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Power in Third-Party Logistics

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ABSTRACT

The aim of acquiring competitive advantage by concentrating on core activities and outsourcing non-core activities has increased the demand for third-party logistics services. Therefore, the relationship between the third-party logistics providers and customers is important. This study examined the role of switching costs in the relationship between third- party logistics customers and providers, and the effects of power exercised by third-party logistics providers over third-party logistics customers on trust and commitment in the UK. An analysis of 192 completed questionnaires showed that switching costs had a negative relationship with coercive power and a non-significant relationship with legitimate power. Switching costs were positively correlated with non-coercive power (information, referent, expert and reward power). There was a significant negative correlation between coercive power and normative commitment, whereas coercive power had a non-significant correlation with instrumental commitment. The effect of coercive power on trust was negative, but non- coercive power was positively correlated with trust. Non-coercive power (information, referent, expert and reward power) was positively related to both normative and instrumental commitment.

Keywords: *coercive power, commitment, non-coercive power, third-party logistics, trust*

1. INTRODUCTION

Today's companies are eager to gain competitive advantage, meaning they tend to focus on their core activities and outsource non-core activities (Asian and Nie, 2014). Companies are focusing on their core competencies and outsourcing is becoming increasingly prevalent (Gyarmathy *et al*., 2020). Outsourcing decisions are not different from other strategic business decisions in that they are subject to the rules of cost benefit analysis (Gurtu *et al.*, 2019). So, engaging third-party logistics (3PL) providers, which is a fast-growing sector, leads to many advantages such as increased flexibility, improved performance, and reduced costs (Aguezzoul, 2014; Li *et al.*, 2018). Therefore, 3PL providers help 3PL customers create competitive advantages, focus on their activities and support other operations (Li *et al.*, 2012) and as increased emphasis on evaluating business partners is a result of the growth of outsourcing (Khan *et al.*, 2019).

A lock-in situation refers to a situation in which a buyer is dependent on a single supplier for a specific service, and that buyer is unable to move to another provider without substantial costs (switching costs) (Farrell and Klemperer, 2007). When there are high switching costs, a buyer is inclined to maintain their existing relationship rather than bear more costs from switching to another provider. Switching costs include both monetary and non-monetary costs incurred when switching to another supplier (Wang, 2010), and encompass the time, effort and hassle resulting from switching to a new supplier (Gee *et al*., 2008). When switching costs increase, dissatisfied buyers may be unwilling to maintain their relationship with their existing supplier (Yang and Peterson, 2004), but must keep this relationship, thereby displaying spurious loyalty to that supplier (Nam, 2011). It is reasonable to anticipate that B2B switching costs will be more significant than B2C switching costs since buying decisions in a B2B environment are more complex than those in a B2C environment (Blut *et al*., 2015), As switching costs, which are frequently seen negatively by customers, maintain customers in the relationship since they must (Gremler *et al*.,2019). Hence, Customers may find it difficult to switch to other suppliers because of switching costs (Samudro *et al*., 2019) and uneasy for customers to change the service provider (Han, *et al*., 2020).

Power refers to one party's ability to affect the attitudes and behaviours of other partners (Narasiman *et al*., 2009; Wang *et al*., 2015). Power in B2B context is defined as "one party is recognized as being more influential and able to exercise control over the other party" (Siemieniako and Mitrega, 2018, p. 91). Various scholars and authors have different views regarding the classification of power. There are also different categories of sources of power that reflect coercive or non-coercive power (Bazayar *et al*., 2013; Chang and Huang, 2011), mediated and non-mediated power (Nygaard and Biong, 2010; Zhao *et al*., 2008), economic and non-economic power (Etgar, 1978), direct and non-direct power (Frazier and Summers, 1984), or authoritative and nurturing power (Johnson *et al*., 1993). Among these different classifications of power, the dominant view adopted by many authors conceptualizes power as coercive and non-coercive (Chang and Huang, 2011; Hunt and Nevin, 1974; Lusch and Brown, 1982; Wang *et al*., 2015). Coercive power is power that motivates one partner to take actions to meet another partner's requirements (Ireland and Webb, 2007). In contrast, non- coercive power is used when one partner strives to achieve its goals by providing other partners with suggestions and expertise (Bazyar *et al*., 2013).

Chen *et al.* (2016) stated that the exchange partner's dependence is reflected in the supply chain (Carr *et al*., 2008; Emerson, 1962). A partner's 'choice' is whether to exert

power to affect other partners' behavior (Handley and Benton, 2012a; Yeung *et al*., 2009).

Dependence of one partner on another to maintain a relationship and accomplish goals is defined as dependence (Emerson, 1962). Dependence also refers to when one partner's goals are facilitated and achieved by the actions of another partner (Zhang and Huo, 2013). Use of power by a partner is therefore influenced by the degree of dependence (Chen *et al*., 2016), as power is derived from dependence (Emerson, 1962) and the partner's need for resources (Pfeffer and Salancik, 1978). The dependence power theory states that a powerful partner can exert power over another partner if that partner is dependent on the powerful party (Frazier *et al*., 1989). However, studies on the antecedents of power are lacking and there is a need for further research on power, including the antecedents of power (Huo *et al*., 2019).

