



# The Role of Justice in Achieving Long-term Buyer-Supplier Relationship: The Case of Jordanian Manufacturing Sector

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## ABSTRACT

The purpose of this paper is to investigate the role of justice in buyer-supplier relationships in the Jordanian manufacturing sector. Questionnaires were collected from 202 buyers in Jordan. Multiple regression results indicate that most of the research hypotheses were not supported (distributive, procedural, and interpersonal), and only informational justice is supported. Based on these results, suppliers have to work with buyers to improve the perception of justice in order to build a long term buyer-supplier relationships. Opportunities for future empirical research are also identified.

**Keywords:** Justice (Fairness), Supply Chain Relationship, Jordan

**JEL Classification:** M1

## 1. INTRODUCTION

In an area of global competition, there is a need for organizations to operate effectively and efficiently in order to achieve the competitive advantage; one of the areas that have increased attention in last decades is supply chain relationships (SCRs) (Cadden et al., 2013). SCRs enhance competitiveness, reduce transaction costs, and improve firm's performance (Morgan and Hunt, 1994).

Among many influencing factors, fairness (or Justice) has been studied in organizational research as a foundation for social exchange, researchers have extended the concept and begun examine it in inter-organizational context such as strategic alliances and SCRs (Huo et al., 2016; Duffy et al., 2013; Liu et al., 2012; Griffith et al., 2006). The changing in the role of competitions in the global market force the companies to focus on building on-going SCRs (Liu et al., 2012; Griffith et al., 2006). Fairness has become an increasingly visible construct in social exchange in the last decades, and an informal norm used in business relationships (Huo et al., 2016; Colquitt, 2001). Justice strengthens commitment to SCRs, reduce opportunism, decrease uncertainty, improve resource allocation and promote long-term relationship (Wei et al., 2014; Luo et al., 2015).

Despite the growing interest in SCRs, a review of the literature reveals a limited understating for the role of justice in SCRs is

incomplete (Huo et al., 2016; Liu et al., 2012; Hornibrook et al., 2009; Griffith et al., 2006). Due to the increasing globalization, calls have been made to extend the concept of organizational justice to all stakeholders rather than just employees (Hornibrook et al., 2009) and call to collect data from different countries (Ziaullah et al., 2015; Muhammad et al., 2015; Liu et al., 2012; van Dick et al., 2006). However, to fill this gap the present research aims to extend the literature and examine the role of justice in SCRs in an Arab world, in particular Jordan to answer the following research question: Does justice contributes to long-term buyer-supplier relationships in the Jordanian manufacturing sector?

The reminder of this paper is organized as follows. First, the theoretical background and research hypotheses are provided. Next, the research methodology is presented, followed by the analysis and results. Subsequently, results are discussed and managerial implications set out. Finally, conclusions are drawn, limitations of the study are considered and suggestions are made for future research.

## 2. THEORETICAL BACKGROUND

### 2.1. Long-term Orientation (LTO)

The issue of managing SCRs has been increasingly gaining more attention in the last decades (Humphreys et al., 2001; Barrat, 2004; Matopoulos et al., 2007). In consequence, the development of an

effective buyer-supplier relationship for maximizing the benefits of the relationships (e.g., customer satisfaction, overall performance, quality, competitive advantage) is the primary concern of exchange parties in the supply chain (Mentzer et al., 2001; Saad et al., 2002; Soni and Kodali, 2011). While supply chain partnership has been defined in different ways, it is often viewed as on-going working relationships between two or more parties with their commitment, sharing information, risk, motivation and engagement in long-term business projects towards achieving mutual goals (Daugherty, 2011; Ellram and Krause, 1994; Egan, 1998; Saad et al., 2002).

