Online shopping

Keywords
B2C; Trust Model; Trusted Third Party; Trust Problem; Credit Transmission; Credit Publicity; Service Type.

1. INTRODUCTION
Consumers’ online trust refers to a kind of belief of the consumer to the ability and attitude of the online retailer to complete an online transaction in certain environment according to the experience of the consumer or others’ recommendations [1, 2]. It has been repeatedly demonstrated as a critical factor for the success of e-commerce [3]. Over the past decades, both researchers and practitioners dedicated their effort to identifying the key factors that influence the consumers’ online trust [4]. Researchers found that consumers’ online trust can be influenced by consumer related factor [5], online retailer related factor [6], e-commerce environment [7] and trusted third parties (TTP) [4]. While much of the extent studies examined the impact of individual level antecedents of online trust, there is a dearth of investigation on the influence of TTP on consumers’ online trust.

TTP in the online marketplace refers to third party economic entity which mainly aims at overcoming the credit obstacles and credit risks of virtual market, improving the awareness of overall credit information and honesty of the market, forming a good credit culture of virtual market, expanding online transaction volume and promoting the constant development of e-commerce [8, 9]. Based on our literature review on the consumers’ online trust, two possible reasons resulted in the limited number of research on the influence and function of TTP. First, over the past decade, a large number of researches have been conducted in respect of the mechanism of building up the initial consumer trust [4, 10]. The main objective of these studies is to validate the influencing factors and framework structure of consumer trust from individual’s characteristic perspective. Thus, there is a neglect of studies on the influence from the TTP. Second, the traditional regulatory mechanism is high-cost and low-efficiency for risk control of online transactions [9, 11]. TTP can play an intermediary role because they can help one party in the transaction to make sure that the other party will not use its informational advantage to do anything unfavourable to him, so as to facilitate e-commerce. TTP may serve as a control mechanism for online transactions, can restrict opportunistic behaviours, effectively eliminate the distrust of consumers and increase the number of potential transactions in the future, and are conducive to both parties to establish a stable long-term trust relationship. Thus, there is a salient research gap in the extent literature that needs to be addressed by answering the following research questions: How does the TTP influence consumers’ online trust in the Australian B2C transaction context? Whether the TTP can be exhibited in the form of a multifunctional and multiservice structure?
To this end, this paper adopts a qualitative research fashion to address the research questions. First, we systematically reviewed the prior literature on TTP and online trust. Next, based on an established trust model, we argued the theoretical legitimacy of the influence of TTP on consumers’ online trust. This is followed by the in-depth reasoning of how the TTP’s function and services can be operationalized to attenuate two main trust problems: credit obstacle and credit risk. Our theoretical reasoning is then validated by the analysis of organizational data from Australian B2C marketplace. The findings of this paper shows that TTP fall into five different service types, namely payment services, logistics and distribution services, guarantee and insurance services, certification services, and rating and recommendation services; online retailers select different service types of TTP together to enhance the level of consumer trust; the TTPs chosen by different types of online retailers have different characteristics; TTPs have the function of credit information transmission in the online shopping environment; TTPs have the function of credit information publicity in the online shopping environment.

The rest of this paper is organized as follow. The second section is mainly a review of current research findings and literature. In the third section, the trust model used in this paper is presented and its theoretical basis is explained. The fourth section expatiates the problems consumers are facing in the online shopping environment as well as the functions, service types and influencing factors of TTP. In the fifth section, through analysis of sample data, the development status of Australia’s TTP further demonstrates the explanation of the functions and services of TTP in the previous section. The research findings and the limitations of the present study are proposed in the sixth section. The last section is the conclusions of the study.

2. LITERATURE REVIEW

As pointed out by Luhmann in his monograph “Trust and Power”, there are two trust systems in modern societies, namely interpersonal or institutional-based trust [12]. The former is based on familiarity of people and the latter builds on legal punishment or preventative mechanisms. The neo-institutionalist Williamson also proposed to overcome the vulnerability on trust by expanding control and monitoring procedures [13]. The trust in e-commerce, because of its virtual nature, is more appropriate to adopt the institutional-based trust, which relies on legal punishment and TTP measures. According to the general situations in all the countries over the world, if a country has more developed e-commerce, it enacts more comprehensive laws and TTPs in the sector. This further promotes the market stability and decreases short-term behaviors.