A situation where a trustor depends on a trustee's acts and thinks they are as expected is referred to as a trust. (Pentina *et al*., 2013). The trustor also has levels of expectations of a trustee. Trust starts building gradually during exchanges as the trustors decide if they can rely on the trustee (Doney and Cannon, 1997). The role of trust is important in the seller-buyer relationship because mutual trust is expected to build a strong relationship and avoid termination of that relationship, even if the relationship changes from benefit-based dependence to cost-based dependence (Johnsen and Lacoste, 2016). The use of power and exploitation of a partner may deteriorate trust between partners, which may harm the relationship (Cowan *et al*., 2015). Conversely, the development of trust and commitment may reduce power asymmetry between seller and buyer (Das and Kasturi, 2004; Kumar *et al*., 1995). In situations where there is power asymmetry, trust will be destroyed if the powerful partner acts irresponsibly and uses coercive power (Johnsen and Lacoste, 2016). Kähkönen (2014) stated that if one party uses power to dominate the other party, trust between the two parties will be decreased. Caniels and Gelderman (2007) observed that trust and commitment were likely to reduce risk resulting from dependence. Their findings suggested that a buyer may not mind being dependent on a supplier if the partnership is satisfactory and represents benefit-based dependence. Johnsen and Lacoste (2016) stated that dependence was seen as positive if there was mutual trust between seller and buyer but was perceived as negative if there were low levels of trust and high switching costs.

Since supply chain partners are willing to commit their resources and give short-term gains for long-term success, commitment is a crucial factor in success over the long term. If both parties experience mutually beneficial benefits because of such commitment, organizations create and maintain long-term relationships (Setyawan *et al*.,2019). Therefore, Commitment reflects the success of an inter-firm relationship (Mavondo and Rodrigo, 2001). A high- quality relationship is commonly described as involving high-level commitment that fosters relationships between the partners (Morgan and Hunt, 1994; Lai *et al*., 2013). In addition, commitment in inter-firm cooperation supports exchanges and Curbs opportunism (Zhao *et al*., 2008). Commitment to the business relationship and trust in the partner are therefore the most important constructs in a relationship. The presence of these constructs in any exchange relationship means that the partners are eager to engage in the relationship. The two constructs also play a major role in building and developing good inter-organizational relationships (Anderson and Narus, 1990; Liu *et al*., 2008). Researchers have increasingly focused on constructs that are appropriate for a relationship approach, like cooperation and communication, with trust and commitment considered essential constructs (Morgan and Hunt, 1994). However, the area of power bases and commitment merits further consideration (Hopkinson and Blois, 2014), especially as studies on dependence and trust/commitment are lacking (Johnsen and Lacoste, 2016).

This study investigated the effects of power exerted by 3PL providers over 3PL customers because of dependence on trust and commitment from the perspective of 3PL customers in a business-to-business (B2B) setting in the UK. This study contributes to the relevant literature by extending knowledge of dependence as an antecedent to the use of power and re- examining associations among these constructs. By examining how dependence 'pushes' a seller (3PL provider) to exercise power over a buyer (3PL customer), this study also enriches understanding of dependence-power relationships and the consequences of exercised power, namely trust and commitment.

2. THEORETICAL BACKGROUND

A unique study was conducted by Soh *et al*. (2015) to investigate factors that affected customer loyalty to 3PL providers, including logistics service quality (LSQ) and customer satisfaction. They examined the moderating role of switching costs in the link between satisfaction and loyalty and confirmed that the presence of switching costs in the relationship between 3PL customers and providers obliged customers to stay in their relationship with the existing provider. This is because the 3PL customer is unwilling to bear more switching costs to change providers. Satisfaction with the 3PL provider's services would be decreased because of the high switching costs, indicating that the 3PL customers would want to stay 'loyal' to their current 3PL provider (i.e., spurious loyalty). As a result, the presence of switching costs demonstrated the existence of spurious loyalty.

Scheer *et al*. (2015, p.697) defined switching costs as 'the need to maintain a relationship with a specific partner because of the unrealized costs that would be incurred if the relationship ended'. In a previous study, Scheer *et al*. (2010) split dependence into benefit- based dependence and cost-based dependence. Benefit-based dependence stems from a party's need to stay in an existing relationship for benefits such as value, sales and resource access. Cost-based dependence takes place when a party needs to remain in an existing relationship to avoid any costs (e.g., replacement and disengagement costs) in changing to a new party. Scheer *et al*. (2015, p.697) stated that benefit-based dependence included relationship value dependence, which referred to 'a party's need to maintain its relationship with an exchange partner because of the irreplaceable, unique value that would be forfeited if that relationship ended'. Padgett *et al*. (2020) also contended that in switching cost dependence, a customer would be switching cost-dependent on a provider if that customer realised a cost would be incurred if they terminated their existing relationship to establish a new relationship with another provider. Caniels and Roeleveld (2009) confirmed that organisational dependence arose from switching costs when the outsourcing firm (customer) was highly dependent

on a supplier if switching to an alternative supplier would be costly.

Emerson (1962) highlighted that power is derived from dependence. In this context, a major cause of power is asymmetric dependence between partners (Hingley *et al*., 2015). Five types of power have been identified based on the source of power (French and Raven, 1959): legitimate, referent, reward, expert, and coercive power. These types of power are commonly classified into coercive power and non-coercive power (Hunt and Nevin, 1974, Molm, 1997a; Yeung *et al*., 2009). When two business partners are in a dyadic relationship, these sources of power are frequently used to try to balance the power differential in the dyadic relationship (Siemieniako and Mitrega, 2018). Coercive power encompasses one party's attempt to exercise control over other parties through imposing sanctions and threats (Liu *et al*., 2010; Yeung *et al*., 2009). Non-coercive power includes legitimate, referent, reward and expert power and refers to one partner's attempt to encourage another partner to perform desired actions and adopt desired behaviours through enticing them through supportive activities and assistance (Liu *et al*., 2010). Soft powers that could be used in a non-coercive manner to help accomplish the desired results without harming the business relationship include legitimate, reward, referent, expert, and information (Siemieniako and Mitrega, 2018). Power sources are theoretically appropriate to investigate the relationships between buyers and sellers in the field of relationship marketing (Liu *et al*., 2018).