In the light of increased emphasis on global sourcing and changing the role of competition to reach a competitive position in the market place have led many businesses to move away from traditional arm's length transactional views of business relationships to long-term and collaborative partnership (Hope and Mühlemann, 2001; Kwon and Suth, 2004; Nyaga et al., 2010). In contrast to the arm's length relationship where both buyer and supplier act independently for their own self interest, the both parties in long-term relationship are acting together for their mutual benefit (Harland, 1996; Humphreys et al., 2001; Cox et al., 2003; Cox, 2004; Power, 2005; Daugherty, 2011). Long-term relationships includes several key constructs, namely, commitment (Grayson and Ambler, 1999; Liu et al., 2012), relationship continuity (Jena et al., 2011), and LTO (Ellram and Cooper, 1990; Ganesan 1994; Griffith et al., 2006; Cannon et al., 2010). While these constructs differ in terms of nature and levels of measurement, they have significant effects on the type of relationships between buyers and suppliers' firms (Cannon et al., 2010). From a time perspective, the exchange partners go through questionable period to continue to decide on the nature and intensity of business relationships. This implies that firms' behaviors and actions in exchange relationships vary in accordance to short-run to long-term performance and economic benefits (Cannon et al., 2010).

In the extant literature on SCRs, the term "LTO" refers to a firm's willingness to accept short-term equity to get long-term benefits from the relationship (Griffith et al., 2006). For a firm, LTO with business partners serves a number of outcomes, namely, increased relational behavior, decreased conflict between exchange partners and facilitating stable and nurturing business relationships. These outcomes are in turn pave the way for increased satisfaction, improved performance at firm and supply chain levels and are expected to create sustainable competitive advantage for the members of supply chain (Noordewier et al., 1990; Ganesan, 1994; Lusch and Brown 1996; Griffith et al., 2006). As Ganesan (1994, p. 3) has observed, LTO lays stress on achieving future goals, owing to the fact that (in the words of Griffith et al., 2006, p. 88) "... an exchange partner believes that the on-going relationship with another partner is so important as to warrant maximum effort in maintaining the relationship." For Lusch and Brown (1996), LTO is based on the premise that a firm's relationship with its major supplier will continue into the future.

While there are number of factors are expected to determine whether a relationship should be short (i.e., transactional) or long term (i.e., collaborative) such as the level of trust, the level of interdependence, risk sharing, opportunistic behavior, uncertainty

level, cost of termination a relationship, etc..., SCR is subject to the perception of justice that lead to LTO (Dwyer et al., 1987; Ganesan, 1994; Griffith et al., 2006; Liu et al., 2012). This characterization of LTO conforms to Daugherty (2011, p. 19) definition of long-term relationship that we adopt for the purpose of the current study: "An ongoing relationship between two firms that involves a commitment over an extended time period involving a mutual sharing of information and of the risks/rewards related to the relationships."

## 2.2. Justice (Fairness)

Justice (or fairness) is a concept that has been long studies in organizational research, is the foundation for all types of social and economic exchanges and relationships (Liu et al., 2012). Researchers state that fairness can be categorized into structural and social facets of justice (Huo et al., 2016; Liu et al., 2012). While structural justice includes distributive and procedural justice (PJ), social side includes interpersonal and informational justice (Huo et al., 2016; Wang et al., 2014; Liu et al., 2012; Hornibrook et al., 2009). Distributive justice is perceived the fairness in the decision's outcomes rather than what outcomes are (Huo et al., 2016; Giovanis et al., 2015; Kaynak et al., 2015; Chen et al., 2012; Liu et al., 2012; Bakhshi et al., 2009; Griffith et al., 2006). Distributive justice refers to the equity of rewards that are consisting with their input (Luo et al., 2015; Ziaullah et al., 2015; Muhammad et al., 2015; Chan et al., 2012; Hornibrook et al., 2009; Colquitt, 2001). Distributive justice refers to the compensation on service failure (Mattila and Patterson, 2004; Kumar and Kumar, 2016). PJ is concerned about if the process is fair and whether they have control over the process (Huo et al., 2016; Kumar and Kumar, 2016; Giovanis et al., 2015; Luo et al., 2015; Kaynak et al., 2015; Ziaullah et al., 2015; Muhammad et al., 2015; Wang et al., 2014; Liu et al., 2012; Chen et al., 2012; Bakhshi et al., 2009; Griffith et al., 2006; Colquitt, 2001). They proposed that individuals may use several different procedural criteria to judge the presence of PJ, including consistency; freedom from bias, accuracy of information, correctability, representativeness, and ethicality (Hornibrook et al., 2009; Colquitt, 2001). Interpersonal justice is concerned about fairness perceptions in a treatment, the degree people treated with politeness, respect, and dignity by those involved in executing procedures or determining outcomes (Huo et al., 2016; Kumar and Kumar, 2016; Luo et al., 2015; Giovanis et al., 2015; Muhammad et al., 2015; Chen et al., 2012; Liu et al., 2012; Hornibrook et al., 2009; Bakhshi et al., 2009; Mattila and Patterson, 2004; Colquitt, 2001). Informational justice focus on the fairness in an open communication of information in explaining for individuals why procedure is used a certain way and why outcomes are distributed in a certain way (Ziaullah et al., 2015; Muhammad et al., 2015; Chen et al., Liu et al., 2012; Hornibrook et al., 2009; Bakhshi et al., 2009; Colquitt, 2001).