Warrington, Abgrab and Caldwell research show that, if consumers are attracted to the goods or services on the website, in order to ensure the security of personal information or transaction, they may search for relevant information to enhance their confidence in interacting with the website [14]. Online retailers can effectively enhance consumers’ trust in the online shopping environment through the TTP service support and statement of their own guarantee policies.

In addition to the above research, it was also revealed that in the e-commerce environment, consumers were often unable to have control over online retailers or distinguish whether the information disclosed by online retailers is authentic or not, nor can they influence the behaviours of online retailers. Due to the lack of judgment of the correctness of information and control over the transaction counterpart, consumers refuse some of the potential online consumption behaviours and thus greatly affecting the development of e-commerce. Kimery and McCord proposed that the trust may be extendable to some extent, that is, by virtue of a credible TTP, to show that the certified online retailer is trustworthy [9]. It also means that even consumers do not have any experience in transaction with the retailer, they still can trust the targeted retailer through a credible source. For example, consumers may transfer their trust to the certified retailer or website through the certification by entrusted TTPs.

The studies of Kimery and McCord point out that TTP is a group of organizations that promote the website trust [9] and when the website that applies can prove that it abides by the regulations of TTP, TTP will show its brand on the website that applies, among which the more famous ones are TRUSTe, Thawte, GeoTrust True Site and VeriSign.com. According to the study of Benassi, TRUSTe mainly aim to protect consumers’ privacy on the Internet from invasion [15] and when the website can prove that it abides by the regulations of consumers’ privacy protection, the TRUSTe will show its brand on the website that applies; while VeriSign.com mainly aims to protect the online transaction mechanism and emphasizes to consumers that the websites with its certification mark has no hidden problems about online transaction security [16]. Therefore, when the website has the certification marks of TRUSTe, it will give consumers a message that it will protect their privacy; when the website has the certification mark of VeriSign.com or Thawte, it will give consumers another message that: the payment service provided by the website is safe. These different types of TTPs have strong positive significance to the trust intentions of consumers, which can improve consumers’ trust degree in enterprises and eventually influence the trust actions of consumers [8, 9].

3. THE CONCEPTUAL TRUST MODEL

The theoretical legitimacy of the influence of TTP on consumers’ online trust is building upon an established trust model [17]. This trust model is based on the Theory of Planned Behaviour (TPB) [18]. Anchoring on the theoretical underpinning of TPB, three main factors influence consumers’ online trust behaviour.

Trust model presented in this study believes that the trust behaviour of the majority of consumers is controlled by their own will and rational. Consumer trust intention is an important factor for determining whether or not the trust behaviour will occur, but such intention is determined jointly by consumers’ personal attitudes and public opinion on the trust behaviour. Meanwhile, the study also thinks that in the practical environment of B2C e-commerce, consumers’ own control of their trust behaviour is often affected by many factors, such as time, information and ability. Thus, TTPs can effectively influence consumers’ trust intention and in some special circumstances, directly influence the consumer trust behaviour (as the red dashed frame of the following figure 1 shows).

Personal attitude refers to consumers’ positive or negative feelings of trust in online retailers. These factors, namely personal characteristics of consumers (including trust propensity and past experience in transactions of consumers), the current overall environment of e-commerce, and online retailers and their websites, together affect consumers’ personal attitude of trust.

Public opinion represents the pressure perceived by a consumer from the other people (such as consumers’ families, colleagues and friends or other consumers), who think that he should or should not have trust behaviour. The impact of social pressure is
influenced by the information dissemination channels, type of information presentation and information quality.