Relationship marketing places a strong emphasis on trust and commitment, which leads to satisfied business relationships (Grewal *et al*., 2015). Boström (2015) and Friend *et al*., (2018) suggested that trust plays a crucial role in the seller-buyer relationship. Because of the high degree of dependence in B2B relationships, the construct of trust is critical to both seller and buyer (Bruhn *et al*., 2014). Trustworthiness of counterparts is related to power asymmetry (Chen *et al*., 2016). In power asymmetry, the dependent partner is expected to have a lower level of trust because of the risk for opportunism, whereas the powerful partner may have a higher level of trust because of gains from the relationship (McEvily *et al*., 2017). This highlights the relationship between dependence and trust. When trust is high, a buyer would not perceive dependence as problematic, even if there was cost- based dependence. The buyer would therefore be more likely to stay in the relationship because of the perceived value (Hald *et al*., 2009). Abuse of power where power is used to dominate the other partner is considered a destructive force that decreases trust between parties and negatively affects collaboration in the seller-buyer relationship (Hingley, 2005). Terpend and Ashenbaum (2012) argued that power affected many constructs in industrial relationships, including trust and commitment. Kumar (2005) and Kumar and Sadarangani (2019) stated that the use of coercive power resulted in decreased trust and commitment; conversely, using non-coercive power enhanced trust (Hausman and Johnston, 2010; Kumar and Sadarangani, 2019). According to Jain *et al*., (2014), coercive power used by a supplier against a customer had a negative association with trust, while non-coercive power used by a supplier had a positive association with trust.

Brown *et al*. (1995) contended that the two types of commitment are normative and instrumental commitment. Since then, scholars have considered normative and instrumental commitment when investigating the concept of commitment in the context of the base of power (Hopkinson and Blois, 2014; Zhang *et al*., 2020). In this study, normative commitment refers to 3PL customers' emotional attachment and values regarding maintaining long-term relationships with suppliers, namely 3PL providers (Wang *et al*., 2018; Zhao *et al*., 2011).

Instrumental commitment is defined as a 3PL customer's willingness to preserve a current relationship with a supplier because of the returns or remuneration coming from that relationship (Hausman and Johnston, 2010). Commitment is considered as an asset investment of commercial cooperation between customer and supplier (Heide, 1994). This asset investment strengthens the willingness for cooperation and curbs opportunism (Zhao *et al*., 2011). The investment may take both monetary and non-monetary forms. Offering the supplier 's specialised knowledge could count as a non-financial form of investment. It may also involve the exercise of legitimate power, in which case customers feel obligated to follow the supplier 's directions, or referent power, in which case customers take pride in associating with the supplier. The financial investment includes the reward power, in which customers receive a reward (Kumar and Sadarangani, 2019). Therefore, there is a strong correlation between power bases and commitment, which is expected to influence inter-firm relationships. Hopkinson and Blois (2014) confirmed that power bases affected commitment in different ways. Because coercive power influences the target's commitment, it causes a partner to comply with minimum standards. (Handley and Benton, 2012a). Flyn *et al*. (2008) identified that normative commitment and non- coercive power (expert, reward and referent power) have a positive association, and that coercive power and normative commitment have a negative relationship. Zhang *et al*. (2020) also reported that coercive power and normative commitment were inversely associated but found a weak link between coercive power and instrumental commitment. However, non- coercive power had positive relationships with both instrumental and normative commitment.

As noted, 3PL customers are dependent on 3PL providers because of switching costs, which allows a 3PL provider to exert power over a 3PL customer. However, the power exercised by3PL providers may affect customers' trust and commitment.

3. HYPOTHESIS DEVELOPMENT

3.1 Effects of Dependence on Coercive and Non-coercive Power

Dependence is significantly impacted by switching costs. A partner's investment of effort, time and money in a working relationship can contribute to dependence (Emerson, 1962; Scheer *et al*., 2015). In the context of switching costs, the more vulnerable partner who notices the power imbalance is the dependent partner; this partner becomes the weaker partner as they are unable to switch to another supplier because of dependence. The power differential is obvious in such situations (Glavee-Geo *et al*., 2021). Dependence allows the other partner to exercise power over the dependent partner (Chakrabarty *et al*., 2010),

and the more dependent a partner is the more likely they are to be subjected to power exercised by the other partner (Leonidou *et al*., 2014). If the dependent party is highly dependent on the other party, it is expected that the powerful party will exercise non-coercive power over the dependent party (Frazier and Rody, 1991). This is attributed to the fact that the dependent party will seek to comply with demands set by the more powerful party without resistance, because the relationship between the two parties is coordinated. In addition, the dependent party will perceive the other party as powerful when exercising non-coercive actions (Zhuang *et al*., 2010). However, when dependence decreases, the more powerful party is anticipated to exert coercive power to influence the dependent party's behaviour (Frazier *et al*., 1989; Kale, 1986). For example, Frazier and Rody (1991) reported that when dependence between a seller and a buyer was increased, non-coercive power increased, and coercive power decreased. Based on these findings, we proposed the following hypotheses.

High dependence of 3PL customers on 3PL providers is positively related to non-coercive power.

High dependence of 3PL customers on 3PL providers is negatively related to coercive power.

3.2 Effects of Coercive and Non-coercive Power on Trust

A supplier may exercise coercive power over a partner to gain that partner's compliance using punishments and threats (Kumar, 2005). This will negatively affect the relationship (Jain *et al*., 2014) and make the less powerful partner feel frustrated and vulnerable in the relationship (Leonidou *et al*., 2008). Coercive power exercised by a supplier over a partner may also be a signal of upcoming opportunistic actions. Therefore, the partner may hesitate to share information or invest in the relationship (Yeung *et al*., 2009). When a partner (customer) feels exploited by a supplier, they may believe the supplier is not credible and uninterested in their welfare and the dependent party does not trust in the relationship (Chung, 2012). Also, threats and sanctions increase uncertainty and risk, which can make customers distrustful since they prevent them from making a profit (Plouffe., *et al*., 2016).