## 2.3. Fairness and SCRs

### 2.3.1. Distributive justice

In their study of four types of justice (distributive, procedural, interpersonal, informational) on buyer-supplier relationship performance and the mediating role of knowledge sharing, continuous commitment, and relationship invest (i.e., coupling behaviors) on achieving buyer-supplier relationship performance.

Liu et al. (2012) found that the home appliance industry in China from paired data that the four types of justice has a positive influence on buyer-supplier relationship performance. In their study for the justice and opportunism in buyer-supplier relationship in China, Luo et al. (2015) stated that perception of distributive justice enhances the confidence level in exchange party in benefits and profits distribution which, in turn, will encourage the exchange partner to invest in long term relationship and improve its quality. Kaynak et al. (2015) state that distributive justice positively affects the continuity of a relationship by eliminating the unethical behavior. Similarly, Huo et al. (2016) studies the impact of justice on collaborative and opportunism behavior between buyer and supplier in a business relationship, researchers found that rewards from investment facilitate a long term orientation relationship and reduce the uncertainty in investment, in turn, partner is more likely to invest more in a relationship. In the situation of distributive justice, equity also means how to share benefits and losses between exchange partners. Perceive the equity in the transaction situation improves the level of trust that will influence buyer-supplier relationship positively (Ziaullah et al., 2015). In the situation of supply chain disruptions, Wang et al. (2014) stated that distributive justice follows the equity rule in allocating resources and rewards which, in turn, will foster the formation of integrity between buyer and supplier. In addition, perceive distributive justice will improve the opportunities that enhance the relationship between buyer and supplier. In the same vein, Griffith et al. (2006) stated that allocation of resources in an equitable manner and ensuring the supply chain partner earn a fair reward will increase the amount of input in the resources and maintain a long term orientation relationship.

In their study for the corporate fairness in banks small and medium size enterprises (SMEs)-relationships, Veghohn and Silver (2008) stated that customers are satisfied if the output comparing to the input is fair, therefore, enhance the customer's loyalty and retention level to deal with the bank. Similarly, Chen et al. (2012) found that distributive fairness associate positively with customer satisfaction. In the same vein, Bakhshi et al. (2009) found that distributive justice related positively to job satisfaction and organizational commitment. If we apply these literature on the relationship between buyer and supplier in the Jordanian manufacturing sector, then:

$H_1$ : There is a positive relationship between perceived distributive justice and buyer-supplier relationship.

### 2.3.2. *PJ*

PJ facilitates establishing a common understanding for goals and expectations between exchange parties and facilitates knowledge sharing between buyer and supplier. Also, when both parties believe that their rights are protecting in rules, policies, and contract that enhance the perceived PJ (Kaynak et al., 2015; Ziaullah et al., 2015; Liu et al., 2012). In the same vein, Huo et al. (2016) stated that fair procedures creates an atmosphere in which the partner can invest more and reduce the level of uncertainty in a specific investment. However, when exchange parties know that their rights are protecting then the partner is more willing to continue in the relationship (Luo et al., 2015; Liu et al., 2012). It consistent

with Griffith et al. (2006) that perceived fair administration from supply chain partner will enhance the continuity in a relationship to receive the benefits. Also, Kaynak et al. (2015) state that fair in policies and regulation will help to avoid the unethical behavior, in turn, enhance the continuity of the relationship.