**Trusted Third Parties** (TTP) refers to the third party economic entity which mainly aims at overcoming the credit obstacles and credit risks of virtual market, improving the awareness of overall credit information and honesty of the market, forming a good credit culture of virtual market, expanding online transaction volume and promoting the constant development of e-commerce. When consumers think the more resources and opportunities from TTP are owned by online retailers and the expected obstacles are smaller, they will have the stronger perception of control in the trust behaviour. Further, the types of services provided by TTP and the type and creditworthiness of information presentation will determine the degree of impact by TTP on consumers’ trust behaviour.

![Three-dimensional dynamic trust model](image)

**Figure 1. Three-dimensional dynamic trust model [17]**

Through the analysis on the above model, we can find that TTP plays an important role on influencing consumer online trust. TTP is not only one of the three factors that affect consumer trust intention, but also has a direct impact on the consumer’s final trust behaviour. This study argues that the majority of consumers are rational when shopping on the Internet. When they think about the trust behaviour to be performed, the analysis on trust intention will be the best way to examine their trust behaviour. In actual situation, however, consumers often can’t get the relevant information and resources what they require, so the use of TTP will produce the direct impact on the consumer trust behaviour. Analysis on the influence of TTP on the consumer online trust, as well as the impact of different service types of TTP upon the trust will help us understand consumer trust intention, and can give the reasonable explanation of the consumer trust behaviour.

The main opinions of the trust model and the influence of TTP are as follows:

1. The trust behaviour that is not completely controlled by individual will is not only affected by the trust intention, but also restricted by actual control conditions, opportunity and resources. In the condition of sufficient conditions of actual control, the trust intention directly determines the trust behaviour;
2. The TTP reflects the condition of actual control conditions, so it can be used to directly predict the possibility of trust behaviour occurrence (as the dashed line of the above figure 1 shows), and the accuracy of the prediction relies on the truthiness of the TTP;
3. The personal attitude, public opinion and TTP are the three main variables that determine the trust intention. The more positive the attitude is, the greater the support of the public opinion is and the stronger the TTP is, the greater the trust behavior control will be. Otherwise, the less.

**4. THE INFLUENCE OF TTP ON CONSUMERS’ ONLINE TRUST**

**4.1 Trust Problems**

In e-commerce, consumers’ online trust is represented by the interaction between consumers’ decision on engaging in the online transaction and the online retailers’ status of credit [17]. Consumers have two general types of decisional options for the online transaction: to accept or to reject. In terms of online retailers’ status of credit, there are two types: trustworthy or dishonest. Therefore, the interaction between these two parties creates four scenarios that determine the consumers’ online trust, as shown in Table 1. If an online retailer is trustworthy (dishonest) and the consumers agree (reject) to make transaction with it, then consumers’ online trust can be secured. From the consumers’ perspective, however, two types of exist in these four scenarios, namely credit obstacle and credit risk [19-21].

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<tr>
<th>Table 1. Interaction between consumers and online retailers</th>
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<td><strong>Online Retailers</strong></td>
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**Credit Obstacle** refers to ineffective transfer of online retailer’s credit information to consumers because of information blocking and not flowing. Due to the presence of credit obstacle, consumers are unable to have a necessary understanding of credit status of online retailer, causing their distrust of online retailer. Given that the e-commerce is characterized by virtuality, the credit obstacle is more obviously reflected in the e-commerce than in the traditional business [7, 16, 17]. In the B2C e-commerce market environment, there are a large number of online retailers available for choice, the transaction process is uncontrollable, the shopping experience is highly virtual and randomized transactions greatly increase. These problems lead to the situation that consumers are often cautious in the process of online transactions and lack of trust in online retailers. Therefore, credit obstacle result in consumers’ reject of potential transactions even in the face of trustworthy enterprises.

The specific manifestation of credit obstacle in the e-commerce market is as follows: though e-commerce enterprises adopt the
business strategy of honesty and trustworthiness, yet it is still difficult to attract potential consumers. This is because the trustworthy information of the enterprise can't be passed on to consumers effectively, and consumers can't use the reliable and efficient information to reduce their risk feelings. The credit obstacle greatly affects the consumer’s trust for the target online retailer, thus impeding the potential transaction of consumers. In order to effectively solve such trust problem, we need TTP to deliver the characteristic that the enterprise is trustworthy, and to promote consumer’s understanding of enterprise credit information. Only through such TTP can we effectively promote the potential consumers for building trust relationship with enterprises, so as to effectively increasing the potential trading volume.