Conversely, customers frequently view dependable providers as long-term partners since they perceive these suppliers to be trustworthy and reliable (Friend *et al*., 2018). Non-coercive power exercised by a supplier suggests that the supplier shares information and skills with the partner (Liu, 2010). When a supplier shares information with a partner, they demonstrate good intentions toward that partner (Doney and Cannon, 1997). Similarly, when a supplier shares expertise, the partner develops a belief that the supplier can fulfil promises and is therefore reliable (Doney and Cannon, 1997; Moorman *et al*., 1992). This will support the value of the relationship (Luo *et al*., 2011) and allow high degrees of consensus to be reached between parties (Leonidou *et al*., 2008; Ramaseshan *et al*., 2006). These advantageous effects can foster the supplier's credibility. In addition, positive actions such as rewards and assistance from the supplier are a sign of goodwill and support that lead to increased trust in the relationship (Hald *et al*., 2009). Based on these findings, we proposed the following hypotheses.

The greater the 3PL providers' use of coercive power, the lower the 3PL customers' trust in the 3PL provider.

The greater the 3PL's use of non-coercive power, the higher the 3PL customers' trust in the 3PL provider.

3.3 Effects of Coercive and Non-coercive Power on Commitment

Coercive power can encourage one partner to adopt specific behaviours to meet the other partner's requirements (Ireland and Webb, 2007). Coercive power results in unfavourable effects in the setting of normative commitment. (Chae *et al*., 2017). For example, a firm imposes sanctions to coordinate their relationship with a partner (target). In this way, the two partners' exchange appears to be a pure transaction rather than a mutually beneficial partnership. (John, 1984; Zhuang *et al*., 2010). Although coercive power plays a role in achieving the target's compliance, actions such as threats and sanctions undermine their intrinsic commitment (Handley and Benton, 2012b). Coercive power therefore does not support normative commitment (Hopkinson and Blois, 2014). However, coercive power may support instrumental commitment (Zhao *et al*., 2008). For the goal of obtaining returns, a firm typically controls the target's behaviour to assure compliance (Molm, 1997b), It suggests that the firm prioritises its own interests over the partnership with the partner. (Huo *et al*., 2019). In this context, the use of coercive power represents a condition to maintain interest- based relationships (Huo *et al*., 2017). With instrumental commitment, the target, customer, is more likely to be committed to the interest-based relationship and willing to maintain the relationship despite coercive power. This is because the relationship is profitable.

Therefore, we proposed the following hypothesis.

Coercive power exercised by 3PL providers over 3PL customers is negatively related to normative commitment and positively related to instrumental commitment.

Non-coercive power includes actions such as providing a partner with expertise and suggestions (Bazyar *et al*., 2013). These 'friendly' actions are a signal of the firm's expectations of building a cooperative relationship with a partner (Doney and Cannon, 1997). Therefore, using non-coercive power reflects the firm's intention to extend the effective relationship with a partner (Huo *et al*., 2019). Non-coercive power is thought of as affirmation given by a company to a partner that helps to keep the relationship going (Chae *et al*., 2017). However, when a company considers the cost of exercising non-coercive power, it may encourage the target to reap the benefits of the connection and uphold that relationship (Hausman and Johnston, 2010; Huo *et al*., 2019; Zhuang *et al*., 2010). In both normative and instrumental commitment, the target, customer, benefits from non-coercive power in the relationship and is therefore more likely to be committed to the relationship as long as the relationship remains beneficial.

Therefore, we proposed the following hypothesis.

Non-coercive power exercised by 3PL providers over 3PL customers is positively related to both normative commitment and instrumental commitment.

4. CONCEPTUAL FRAMEWORK

Figure 1 presents the conceptual framework for this study that describes the effects of power on trust and commitment. The conceptual model was based on a review of relevant literature. Dependence enables a partner to exert power over another party (Chakrabarty *et al*., 2010), as power is derived from dependence (Emerson, 1962). This means the antecedent of power is dependence, and the outcome of dependence is exercised power. In this study, 3PL providers exercised power over 3PL customers because of dependence, namely switching costs. The consequences of exercised power are trust and commitment (Leonidou *et al*., 2014). In the context of B2B relationships, Zhang *et al*. (2016) stated that marketing literature views dependence, trust, and commitment as critical constructs to re-evaluate relationships and factors influencing a successful relationship include power, trust, and commitment (Tokman *et al*., 2019).