Hornibrook et al. (2009) study justice in food supply chain stated that while perception of fair procedurally treatment resulting in increased positive outcomes, unfair procedurally treatment result in negative outcomes such as theft, bad mouthing, or leaving the organization and increase the customers complains (Chen et al., 2012). Therefore, perceive fair procedural treatment increase the opportunity of enhancing the level of relationship's commitment.

Wang et al. (2014) studied the mitigation of different aspect of trust damage on the supply chain through the supplier's selective use of appropriate justice approach and found their impact on the intention to continue in a relationship. Scholars stated that PJ depends on rules, accuracy, correctability, and representativeness which reduce the level of uncertainty and enhance the level of trust which, in turn, promotes a fruitful environment for relationship continuity intentions. In the same vein, Ziaullah et al. (2015) state that PJ has a positive impact of trust level between buyer and supplier which, in turn, enhance buyer-supplier relationship.

Chen et al. (2012) stated that fair service has a significant impact of customer satisfaction. In addition, perceive procedural fairness foster building long-term relationship between exchange parties. Veghohn and Silver (2008) link the satisfaction with the customer's loyalty and stated that to enhance the level of satisfaction; banks are encouraged to develop policies, rules, and procedures that support SMEs businesses.

While the perceptions of PJ has been shown to result in increased positive outcomes and greater commitment) (Hornibrook et al., 2009; Bakhshi et al., 2009), the unfair procedure results in negative behaviours, such as theft, bad mouthing or leaving the organization (Colquitt, 2001; Hornibrook et al., 2009). However, applying the literature on the Jordanian manufacturing sector:

$H_2$ : There is a positive relationship between perceived PJ and buyer-supplier relationship in the Jordanian manufacturing sector.

### 2.3.3. *Interpersonal justice*

Interpersonal justice is the third dimension of justice that related to interpersonal treatment between buyer and supplier (Liu et al., 2012). It shows the reaction of an individual about the decision outcomes (Ziaullah et al., 2015). Interpersonal justice has a significant impact not only on perception of procedure but also a moral and ethical obligation toward the exchange partner to treat them in a fairly manner that enhance the level of trust and in turn impact supply chain integration (Ziaullah et al., 2015). In their study for the mitigation of damaged trust from supplier-induced distribution, Wang et al. (2014) stated that interactional justice related to the fairness of interpersonal treatment received during buyer-supplier transaction. Interactional justice is treat others with dignity, respect, and politeness that increase the strength of commitment to the relationship, which in turn increase the loyalty and willingness to invest time in the

relationship and enhance the buyer's trust in supplier in order to build close relationship. This improvement in the quality of interaction between exchange parties reduces the level of uncertainty in the relationship, in turn; firms are more willing to invest in a long-term buyer-supplier relationship (Luo et al., 2015). Veghohn and Silver (2008) also stated that customers are more willing to develop a relationship with organizations that encourage their employees to treat their customers fairly. Giovanis et al. (2015) study of the relationships between service fairness, service quality, and customer loyalty stated that interactional fairness is the most important and then followed with distributive and procedural fairness. In addition, scholars stated that fairly treatment with respect during transaction for customers is crucial for developing long-term relationships that lead to customer loyalty. However,

H<sub>3</sub>: There is a positive relationship between perceived interpersonal justice and buyer-supplier relationship in the Jordanian manufacturing sector.