Credit Risk refers to the risk of inflicting losses to consumers because online retailer adopts the strategy of dishonesty. In an e-commerce environment, the credit information of related online retailer in the hand of consumers is asymmetric. With only limited resources and capabilities, consumers cannot have enough time, money and resources to gain a comprehensive and detailed understanding of the online retailer’s credit information, so they are always at great risk during online transactions. Once an untrustworthy online retailer emerges, since there is no negative information disclosure on the market, consumers are faced with the potential risk in the transaction.

The specific manifestation of credit risk in the e-commerce market is as follows: e-commerce enterprises adopt the business strategy of fraud and failing to keep faith, but since consumers have no the information about the enterprise failing to keep faith, thus making consumers face the problem of trading risk. Due to the existence of credit risk, consumers not only face the risk of trading failure, but also have the personal financial loss. Main cause of such problem is that consumers lack the reliable means of knowing the enterprise credit, and the root of the problem is that the credit information of the enterprise is asymmetric. To solve the trust problem, the effective TTP can make the enterprise credit information public for restraining and standardizing enterprise behaviour, thus reducing the credit risk faced by consumers. Only through such TTP can we effectively avoid the fraud faced by consumers and reduce the speculative behaviour of not keeping faith adopted by the enterprise for gaining the interests.

In summary, credit obstacle and credit risk interact and constitute the main bottleneck of the further development consumers’ online trust. To solve the two kinds of trust problems, the e-commerce market needs TTP to transmit both transaction parties’ credit information, punish the fraud behaviour and certify the subjects that are trustworthy in the market.

4.2 Function of TTP

Through above analysis, it is found that TTP can effectively solve the two kinds of trust problems in front of consumers, which are solvable by two different functions of TTPs [17]. The main function of TTP is to improve the credit of the online retailers who conduct online transactions and ensure credit transactions and reduce discredit transactions. The establishment mechanism of credit is realized through the following functions: the first one is transmission function of credit information; the second one is credit publicity, namely punishment and screening function. Based on this, the TTP plays an important role in improving the credit and confidence of the whole virtual market and establishing the e-commerce credit.

4.2.1 Transmission of Credit Information

TTP have the information transfer function, it can promote the flow of credit information among consumers and online retailers so that consumers may have a more comprehensive understanding of credit status of online retailers before the potential transaction [17]. Consumers of online transactions can easily establish the trust relationship through the credit information transfer function of TTPs. In an e-commerce environment, the transaction parties have limited information of each other, so it is not easy to establish a trust relationship. Therefore, both parties of a transaction need a third party for match-making and contribute to the establishment of credit relations between them.

As shown in Figure 2, in case of the presence of TTP, the credit information of online retailers of the online transaction flow through consumers and online retailers and eventually achieves the credit information transfer [17]. Consumers’ trust in online retailers strange to them is built on the basis of their trust in TTP. Due to TTP’s trust and authentication of online retailers and consumers’ acceptance of such TTP, the chain relationship transfers the consumer trust to online retailers and finally establishes their trust in online retailers.

![Figure 2. Transmission of credit information](image)

The above analysis indicates that the TTP can overcome credit obstacles caused by relatively closed credit information, so consumers do not have to be too cautious as before and do not have to reduce the probability of being defrauded even by refusing some faithful transactions sometimes as before. It can change the current condition of low credit and confidence generally shown by the online transaction subjects and increase the volume of online transactions.