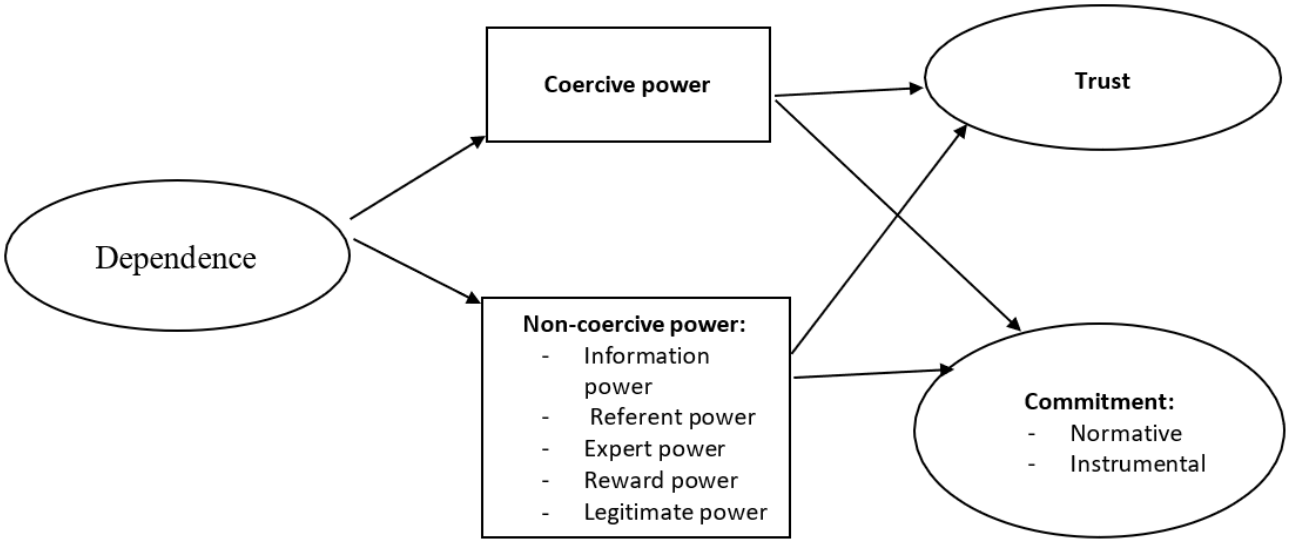

Figure 1 Conceptual framework

5. METHODS

5.1 Sampling and Data Collection

The survey instrument used in this study was designed based on the literature review. The items were adapted to suit a study of power in 3PL through discussion with experts and interviews with managers. The instrument was reviewed by academics with strong backgrounds in logistics and survey methodology and pilot-tested with 20 firms. Following feedback from these key informants, some items were reworded to ensure that they were closely related to the topic and could be easily understood by respondents.

The survey was sent the addresses to potential respondents (3PL customers), which were randomly chosen from the Amadeus electronic database (http://amadeus.bvdep.com/ip). A cover letter and self-addressed, stamped envelope are included to make it easier to return the completed questionnaires. In total, 1000 surveys were sent to companies operating in many industrial sectors in the UK. Logistics managers were the target of the survey because they were considered most likely to able to answer the survey questions. A total of 223 managers responded. However, 31 questionnaires were excluded because the respondents were not 3PL customers or had unusable responses. This left 192 completed questionnaires for analysis.

Most respondents were from logistics departments (73%), with 21% from marketing departments and the remainder (6%) from other departments. Therefore, as most (94%) respondents were logistics or marketing managers, the information collected by the survey was considered reliable. The largest number of respondents belonged to the food and beverages industry (68%), followed by the tobacco sector (18%).

5.2 Measures

The measurement scales used to evaluate dependence were adapted from Burnham *et al*. (2003) and Kumar *et al*. (1995), and those used to assess power (coercive and non-coercive power) were adapted from Brown *et al*. (1995). The construct of trust was measured using items adapted from Doney and Cannon (1997). Finally, normative, and instrumental commitment were measured with items adapted from Zhao *et al*. (2008). A five-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree") was used to ask respondents to rate their agreement with each survey question.

6. FINDINGS

The reliability and validity and analysis of the survey instruments are summarised in **Table 1**. The validity of the data was assessed by investigating the scale items' factor loadings on the corresponding constructs. All items had significant coefficient loadings at the 5% level and higher than 0.5. Therefore, the constructs used in this study were valid and there was a strong relationship between the observed indicators and their associated constructs. It should

be noted that the switching total costs to another comparable 3PL had the highest factor loading (0.844). This showed that this indicator was the most important contributor to the dependence variable.

The data reliability was examined through the Cronbach's alpha coefficient as well as the average variance extracted (AVE). An AVE value greater than 0.5 and a coefficient of Cronbach's alpha greater than 0.7 are defined to be reliable. The scales used in our survey were reliable as the alpha coefficients and AVE values were above their respective cut-off points. The composite reliability (CR) was also computed to assure the reliability of the estimation. All CR values were >0.7, indicating the scales in this survey were reliable.

Table 1 The survey instrument's validity and reliability results

Construct / Factor	Item	Factor Loading (*significant at 5% level)	Average Variance Extracted (AVE)	Composite Reliability(CR)	Cronbach'salpha
Dependence	DP1	0.604*	0.519	0.807	0.738
	DP2	0.613*			
	DP3	0.557*			
	DP4	0.844*			
Information Power	IP1	0.696*	0.512	0.838	0.810
	IP2	0.632*			
	IP3	0.836*			
	IP4	0.624*			
	IP5	0.619*			
Expert Power	EP1	0.696*	0.521	0.843	0.801
	EP2	0.564*			
	EP3	0.811*			
	EP4	0.687*			
	EP5	0.717*			
Referent Power	RfP1	0.610*	0.504	0.830	0.773
	RfP2	0.502*			
	RfP3	0.907*			
	RfP4	0.661*			
	RfP5	0.585*			
Legitimate Power	LP1	0.672*	0.506	0.835	0.807
	LP2	0.634*			
	LP3	0.690*			
	LP4	0.806*			
	LP5	0.591*			
Reward Power	RwP1	0.672*	0.502	0.831	0.793
	RwP2	0.483*			
	RwP3	0.820*			
	RwP4	0.694*			
	RwP5	0.647*			
Coercion Power	CP1	0.586*	0.532	0.847	0.840
	CP2	0.853*			
	CP3	0.856*			
	CP4	0.691*			
	CP5	0.615*			
Trust	TR1	0.855*	0.780	0.947	0.945
	TR2	0.907*			
	TR3	0.928*			
	TR4	0.877*			
	TR5	0.848*			
Normative Commitment	NC1	0.897*	0.805	0.925	0.925
	NC2	0.890*			
	NC3	0.905*			
InstrumentalCommitment	IC1	0.934*	0.835	0.938	0.938
	IC2	0.924*			
	IC3	0.882*			

The discriminant validity of the survey was also assessed by making comparison between the square root of AVE and the coefficient correlations. **Table 2** shows that the square roots of the AVE (see shaded values) were above the factor's respective correlation with all other factors. This showed good discriminant validity.