#### 2.3.4. Informational justice

Informational justice refers to the communication manners (i.e., honesty, timely information, explains procedures) between buyer and supplier in supply chain (Liu et al., 2012). Chen et al. (2012) stated that all customers in financial sector should treat with sincerity and respect, and provide customers with required information on procedures that their customers concern about in order to increase the level of customer satisfaction in the perceived service. (Ziaullah et al., 2015) define it as the reaction about the procedure. Researchers identify informational justice by open communication, two-way communication that influences the health of the relationship. In addition, this type of sharing knowledge between exchange parties, in turn, will result in reducing the level of uncertainty and conflict. However, both parties are more willing to commit to the business relationship (Liu et al., 2012). Huo et al. (2016) stated that when the supplier treats his buyer in a fairly way that will enhance the confidence level and eliminate buyer's concern in an investment, then the buyer will be more willing to share fully and frequently information with the supplier. However, this open communication will foster building a long term relationship between exchange parties.

H<sub>4</sub>: There is a positive relationship between perceived informational justice and buyer-supplier relationship in the Jordanian manufacturing sector.

## 3. METHODOLOGY

### 3.1. Population and Sample

We surveyed a sample of buyer's organizations that operates in the manufacturing sector in Jordan. Using a directory from Amman Chamber Industry (ACI), Multi-level of respondents was collected from each organization. The 202 respondents have a direct contact with the suppliers such as general manager, purchasing manager, operations managers, supply chain manager, or employees of the departments (Huo et al., 2016).

### 3.2. Data Collection Procedure and Response Rate

Our survey was developed in English, translated into Arabic by independent translator, and then translated back to English (Huo

et al., 2016; Wang et al., 2014; Liu et al., 2012). A preliminary survey instrument was developed and pilot tested on 50 buyers to estimate the response rate and examine the behavior of the measures in a sub-sample of the population. The pilot study results indicated that no additional instrument modifications were necessary.

Data were collected via self-administered survey available on paper. The main round of survey was conducted in Jordan between October and December, 2017. The data were collected thru drop-off and pick up questionnaire as the most suitable procedure to collect data in the Middle East region to enhance the response rate (Al-Ma'aitah, 2014; Al-Sukkar, 2013). A cover letter was included with the questionnaires that explained the purpose of the survey. 300 questionnaires were distributed initially, a total of 202 questionnaires were returned. The response rate of returned questionnaires was 67.33%.

### 3.3. Instrument Development and Measures

The questionnaire design was based on an intensive review of the literature, and was subsequently reviewed by academic researchers with expertise in survey methodology, and supply chain management. We obtained our instruments from previous research, adapted them to our context. The questionnaire included questions about demographic profile of the companies, and related questions to justice (distributive, procedural, interpersonal, and informational justice) and LTO. To measure supplier justice from buyer's perspective (Table 1), the questionnaire adapted 17 items from the literature and four items to measure the dependent variable (LTO). A five- point Likert scale was used to measure the items, with 1 representing very strong disagree and 5 "very strong agree."

## 4. DATA ANALYSIS AND RESULTS

### 4.1. Company Profile

A descriptive overview of the buyers' companies in respect of their age (in years), industry, structure, number of employees, market share, number of key buyers and/or suppliers, length of business relationship, and method of communication. The research has discussed these characteristics in order to shed the light on the nature of the Jordanian manufacturing sector. The sample includes different industries in order to generalize the results to the manufacturing sector. As 29.7% of the data collected from textile, 25.2% from chemicals, and the latest from furniture with 3% of the sample (Table 2).

**Table 1: Sources of measurements**

Variable	Number of items	Source	Cronbach's alpha
Distributive justice	4	Luo et al., 2015	0.91
PJ	5	Luo et al., 2015	0.87
Interpersonal justice	4	Liu et al., 2012	0.89
Informational justice	4	Chen et al., 2012	0.94
LTO	4	Griffith et al., 2006	0.89

LTO: Long-term orientation, PJ: Procedural justice

As Table 3 shows that the majority of the businesses trading for more than 24 years, as the manufacturing sector in Jordan described as a growing industry and it includes family businesses that move from generation to another (Al-Ma'aitah, 2014).

The descriptive data also shed the light on the number of keys suppliers that the Jordanian buyers have a business within last years. As Table 4 shows that 29.7% of the Jordanian buyers has a business with 11–21 key suppliers, followed with 28.2% and the latest is 2% of the sample has a business relationship with more than 55 suppliers.

