

# **EFFECT OF JUSTICE IN COMPLAINT HANDLING ON CUSTOMER LOYALTY: EVIDENCE FROM EGYPT**

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## **ABSTRACT**

*The main objective of this research is to identify and validate the factors that significantly influence customer loyalty during the complaint handling process in Egypt. The literature alludes to the effect of perceived justice of the complaint handling process on customer satisfaction and loyalty after the complaint. These relationships are tested and validated in the Egyptian context over ten different industries. The outcome of this research gives further validation to the finding of previous empirical studies in a novel context. The results will benefit Egyptian companies in different sectors to better handle customer complaints, as they will recognize the major variables that they should address.*

**JEL:** M310

**KEYWORDS:** Justice, Customer Loyalty, Complaint Handling, Customer Satisfaction, Egypt

## **INTRODUCTION**

Even when companies put forth their best efforts to serve their customers, customer complaints are inevitable and are a regular part of doing business (Fierro et. al. 2015). Complaint handling systems are the ultimate test for a company's customer orientation as they strive to create satisfactory resolutions to customer concerns. A company may risk losing previously loyal customers when grievances are poorly handled. This implies that existing levels of customer satisfaction do not offer foolproof protection against the consequences of ineffective complaint handling. Looking at the issue from the other side of the coin, satisfactory handling of customer complaints may likely enhance customer loyalty. Studies have shown high returns on investment in effective complaint handling systems (TARP 1986; Fornell et. al. 2006; Fierro et. al. 2015). Thus many companies are seeking to develop such systems to cultivate loyalty among their customers. In doing so, two distinct approaches have been cited, the first of which involves setting standard procedures to program complaint handling employees on how to deal with customers in specific situations. The second approach takes a more open stance and consists of training and motivating employees to adopt a set of shared values that would likely lead to the desired behaviors.

The current study explores how Egyptian customers in ten different industries perceive the quality and fairness of the complaint handling process, and how complaint-handling perceptions affect customer loyalty. The following section reviews the literature on justice and complaint handling and the impact on customer loyalty and satisfaction. The literature review is used to develop the conceptual model. Next, the methodology section describes the data collection phases and the analytical methods used. The results of the measurement and conceptual model testing are given next, followed by the main conclusions of the study. Limitations of the current study and avenues for future research are finally presented.

## LITERATURE REVIEW

### Complaint Handling and Complaint Satisfaction

Customer complaints include all written, oral or electronic communications in which customers express their displeasure regarding some deficiency or failure in the product or service. Complaint handling involves strategies whereby companies attempt to resolve the failure and learn from it to avoid future failures, while regaining the customers' perception of the company's reliability (Shammout and Haddad, 2014). While the ultimate guidance in service marketing is to perform the service right the first time, mistakes are sometimes unavoidable (Fierro et. al., 2015). The literature documents the pervasiveness of customer complaints in instances of service failure (Gelbrich and Roschk 2011; Zu et. al. 2013). Communication in the context of complaint handling offers companies an opportunity to turn angry customers into loyal ones (Rothenberger et. al. 2008). Moreover, it provides an opportunity for the company to learn about its deficiencies and to retain its customers while influencing their perceptions and behavior as well as the future satisfaction of all the company's customers (Lovelock and Wright 2002; Gelbrich and Roschk 2011). This is why it is of utmost importance to handle every complaint with care and to take customer communications seriously (Bodey and Grace 2006). It also explains why customer communication should be encouraged and complaints should be perceived as opportunities for quality improvement, enhancement of customer satisfaction and positive word of mouth (Blodgett et. al. 1997). Effective complaint handling helps companies avoid losing dissatisfied customers to competitors and the spread of negative word of mouth (Stauss 1990; Gelbrich and Roschk 2011).

Customers who experience a service failure may display one of four possible responses, the simplest of which is to do nothing. However, some of the customers who decide to do nothing will tell a friend about the bad experience, in which case there is a risk of negative word of mouth. The second possible response is to file a complaint and if the problem is not resolved, the customer may choose to escalate the complaint to a higher level either inside or outside the company, to consumer advocacy groups, regulatory agencies, civil or criminal courts. Finally, the customer may choose to switch suppliers and discourage others using the service firm through negative word of mouth (Gelbrich and Roschk 2011). A study on customer switching in service industries reports that 10% of all respondents who switched suppliers did so due to unsatisfactory response to a prior service failure, 25% due to a failure in the core service and 19% due to unsatisfactory encounter with an employee (Keveaney 1995; Wang et al. 2011).