4.2.2 Publicity of Credit Information

The second function of TTP is to restrain and regulate the actions of online retailers on the Internet through information publicity of enterprise credit so as to achieve the aim of screening the online retailers. With the credit publicity mechanism of the TTP, credit status of the online retailers becomes the public information of the society and is subject to social supervision [11, 22]. In fact, this exerts pressure on the online retailers and increases the cost of frauds or breaches of contract so that the online retailers cannot only give consideration to short-term actions. Because if any fraud or breach of contract is recorded and made public by the TTP, these records will become the basis on which the public evaluates the credit status of the online retailer, and the online retailer is divided into different credit ratings as well. For online retailers with bad conducts, their consumers will gradually diminish until these online retailers are eliminated from the market completely. In view of this supervision mechanism, the online retailers will cherish their reputation and regard the reputation as the most valuable capital to operate, and the credit consciousness of whole virtual market will be improved correspondingly. The above analysis indicates that the TTP can overcome credit risks caused by information asymmetry.
4.3 Service Type of TTP

There are a few researches that have been done on TTP, and most of them only propose and prove the role of TTP in building the trust relationship and their effect on the trust behaviour. For example, present studies show that TTP certification can enhance the consumer trust in online retailers [23]; privacy protection can effectively reduce the distrust of consumers [24]; and secure and reliable third party payment may effectively increase the potential transaction quantity of consumers [25].

Building upon prior studies [17], this paper proposes that the service of TTP should include the following five aspects: Payment Services, Logistics and Distribution Services, Guarantee and Insurance Services, Certification Services, and Rating and Recommendation Services.

- **Payment Services** refer to specific entities to deal with financial operations of online transaction counterparts, mainly including banks, credit card organizations, third-party payment institutions and other financial institutions. Through such institutions, consumers’ concerns about payment security, payment information disclosure and transaction information alteration can be effectively alleviated, thus strengthening their controllability of related payment information, enhancing the consumer trust intention and ultimately influencing the consumer trust behaviour.

- **Logistics and Distribution Services** refer to enterprises which are responsible for logistics and distribution of online transactions, mainly inclusive of the postal logistics system and third-party logistics enterprises etc. Logistics and distribution organizations are intermediaries between consumers and dealers. Their service quality, credit status and reputation will influence the consumers’ trust intention.

- **Guarantee and Insurance Services** mean the companies offering online transaction security and insurance services, mainly including financial enterprises which provide compensation for the transportation process and damage and replacement of goods. The guarantee and compensation provided by TTP for online transactions can effectively transfer risks in the online shopping environment and thus increasing consumers’ trust in potential transaction behaviour.

- **Certification Services** refer to third parties for all kinds of quality certifications to certify enterprise security, privacy and service, mainly including various service and quality certification bodies, accreditation bodies and some law, accounting and auditing firms. These bodies can provide reliable, clear and useful information consultation and authentication services for consumers and effectively improve the transparency of credit information in the e-commerce environment, so as to avoid credit risk.

- **Rating and Recommendation Services** are a kind of organizations independently providing relevant product testing and company evaluation, mainly including professional product use and testing companies, industry associations, company rating and recommendation agencies. Consumers may browse their independent evaluation information to gain understanding of products, services and online retailers, and therefore effectively remove the credit barriers and enhance the potential trust behaviour.

5. DATA COLLECTION AND ANALYSIS

This study mainly uses two research design methods: exploratory research design and descriptive research design.

In the first phase of the study, through the exploratory research design, we offer precise definitions of the research questions, determine the action plan for future studies, propose appropriate research hypotheses and further define the future research focuses. In this phase, the study obtains a lot of needed unstructured data by qualitative analysis of second-hand data, and review of related academic literature. Through the qualitative analysis of these data, we offer the ideas and understanding of the the influence and service of TTP on consumers’ online trust.

In the second phase, this study achieves the detailed description of service type of TTP by the descriptive research design and describes the effects and functions of TTP on consumers’ online trust. In order to understand the effects and functions of TTP in the e-commerce environment, this study selects 100 Australian B2C enterprises from the Orbis database by the simple random sampling method to constitute the sample pool. Through qualitative analysis of information about related enterprises in the sample pool and the in-depth mining of other second-hand data, the present study summarizes the current development status of TTP in Australia, as well as the different types of services of these TTP and elaborates the functions and roles played by TTP.