While 45% of the buyers have a relationship with their suppliers range between 6 and 11 years Table 5, 9.9% of buyers have more than 18 years of business relationship with their suppliers. This could be because when the companies start their business has many suppliers, and then with the time they have clear criteria to select their key suppliers (Al-Ma'aitah, 2014).

Finally, 56.9% of buyers use phone to communicate their suppliers (Table 6), and 58.4% use E-mail more than using face-to-face meeting (42.1%). Jordan has a wide spread of internet and has more people online than any other Arab country, which enhance transform of accurate and timely information between buyers and suppliers and then enhance the business relationship (Al-Ma'aitah, 2014).

## 4.2. Measurement Validity and Reliability

### 4.2.1. Reliability

Cronbach's alpha is used to evaluate the construct reliability, with threshold value of 0.70 recommended (Graca et al., 2015; Humphries, 2003). Accordingly, the entire construct in the current

**Table 2: Participating industry in the survey**

Industry	Frequency (%)
Textile	60 (29.7)
Leather	11 (5.4)
Chemicals	51 (25.2)
Plastic	20 (9.9)
Furniture	6 (3.0)
Food and drink	43 (21.3)
Others	11 (5.4)
Total	202 (100)

**Table 3: Age of the buyer's company in years**

Age (years)	Frequency (%)
0–5	28 (13.9)
6–11	33 (16.3)
12–17	44 (21.8)
18–23	32 (15.8)
24 and more	65 (32.2)
Total	202 (100)

**Table 4: Number of keys suppliers**

Number of key suppliers	Frequency (%)
0-10	45 (22.3)
11-21	60 (29.7)
22-32	57 (28.2)
33-43	26 (12.9)
44-54	10 (5)
55 and more	4 (2)
Total	202 (100)

research are higher than the minimum recommended critical value. Cronbach's alpha values of the measures are above the recommended value and ranged from 0.837 to 0.999. Therefore, the results demonstrate the highly reliable theoretical constructs of the study.

Exploratory factor analysis was performed to explore the validation of the construct using varimax rotation. Principle component analysis was used as a reduction strategy with a cut-off rule 0.50. Kaiser-Meyer-Okline (a statistic test for sampling adequacy, that is, absence of multicollinearity among the variables) values for all constructs exceeded the recommended value of 0.60 (Gray and Kinnear, 2012) and Bartlett's test of sphericity reached statistical significant ( $P < 0.05$ ), which supported the factorability of the correlation matrix in our sample - An indication of the appropriateness of the scale items for further factor analysis [Table 7].

### 4.2.2. Content validity

the survey was administered in the manufacturing sector in Jordan in Arabic. To ensure content validity a professional translation and back translation has been done. In addition, the pilot test was administered into 50 companies. No concerns were raised in regard of the meaning of the survey items.

### 4.2.3. Convergent validity

the average variance extracted (AVE) provides evidence of convergent validity. All measures have an AVE exceeding the recommended value of 0.50 (Graca et al., 2015). Moreover, the higher value of AVE, Composite reliability and factor loading results show the adequate convergent validity of the measurement items. The results of the convergent validity test are also presented in Table 8.

**Table 5: Length of business relationship with supplier**

Length of business relationship	Frequency (%)
0-5	18 (8.9)
6-11	91 (45.0)
12-17	73 (36.1)
18 and more	20 (9.9)
Total	202 (100)

**Table 6: Method of communication with suppliers**

Communication method	Frequency (%)
Phone	115 (56.9)
Fax	62 (30.7)
Email	118 (58.4)
Face to face	85 (42.1)
Others	3 (1.5)

**Table 7: Summary of KMO and total variance explained**

Construct	KMO	Total variance explained
Fairness	0.814	75.12
LTO	0.878	99.76

KMO: Kaiser-meyer-oklin, LTO: Long-term orientation

#### 4.2.4. Discriminant validity

Discriminant validity was investigated using shared AVE. Also, the item total correlations. In addition, if the AVE for each construct exceeds the squared correlation between that variable and any other variables, then discriminant validity occurs. As shown in Table 8, this study showed that all the variables explained 50% or more of the variance, which met the recommendation that AVE values should be at least 0.50 for each variable. Furthermore, as shown in Table 8, discriminant validity was demonstrated, as the AVE values were more than the squared correlations for each set of constructs (Almajali et al., 2016). Therefore, the measures significantly discriminated between the variables.