Therefore, when a customer is dissatisfied, the company runs a risk of losing all future revenue streams that could be generated through repeat business by the customer. In addition, the company also risks losing possible revenue streams of the customers' friends and relatives, who may decide not to do business with the company based on negative word of mouth. The TARP's "Complaint Handling in America" reports show the returns on investment in customer complaint handling programs through relating the associated costs with the value of retaining profitable customers (TARP, 1986; Fierro et. al. 2015). In a sense, these results invite companies to reframe their views on customer complaint programs and to consider them as profit - not cost - centers (Lovelock and Wright 2002; Stauss and Schoeler 2004; Fierro et. al., 2015). The above review points to the salience of maintain customer satisfaction after the complaint has been handled in addition to achieving customer satisfaction with the complaint handling process. Complaint Thus, complaint satisfaction is a key construct in the model we develop. Complaint satisfaction indicates the degree to which the complainant perceives the company's complaint-handling performance as meeting or exceeding his or her expectations. (Gilly and Gelb, 1982; McCollough et al, 2000)

### Procedural, Interactional and Distributive Justice in Complaint Handling

The literature provides evidence that customers' perceptions of fairness in the complaint handling process are key drivers of customer satisfaction and loyalty after the complaint (Homburg et. al. 2010). The idea

of perceived fairness is rooted in justice theory (Gilliland et. al. 1993; Greenberg & McCarty 1990). Customer perceptions of fairness are driven by two kinds of drivers, namely drivers relating to the customer characteristics, which the company cannot change, and drivers relating to the design of the complaint handling system, which the company has control over (Homburg et. al. 2010). The literature points to three determinants of customers' perceived fairness, which stem from the quality of the complaint handling process, and these are procedural justice, interactional justice and distributive justice (Smith et al., 1999; Karatepe, 2006; Siu et. al. 2013; Min et. al. 2014)). Each of these constructs is explained in detail and developed next. The literature on complaint handling emphasizes the impact of perceived fairness of the complaint handling process on customer satisfaction and loyalty after the complaint (McCullough et. al., 2000; Karatepe, 2006; Siu 2013). The construct of procedural justice reflects the extent to which customers perceive the process to be timely, to allow the customer control, to provide the customer with an opportunity to express feelings about the problem and to present information relevant to firm's decision about the results of the complaint (Goodwin, 1992; Tax et al., 1998, Min et.al. 2014). It is also defined as the perceived fairness of the means by which the ends are accomplished (Lind and Tyler, 1988). Procedural justice is important as it aims to resolve conflicts in ways that encourage the continuation of a productive relationship between the disputants even when outcome is not satisfactory to one or both parties (Folger, 1987; Greenberg, 1990; Siu et.al. 2013). Therefore, we hypothesize that procedural justice has a positive impact on the customer's satisfaction with the complaint handling experience.

H1: Perceived procedural justice has a direct and positive effect on complaint satisfaction.

Interactional justice relates to the perceived fairness of the employees' behavior toward the complainant. It includes customer perceptions of employee empathy (Tax et Al., 1998; Min et.al., 2014), employee politeness (Goodwin, 1992) and employee effort (Smith et Al., 1999; Min et.al., 2014). It is also defined as the fairness of interpersonal treatment experienced by customers while the company's employees apply the complaint handling procedures (Bies and Shapiro, 1987; Gilliland, 1993; Siu et. al., 2013). Interactional justice helps to explain why some people might feel treated unfairly although they can describe the decision making procedure and results as fair (Bies and Shapiro, 1987). Research shows that the phase of communication between the customers and employees (Clemmer, 1998; Goodwin, 1992; Min et. al., 2014) together with the efforts exerted to resolve a conflict (Mohr and Bitner, 1995) affect customer satisfaction (Gelbrich and Roschk 2011). Therefore, we postulate that there is a positive relationship between perceived interactional justice and customer satisfaction.

H2: Perceived interactional justice has a direct and positive effect on complaint satisfaction.

Distributive justice refers to the fairness of the complaint outcome, as the customer perceives it. The distributive justice construct embodies notions of equity in the distribution of benefits and burdens (Boatright 2013). An important consideration for the customer is equity in the distributive sense, which is achieved if the customer receives the same outcome as compared to previous complainants with the company (Tax, et al., 1998). Perceptions of equity also concern the degree to which the outcome matches the needs of the customer (Smith et Al. 1999; Harris et.al. 2013). Several studies support the idea that customer evaluations of equity affect customer satisfaction (Oliver and Swan, 1989; Gelbrich and Roschk 2011; Harris et. al. 2013). For the purpose of the current study, perceived distributive justice is indicated by the degree to which the customer perceives the compensation received as a result of the complaint process to be fair. Therefore, we hypothesize that perceptions of distributive justice in the outcomes of complaint handling will positively affect complaint satisfaction.

H3: Perceived distributive justice has a direct and positive effect on complaint satisfaction.