- **Payment Service**

The e-commerce in the Australia mainly adopts the following online payment methods: credit card or debit card, Paypal, cheques, electronic bill and direct deposit. Figure 3 shows the proportion of different payment methods in the e-commerce transaction activities.

![Figure 3. Online payment method](image)

- **Logistics Service**

Logistics and distribution services is an integral part of consumers’ online shopping activities. In our statistical results, three companies have their own logistics and distribution systems. Except these three companies, all other companies use third-party logistics companies, as shown in Figure 4 below. 80% of the e-business enterprises do not provide options for logistics services, but each of them has a predetermined third-party logistics company. For the remaining 20% of e-business enterprises, consumers can choose among optional logistics services delivered at different speeds, ranging from standard speed to extremely fast speed. Of course, different delivery speeds correspond to different
charges. We believe that if an e-business enterprise chooses as its partner a logistics company which has very good reputation, this is conducive to increasing consumers’ trust in such enterprise. This is because the trust transfer function of the third party passes consumers’ trust in the logistics company to the targeted enterprise. However, further research is needed for efficiency and degree of such transfer.

Meanwhile about 1/3 of companies claim that they have the SSL certificate, an enterprise can show consumers its partial attributes in security, privacy protection and SSL certificate etc. By selectively adopting different certification services, an enterprise can show consumers its partial attributes worthy of being trusted. In our studied samples, all enterprises use the SSL certificate to protect the security of personal data in the process of online transaction between consumers and online retailers. Meanwhile about 1/3 of companies claim that they have utilized some kind of safety certification to guarantee that the online shopping environment of consumers is secure and reliable. In addition, we also find that all enterprises have their respective privacy protection policies, which disclose the method of use and storage of consumers’ personal information and their corresponding rights and obligations in detail. Among existing samples, no enterprise has introduced the third-party privacy certification. These are also important issues to be researched in future, namely whether consumers are satisfactory with the current privacy protection strategies and whether an independent TTP is needed to regulate and certify the privacy of personal data. Finally, by comparing large and small enterprises, an interesting phenomenon is found that smaller enterprises are more inclined to using certification services. This means the certification service plays a significant role in promoting the level of trust in small and medium enterprises.

• **Rating & Recommendation Service**

Rating and recommendation service has not been widely used in our samples. From the comprehensive point of view, only less than one fifth of enterprises use this type of TTPs, but such service is widely used among financial enterprises. For example, when introducing a credit card product, the target company will claim that the product is an award winner of a particular year in a certain field. In our opinion, the reason why the rating service is concentrated in certain types of sales companies is that such products or services share a high degree of similarity, and consumers do not possess the ability to compare and distinguish products. In this case, consumers need a competent professional institution or organization to recommend the appropriate information. In the recommendation and publicity process, the more creditworthy the TTP is, it has the stronger professional competence, and its opinions are more acceptable by the most of consumers.

6. **Discussion and Limitations**

6.1 **Research Result and Discussions**

The descriptive statistics of Australian B2C market supports our theoretical reasoning of the functions and services provided by TTP. Thus, several implications can be made to scholars and practitioners.

First, we concur that TTP services can enhance the consumer trust in the online shopping environment and further strengthen the potential trust behaviour of consumers. However, we propose that the TTP services are presented to consumers in diversity instead of by a single service type. Different types of services provided by TTP aim at solving different kinds of problems faced by enterprises and influence consumers’ perception of trust from different aspects. For different trust needs of consumers, enterprises should use different types of trusted third party services. Five types of services are put forward in this study, including payment, logistics, insurance, certification and recommendation. Through analysis of data in the sample pool, the results effectively authenticate the five different types of services. Among them, 28.9% of TTP provide payment services, 23.6% provide logistics services, 18.4% provide insurance services, 18.4% provide certification services, and 10.5% provide recommendation services.