#### 4.2.5. Hypothesis testing

Multiple regression was used to test the relationship between all constructs in the hypothesized model using SPSS 19. The data were tested for linearity and multi-co-linearity. The recommended procedure in the literature by Wiengarten et al. (2011) and Gray and Kinnear (2012), who suggest centering the independent variables and checking the variation inflation factor (VIF), was followed. Results indicate that VIFs are all <1.70, which is less than the commonly used threshold of 10 in the literature (Field, 2005; Wiengarten et al., 2011), indicating that multi-co-linearity is not a problem; therefore, the underlying assumptions of multiple regression analysis were not violated.

The results of distributive justice model show that the model was not significant at  $p < 0.05$  ( $t = -1.585$ ,  $P = 0.115$ ,  $\beta = -0.180$ ) and the  $R^2 = 0.089$ , adjusted  $R^2 = 0.071$ . These results thus yielded rejected Hypothesis 1.

Moreover, hypothesis 2 focuses on the effect of PJ on LTO and was tested in Model 2. The results of model 2, which contains PJ

as an independent variable, did not provide statistically significant results: The  $t$ -value is 0.988 and  $p = 0.324$  ( $p > 0.05$ ) and thus H2 is rejected.

Hypothesis 3 was tested by Model 3. The results of Model 3, which contains interpersonal justice as an independent variable, indicate that the model was not significant at  $p < 0.05$  ( $t$ -value = 1.084,  $P = 0.280$ ,  $\beta = 0.149$ ). Thus Hypothesis 3 was rejected.

Informational justice was hypothesized to impact LTO positively (H4). The results of the Model 4, which indicates informational justice was significant at  $p < 0.05$  ( $t$ -value = 3.752,  $P = 0.000$ ). However, the only accepted hypothesis is H4.

## 5. DISCUSSION AND CONCLUSION

To our best knowledge, The Arabic literature focused on justice in the area of human resource management practices, loyalty, and organizational commitment with no research has been done in the SCRs. This study explores how perception of distributive, procedural, interpersonal, and informational justice drive long-term buyer-supplier relationship in the Jordanian manufacturing sector. Through the analysis of 202 buyers in Jordan, we find that informational justice has a significant impact on LTO and that consist with the literature (Liu et al., 2012; Chen et al., 2012; Ziaullah et al., 2015; Huo et al., 2016). Also, the findings found that no significant impact for distributive, procedural, and interpersonal justice on LTO relationship. The unexpected results that come contradict with all the literature in the Western settings, it has a limited agreement with researchers from Arab world in the human resource field, in particular in Jordan. However, most of the Arabic literature cited in Al-Sukkar, (2013) found that

**Table 8: Reliability and validity measurements**

Construct indicators	Items	Reliability ( $\alpha$ )	Factor loading	Item total correlation	AVE	CR
Distributive justice	DJ 1	0.91	0.846	0.812	0.69	0.898
	DJ 2		0.886	0.867		
	DJ 3		0.812	0.816		
	DJ 4		0.675	0.695		
PJ	PJ 1	0.837	0.577	0.573	0.523	0.845
	PJ 2		0.658	0.619		
	PJ 3		0.674	0.708		
	PJ 4		0.600	0.644		
	PJ 5		0.679	0.651		
Interpersonal justice	Interpersonal 1	0.865	0.758	0.755	0.636	0.874
	Interpersonal 2		0.789	0.774		
	Interpersonal 3		0.719	0.716		
	Interpersonal 4		0.606	0.617		
Informational justice	Informational 1	0.939	0.969	0.943	0.877	0.965
	Informational 2		0.647	0.697		
	Informational 3		0.969	0.944		
	Informational 4		0.969	0.944		
LTO	LTO 1	0.999	0.995	0.998	0.992	0.998
	LTO 2		0.995	0.998		
	LTO 3		0.995	0.998		
	LTO 4		0.995	0.997		