Table 2 Average score, standard deviation, and coefficient of correlation

Construct / Factor	Avg. score	Std. dev.	1	2	3	4	5	6	7	8	9	10
Dependence	3.341	0.735	*0.720*									
Information power	3.046	0.744	0.291	*0.715*								
Expert power	2.893	0.740	0.396	0.242	*0.714*							
Referent power	3.044	0.640	0.477	0.230	0.238	*0.710*						
Legitimate power	3.055	0.675	0.060	0.006	0.058	0.030	*0.712*					
Reward power	2.948	0.705	0.388	0.161	0.399	0.286	0.104	*0.708*				
Coercion power	3.016	0.710	−0.387	−0.274	−0.331	−0.339	−0.009	−0.246	*0.729*			
Trust	3.078	0.877	0.585	0.597	0.534	0.525	0.056	0.486	−0.552	*0.883*		
Normative commitment	3.382	0.803	0.633	0.447	0.539	0.672	0.112	0.629	−0.577	0.782	*0.897*	
Instrumental commitment	2.905	0.911	0.518	0.519	0.595	0.467	0.132	0.528	−0.348	0.725	0.710	*0.914*

Note: the elements on the diagonal (grey highlighted cells) are the square root of the average variance extracted value is (grey highlighted cells).

The research hypotheses were tested using structural equation modelling. The proposed model as shown in Figure 2, which included both direct and indirect effects, had a good fit with the observed data ($RMSEA$ = 0.118; $p > 0.05$; $SRMR$ = 0.106; TLI = 0.951; and CFI = 0.876). Table 3 and Figure 2 present the estimated standardised path coefficients. Dependence negatively affected coercive power ($\beta\hat{}$ = −0.373, $p < 0.001$) but positively affected information power ($\beta\hat{}$ = 0.294, $p < 0.001$), referent power ($\beta\hat{}$ = 0.415, $p <$ 0.001), expert power ($\beta\hat{}$ = 0.399, $p < 0.001$) and reward power ($\beta\hat{}$ = 0.372, $p < 0.001$). Therefore, H1a–H1e were supported. However, the hypothesis concerning the impact of dependence on legitimate power (H1f) was not supported as the estimated coefficient was insignificant at 5% level ($\beta\hat{}$ = 0.055, p = 0.406). These findings suggested that the impact of coercive power on trust was significant with negative association ($\hat{\beta}$ =−0.336, p = 0.003), whereas the impact of non-coercive power on trust was significant with positive association. Legitimate power was an exception showing a non-significant impact on trust. Therefore, H2a–H2e were supported but H2f was not supported. In addition, the impact of coercive power on normative commitment was significant with negative association ($\beta\hat{}$ = −0.277, $p < 0.001$) but insignificant on instrumental commitment ($\beta\hat{}$ = 0.005, p = 0.931). These results indicated that H3a was supported, but H3c was not supported. Legitimate power was the only non-coercive power that had non-significant associations with instrumental ($\beta\hat{}$ = 0.102, p = 0.083) and normative commitment ($\beta\hat{}$ = 0.060, p = 0.931). The remaining elements classified as non-coercive power had significant with positive associations with instrumental as well as normative commitment.

The coefficients of determination ($R2$) were evaluated to assess the goodness of the proposed model. The $R2$ for normative commitment was the highest (0.776), suggesting that 77.6% of the variability in normative commitment are well described by the proposed model. The lowest $R2$ was for legitimate power (0.004), suggesting that only 0.4% of the variability in instrumental commitment was explained by the proposed model.

Table 3 Results of the estimated path coefficients

Causal relationship	Unstandardized coefficient	Standardized coefficient	z-value	p-value
Hypothesis 1				
H1a: Dependence → Coercive power	−0.373	−0.387	−5.811	<0.001
H1b: Dependence → Information power	0.294	0.291	4.211	<0.001
H1c: Dependence → Referent power	0.415	0.477	7.519	<0.001
H1d: Dependence → Expert power	0.399	0.396	5.983	<0.001
H1e: Dependence → Reward power	0.372	0.388	5.838	<0.001
H1f: Dependence → Legitimate power	0.055	0.060	0.832	0.406
Hypothesis 2				
H2a: Coercive power → Trust	−0.297	−0.262	−5.982	<0.001
H2b: Information power → Trust	0.458	0.425	9.826	<0.001
H2c: Referent power → Trust	0.331	0.264	5.940	<0.001
H2d: Expert power → Trust	0.261	0.240	5.473	<0.001
H2e: Reward power → Trust	0.257	0.226	5.149	<0.001
H2f: Legitimate power → Trust	0.013	0.011	0.248	0.804
Hypothesis 3				
H3a: Coercive power → Normative commitment	−0.277	−0.269	−7.628	<0.001
H3b: Information power → Normative commitment	0.203	0.207	5.936	<0.001

Table 3 Results of the estimated path coefficients (con't)

Causal relationship	Unstandardized coefficient	Standardized coefficient	z-value	p-value
H3c: Referent power → Normative commitment	0.505	0.443	12.364	<0.001
H3d: Expert power → Normative commitment	0.190	0.192	5.434	<0.001
H3e: Reward power → Normative commitment	0.397	0.383	10.845	<0.001
H3f: Legitimate power → Normative commitment	0.060	0.056	1.623	0.105
Hypothesis 4				
H4a: Coercive power → Instrumental commitment	0.005	0.004	0.086	0.931
H4b: Information power → Instrumental commitment	0.415	0.362	7.660	<0.001
H4c: Referent power → Instrumental commitment	0.327	0.245	5.049	<0.001
H4d: Expert power → Instrumental commitment	0.433	0.374	7.811	<0.001
H4e: Reward power → Instrumental commitment	0.337	0.278	5.803	<0.001
H4f: Legitimate power → Instrumental commitment	0.102	0.080	1.732	0.083
Coefficient of determination (R^2)				
Coercive power	0.150			
Information power	0.085			
Referent power	0.227			
Expert power	0.157			
Reward power	0.151			
Legitimate power	0.004			
Trust	0.655			
Normative commitment	0.776			
Instrumental commitment	0.558			