Second, we found that an enterprise usually selects not just one type of TTP services, but different types of services together to enhance the level of consumer trust. We also found that the TTP with diversity and different service types has better effect than a single type of TTP to promote consumers’ trust behaviour. The data shows that 7% of enterprises choose all types of TTP services and 55% of enterprises choose four or more types of different services. It should be noted that 100% of enterprises make use of at least three different types of TTP services. The data demonstrates that different types of TTP services are independent from each other in use and they influence consumers’ trust behaviour by different ways. It is further pointed out that when

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**Figure 4. Logistics and distribution service**

- **Guarantee & Insurance Service**

Guarantee and insurance services are mainly provided various financial companies. In our samples two types of security services are offered: first, extension of the product warranty period, and second, compensation of damage and loss incurred for goods in transit. Among our samples, the retailers of all electronic digital products and home appliances provide the option of extending warranty. Meanwhile, only less than 10% of enterprises offer the transportation insurance for choice of consumers. Here it needs to be noted that, all guarantee and insurance services need additional payment from consumers, and the payment amount is determined by the type, value and insurance period of products bought by consumers. TTPs offering security and insurance services are actually learned from the experience on the financial market because such TTPs can effectively transfer risks faced by consumers and boost their trust in potential transactions. How heavy the financial burden can be borne by consumers in the face of such additional expenses is an important issue for future research.

- **Certification Service**

Certification service primary provides the certification of retailer qualification, online environment security, privacy protection and SSL certificate etc. By selectively adopting different certification services, an enterprise can show consumers its partial attributes worthy of being trusted. In our studied samples, all enterprises use the SSL certificate to protect the security of personal data in the process of online transaction between consumers and online retailers. Meanwhile about 1/3 of companies claim that they have utilized some kind of safety certification to guarantee that the online shopping environment of consumers is secure and reliable. In addition, we also find that all enterprises have their respective privacy protection policies, which disclose the method of use and storage of consumers’ personal information and their corresponding rights and obligations in detail. Among existing samples, no enterprise has introduced the third-party privacy certification. These are also important issues to be researched in future.
enterprises choose TTP, they distinguish them by the TTP service types and widely choose different types of services to achieve the enhancement of consumers’ trust in enterprises to the maximum extent.

Third, we find that the TTP chosen by different types of enterprises have different characteristics. For example, big difference exists between services of TTP selected by financial service enterprises and those selected by tourism and air ticket sale enterprises. Such difference is not only reflected in different types of services from TTP chosen by these enterprises, and also different institutions or organizations providing the TTP services. The difference is also shown in e-commerce enterprises of different sizes. For instance, small enterprises generally use more types and number of TTP services than large enterprises.

Fourth, we believe that TTP have the function of credit information transmission in the trust model. Since TTP can effectively transmit related credit information of an enterprise between the certified enterprise and consumer, it effectively promotes consumers’ recognition and understanding of the enterprise. With the credit information transmission function provided by TTP, enterprises may solve the credit obstacle problem in the e-commerce environment and enhance consumers' trust intention.

Fifth, we think that TTP have the function of credit information publicity in the trust model. By publicity of the enterprise credit information, an enterprise’s behaviour may be restricted and regulated to reduce the speculative action of relevant stakeholders. Meanwhile, the credit information disclosed by TTP can effectively solve the credit risk problem faced by consumers, be helpful for creating a good online shopping environment and promote consumers’ trust behaviour.

Table 2. Summary of trust problems and the related TTP functions and services for addressing the trust problems

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<tr>
<th>Trust Problems</th>
<th>TTP Functions</th>
<th>TTP Services</th>
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<td>Credit Obstacle</td>
<td>Credit Transmission</td>
<td>Payment</td>
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<td>Logistics &amp; Distribution</td>
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<td>Certification</td>
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<td>Credit Risk</td>
<td>Credit Publicity</td>
<td>Rating &amp; Recommendation</td>
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Anchoring on the analysis of the current TTP function and services, we create a sequential model to summarize the influence of TTP on consumers’ online trust.