LTO: Long-term orientation, AVE: Average variance extracted, CR: Composite reliability, PJ: Procedural justice

justice has a medium impact on commitment (e.g. Abu-dhaim, 2011; Al-zaabi, 2008, Al-Ma'aitah, 2005, Al-Qatawneh, 2003). Also, Maharmah (2000) found that the employee of the Jordanian government sector in Al-Karak has a very low perception of justice in their organization. In the same vein, Al-Fadli and Al-Enezi (2007) and Al-Ajami (1998) found that there is a very low perception of justice for the employees in Kuwaiti organizations. Also, Khashroum (2010) found that there is no significant impact between justice and the role of conflict in the nursing sector in Halab, Syria. In the same vein, Zaid (1995) found that there is no impact for monitoring and controlling employee performance styles on justice, in particular procedural and interpersonal justice (cited in Al-Sukkar, 2013).

The findings of the present research highlight the situation the process of handling businesses in the Jordanian manufacturing sector in the last years, it shows that the organizations follow the transactional relationship not the partnership. The reason for this could be one of the following: first, the Jordanian manufacturing sector is dominated by SMEs with a huge opportunities for suppliers from out of Jordan to start a business in Jordan by looking a Jordanian partner (Al-Ma'aitah, 2014). Second, the Jordanian manufacturing sector is struggling to survive since 2010 starting from Arab spring and closing borders between Jordan and Arabic market such as Syria, Egypt, Libya and Iraq and looking forward to open a new market for their product (Al-Ma'aitah, 2014). Third, due to the political situation the Jordanian economy has to follow very strict policies from World Bank in last year's to restructure the economic reforms in Jordan (World Bank, 2017), these procedures includes increases the prices and taxes on individual and businesses. However, these extra costs minimize the available money for production. ACI members are asking for extra support from the government by decreasing the taxes, find new markets for their products, more restriction for importing product that compete with the local one, and accelerate the free trade agreement between Jordan and other countries such as Turkey to benefits from them (Alrai Newspaper, 2018a-c).

This study contributes to organizational justice research by extending justice to buyer-supplier relationship context. Researchers have focused on human resource management, paying little attention on justice in SCRs. Thus this study fills this gap by proposing the four types of justice in intra-organizational context. Further, this study investigates the role of justice in a non-Western context, Jordan. Also, the results of this study therefore provide insight for firms on formulating strategies to enter developing market. First, it is important for supply chain manager to create informational justice atmosphere. Second, suppliers can focus more on developing interpersonal relationship with their buyers in these cultures to build a level of trust with them. Third, suppliers must work to understand these cultures to solve the conflict with their buyers to improve the buyer's perceptive on distributive and PJ and openly discuss issues and expected solutions with exchange partner.

We examined the justice's role in buyer-supplier LTO relationship based on a sample from Jordanian manufacturing sector. This study encompasses several limitations which create a new paradigm for further research. This study collects data from buyers' perspective

only. It left the importance of dyadic justice perceptions largely unexplored (Liu et al., 2012). It recommended collecting data from both exchange parties. Second, this study consist various industries. Therefore, it is strength this study, but still there are other industries were not included in the sample such as IT, agri-food and pharmaceutical sector. Third, the analysis of data did not consider the influence of the size of the company on the impact of justice on LTO. Fourth, the results reported in this paper from Jordan. However, more researches are required from different Arab context. Fifth, the research adapts the quantitative approach, it is recommended to adapt the mixed methodology to understand the numerical results from experts in the market. Sixth, justice is a fundamental concern in this comparison particularly in SCRs; it is surprising that no empirical study has investigated the influence of justice on opportunism through collaborative behavior in SCRs (Huo et al., 2016). Finally, further area of research to consider due to the limited research has been conducted to date such as the moderator role of trust and national culture.

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