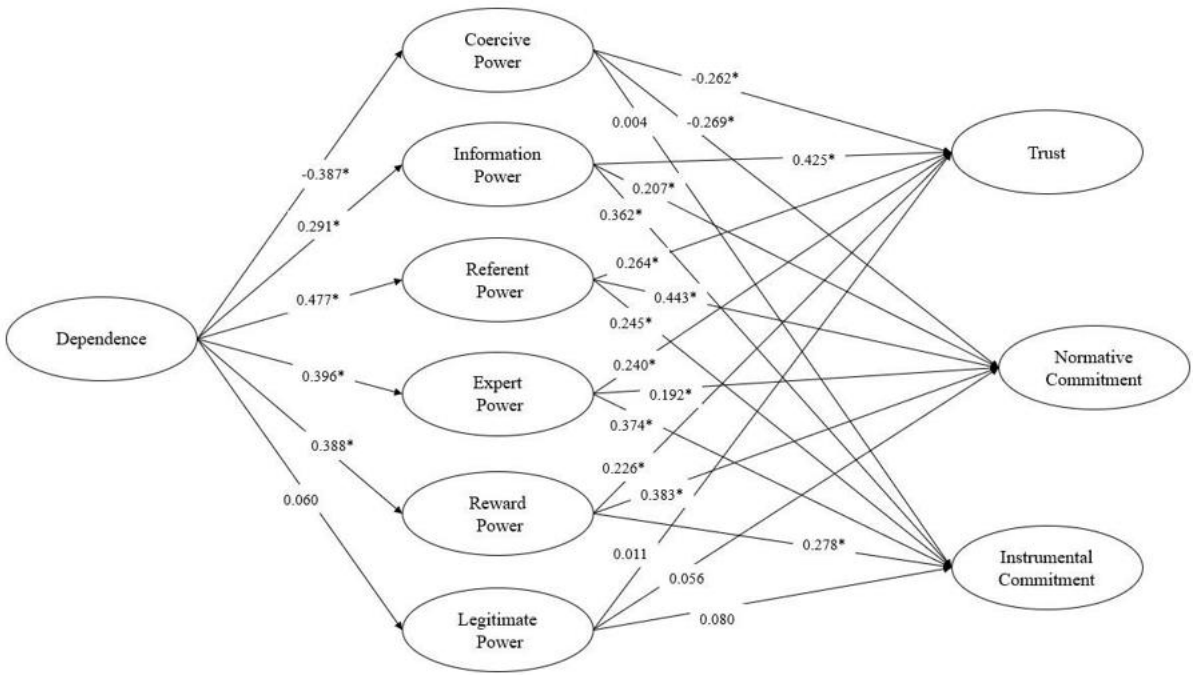

Figure 3 Standardized path coefficients for variables in the structural model

7. DISCUSSION

The present study revealed the role of switching costs when 3PL providers exercised power over 3PL customers. The exercised powers had clear impacts on trust and commitment. As predicted, expert, reward, information, and referent power were all positively correlated with dependence while coercive power was negatively correlated, which was consistent with Leonidou *et al*. (2014). This is because the more dependent a party is, the more likely they are to be subjected to non-coercive power exercised by the less dependent party. The more dependent party is also more likely to comply with conditions as the other party has power and does not need to use coercive power (Zhuang *et al*., 2010). On the other hand, as dependence decreases between

two business partners, coercive actions are expected to increase because the price of complying with such coercive actions is expected to be more costly for the dependent party (Payan and McFarland, 2005).

The current research revealed a significant inverse relationship between coercive power and normative commitment, whereas coercive power had a non-significant correlation with instrumental commitment. This supported the findings of Zhang *et al*. (2020) and partially supported those of Hopkinson and Blois (2014) and Zhao *et al*. (2008). Coercive power's adverse correlation with normative commitment is possibly explained by the fact that coercive power represents negative feedback to the dependent party (customer) from value- and emotional-oriented aspects (Chae *et al*., 2017). Conversely, a justification for why there is no correlation between coercive power and instrumental commitment may be that if a firm compares the value of returns coming from utilising coercive power and the costs resulting from sustaining the partnership, they may consider commitment to the working relationship a bad investment if the cost is greater than the return (Huo *et al*., 2017).

As expected, both normative and instrumental commitment were positively correlated with non-coercive power (information, referent, expert, and reward power). These results were consistent with results reported by Hausman and Johnston (2010) and Zhang *et al*. (2020). A crucial component needed for any firm to establish and retain cooperation is non-coercive power (Huo *et al*., 2019), and plays a crucial role in enhancing the similarity of values between the provider and customer. In addition, it supports the degree of attachment in the relationship (Zhang *et al*., 2020). Furthermore, non-coercive power increases the interests gained from commitment to a working relationship between the two parties. Kumar and Sadarangani (2019) confirmed that the supplier needs to be aware that the customers are aware of the distinctions between coercive and non-coercive power sources. So, rather than using only one power source, a supplier can combine several power sources to bring about the required changes in behaviour. For instance, a supplier can use a combination of expert, legitimate, and referent power to align the goals of its customers. These methods have a multiplier effect on the customers' commitment.