1. Applying the service of TTP

In this step, e-commerce enterprises make an analysis of the number of website visits and sales volume to see if there are problems and whether they are caused by the enterprise’s trustworthiness. If so, a TTP service is chosen to improve its trustworthiness according to the actual situations of e-commerce enterprises and the online shopping environment. And also, a decision must be made on the TTP service(s) of which TTP or the combination of several service types of TTPs are chosen.

2. Building up the online trust

Applying the service of TTP will enhance the consumer trust and loyalty to an e-commerce enterprise, thus improving its trustworthiness, namely increase of consumers’ trust in the online shopping environment.

3. Increasing online sales

Increase of consumers’ trust in the online shopping environment will have an impact on its transaction volume. Trust of consumers in e-commerce enterprise is a principal factor affecting the consumer behaviour because it affects the consumer attitude towards the e-commerce enterprise and its products, further the intention to buy and finally the consumer behaviours.

4. Raising the trust level of TTP

A TTP enhances both the customer trust in enterprise and its own level of trust. Because of different sizes, market positions and services type of TTPs, they have different levels of enhancement of trust in the enterprise applied with the TTP. If a consumer buys products or services from such website of enterprise and feels satisfied, he/she will believe that the TTP is trustworthy, thereby increasing its level of trust.

5. Increasing use of TTP

From the perspective of e-commerce enterprises, if the use of TTP increases their sales volume and consumer loyalty, they will be further used and attract other e-commerce enterprises, to resolve the sales difficulty caused by a low level online trust and increase the use services of TTP.

6.2 Limitation and Future Studies

Similar to other studies, there are several limitations in this paper that worth for investigation in future studies.

By way of the qualitative research, this paper builds a multifunctional and multiservice structure of TTP, but the variables and influencing factors in the TTP must be authenticated by a quantitative research. Also, the functions and roles of TTPs in the trust model need to be further examined and verified in the practical e-commerce environment.

Consumer trust is a dynamic process including the establishment, development and disappearance of trust. Differences exist in the influence of TTPs on consumers’ trust motivation and behaviour at different stages. Therefore, the entire evolving process of trust must be investigated systematically from the perspective of time.

This paper only did some research in Australia’s B2C environment. Meanwhile, the differences of culture and economy development degree of different countries and regions may cause different impacts on online trust of consumers. This is also worthy to be further analysed.

7. Conclusion

To improve the consumer trust of online shopping, it is far from enough to rely on the retailers’ efforts. We should draw the support from the TTP. These institutions functions are of different emphases, but generally they are for strengthening the consumer trust of online shopping. Once the retailer or their website that files an application reaches the requirements of these institutions, the TTP will allow the retailer’s website to add its own logo to convey a message to the consumers: this retailer or its website is certified by a certain authority and there is no worry to go shopping here. Meanwhile, these institutions will regularly or
irregularly publish evaluation reports and publish the names of the honest retailers and the websites. Obviously, the exist of these TTPs can greatly purify the overall market environment of online shopping and improve the overall level of consumer trust of online shopping.

Through the analysis of Australia’s B2C market, this study proposes a multifunctional and multiservice structure of TTP and unveils different influences of different types of TTPs’ service on consumers trust attitude and behaviours. The study also reveals the two important functions of TTP in the establishment and maintenance of a trust relationship: first, transfer of credit information and second, publicity of credit information. Meanwhile, this study concludes that TTP can effectively solve the two trust problems (namely, credit obstacle and credit risk) during the decision-making of consumer trust behaviour, which are solvable by two different functions of TTP. Finally, the paper also points out that a complete multiservice structure of TTPs should include the following five aspects: payment services, logistics and distribution services, guarantee and insurance services, certification services, and rating and recommendation services. This study is the exploratory research, and the conclusions can enrich the online trust theory and the consumer behaviour theories to some extent and help to understand the development of TTPs in Australian B2C e-commerce market. Of course, this study also has many deficiencies that need to be improved in further studies.

8. ACKNOWLEDGMENTS
This study was supported by scholarship of the China Scholarship Council, all support is gratefully acknowledged.

9. REFERENCES