The present results demonstrated that a negative correlation between coercive power and trust, whereas non-coercive power had a positive correlation with trust. These findings were consistent with Jain *et al*. (2014) and Hausman and Johnston (2010). The use of non- coercive power sources strengthens the relationship between the customer and the supplier, whereas coercive power sources diminish trust. For instance, if a supplier wishes to inspire its customer, it can offer incentives or acknowledge the partners' contributions. Trust is strengthened as a result. However, to motivate the customer, the supplier may also use coercive power sources. Trust may be eroded because of this type of coercive power source use (Kumar and Sadarangani, 2019).

As shown, the effect of legitimate power on trust and commitment was non-significant. This may be because legitimate power includes some compulsion related to contract clauses and the provider's requests.

8. SUMMARY AND CONCLUSIONS

Power remains the core concept in the seller-buyer relationship. Power in this relationship plays a crucial role in the success or failure of the relationship. Therefore, power remains a 'hot' research topic. Power exercised by a powerful party over a weaker party arises from dependence, which is the source and the antecedent of power. At the same time, the outcomes of exercising power are trust and commitment. In this study, 3PL providers were able to exert power over 3PL customers because of the switching costs that represented dependence.

Dependence correlated positively with non-coercive power (reward, information, expert, and referent power), but not significantly with legitimate power. However, dependence had a negative correlation with coercive power strategies exercised by 3PL providers over 3PL customers. In addition, a 3PL provider exercising non-coercive power may increase trust, normative commitment, and instrumental commitment, whereas coercive power strategies exerted by the 3PL provider over the customer reduce trust and increase normative commitment. Coercive power and Instrumental commitment revealed no statistically significant link.

To our knowledge, this study is the first to shed light on power in 3PL from the perspective of dependence or switching costs. This study considered dependence as the major source of power. We measured dependence using questions related to time, effort, technological problems and cost. However, many previous studies did not consider the role of switching cost as a hindrance to customers leaving an existing relationship with a provider.

Furthermore, this study enriches our understanding of the consequences of power exercised by 3PL providers over 3PL customers. We found the consequences of exercising power were trust and commitment. Therefore, power may have an impact on how well 3PL customers and providers interact with one another through the constructs of trust and commitment.

Further research could consider the impact of power exercised by 3PL providers over 3PL customers because of switching costs dependence on satisfaction, opportunism, and conflict as outcomes. This will offer a comprehensive picture of the antecedents of power, power sources and the consequences of exercising power; namely, outcomes in the 3PL industry.

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APPENDIX

Table 4 Survey instruments

Item
DP1: My company as a 3PL customer would expend a lot of effort to switch from this 3PL provider to another
DP2: My company as a 3PL customer would take a lot of time to switch from this 3PL to another
DP3: If my company as a 3PL customer was about to switch to a new 3PL provider, some new technological problemswould arise
DP4: The total costs of switching to another comparable 3PL provider would be prohibitive for our company
IP1: The information our 3PL provider gave us made sense
IP2: Our 3PL provider often had more information than we did
IP3: Our 3PL provider convinced us that it made sense to follow their suggestions
IP4: Our 3PL provider knew more than we did about what needed to be done
IP5: We went along with what our 3PL provider wanted before because the information they provided was very convincing
EP1: We trusted our 3PL provider's judgement
EP2: Our 3PL provider's business expertise made them likely to suggest the proper thing to do
EP3: The people at our 3PL provider knew what they were doing
EP4: We usually got good advice from our 3PL provider
EP5: Our 3PL provider had specially trained people who really knew what had to be done
RfP1: We really admire the way our 3PL provider runs their business, so we try to follow their lead

Table 4 Survey instruments (con't)

Item
RfP2: We generally wanted to operate our dealership very similar to the way we thought our 3PL provider would
RfP3: We went along with 3PL provider's request because we wanted to earn the respect of our 3PL provider's personnel
RfP4: Our dealership did what our 3PL provider wanted because we have similar feelings about the way a business shouldbe run
RfP5: Because our dealership is proud to be affiliated with our 3PL provider, we often did what they asked
LP1: Our 3PL provider often pointed out a contract clause that made us feel obliged to do as asked
LP2: It was our duty to do as our 3PL provider requested
LP3: We had an obligation to do what our 3PL provider wanted, even though it wasn't a part of the contract
LP4: Since they were our 3PL provider, we accepted their recommendations
LP5: Our 3PL provider had a right to expect us to go along with their requests
RwP1: We believed that we could get some necessary help from our 3PL provider by agreeing to their requests
RwP2: If we didn't do as our 3PL provider asked, we wouldn't have received very good treatment from them
RwP3: We felt that by going along with our 3PL provider, we would have been favoured on some other occasions
RwP4: By going along with our 3PL provider's requests, we avoided some of the problems other dealers face
RwP5: Our 3PL provider often rewarded us last year got our dealership to go along with their wishes
CP1: Our 3PL provider's personnel would somehow get back at us if we didn't do as they asked and they would've foundout
CP2: Our 3PL provider often hinted that they would take certain actions that would reduce our profits if we didn't go alongwith their requests
CP3: Our 3PL provider might have withdrawn certain needed services from us if we didn't go along with them
CP4: If we didn't agree to their suggestions, our 3PL provider could have made things difficult for us
CP5: Our 3PL provider threatened to cancel, or refuse to renew, our contract if we didn't go along with them
TR1: This 3PL provider keeps promises it makes to our firm
TR2: This 3PL provider is always honest with us
TR3: This 3PL provider is genuinely concerned that our business succeeds
TR4: When making important decisions, this 3PL provider considers our welfare as well as its own
TR5: This 3PL provider is trustworthy
NC1: We feel that this 3PL provider views us as being an important team member rather than being just a customer
NC2: We are proud to tell others that we are a customer of this 3PL provider

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