### Customer Satisfaction

Customer satisfaction has been a central concept in marketing and management for decades (Drucker 1954; Levitt, 1960; Gronroos 1990; Anderson and Sullivan 1993; Anderson et. al. 1994) and has taken on an additional significance since the 1980s with the spread of the quality management movement. Customer satisfaction is an attitude adopted by the customer that indicates the extent to which brands, products and services meet the customer's requirements and expectations (Szymanski and Henard 2001; Varela-Neira et al 2010; Flint et. al. 2011). Customer satisfaction has been explained in the literature based on the disconfirmation theory and the equity theory. The disconfirmation theory explores the gap between the customer's expectations of the product or service quality and their actual experience with the brand, product or service (Oliver 1997). According to the equity theory, customers will be satisfied if they perceive the rewards of buying the product or service to match or exceed the money and effort spent on the product or service (Oliver and Swan 1989).

The literature suggests perceived quality and perceived value as important determinants of customer satisfaction (Fornel 1996; Hu et al, 2009; Khurana, 2014; Khan & Fasih, 2014; Gallarza et. al., 2013). Perceived quality relates to the disconfirmation theory view of customer satisfaction. Customers' perceptions of the product or service quality have both a hard and a human aspect. The hard aspect of perceived quality relates to the product or service attributes and benefits. The soft aspect of perceived quality relates to the interpersonal experience and the service atmosphere around the core product or service. Perceived value relates to the customer's perception of the quality they get as compared to the price they pay, or value for money (Kristensen *et al.*, 2000). Thus, perceived value is based on the equity theory view of customer satisfaction. In the context of complaint handling, the customer's experience and satisfaction with the complaint handling process is expected to influence the level of overall customer satisfaction with the company after the complaint handling process. As mentioned earlier in the introduction, previously high levels of customer satisfaction do not provide foolproof protection for the company if the customer complaints are inadequately handled. Therefore, one of the important objectives of complaint handling systems is to maintain and even enhance the overall satisfaction of the customer with the company. Therefore, we hypothesize that complaint satisfaction will have a direct impact on overall customer satisfaction after the complaint.

H4: Complaint satisfaction has a direct and positive effect on overall customer satisfaction after the complaint.

### Customer Loyalty

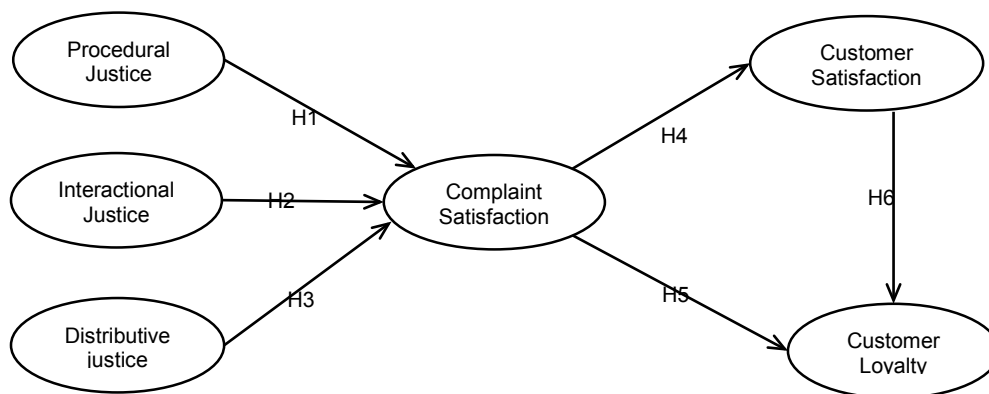
With the rise of globalization and the advances in information and communication technologies, customer awareness of and exposure to competitors has grown, thereby making competition more challenging. Increasingly, companies are finding that to achieve long-term profitability they need to go beyond simple price and quality optimization, and cultivate loyalty to their brands, products or services (Helgesen 2006; Flint et. al. 2011). One of the most effective ways to manage the challenges of competition in the twenty first century is to maintain and increase the company's base of loyal customers. Thus, customer loyalty and its antecedents have featured prominently in the marketing literature over the last few decades. Studies have shown that acquiring a new customer may cost the company up to six times as much as retaining an existing customer (Rosenberg et. al. 1984; Reichheld and Scheffer, 2000). Moreover, increasing customer loyalty is an important factor in growing a company's market share in highly competitive industries, increasing its profitability (Jarvis and Mayo, 1986; Helgesen 2006) and attaining a sustainable competitive advantage (Kotler and Singh 1981). Oliver (1999) defines loyalty not only as repurchase of a product or service, but rather as repurchase despite the presence of situational factors that may potentially result in switching behavior. Oliver proposes four levels of loyalty, namely cognitive, affective, conative and action loyalty. Cognitive loyalty refers to the customer's thoughts and conviction about why he/she chooses the

company's offer over others. This cognitive loyalty is usually related to features and benefits of the product or service and the price offer, not the brand per se, and is likely to change if the customer finds a better offer. Affective loyalty refers to customers' feelings of familiarity and liking toward the brand, product or service, which develops after repeated purchases. Conative loyalty refers to customer intentions to continue to purchase the brand, product or service while action loyalty refers to an insistence to buy the brand even if to do so, the customer needs to bear an inconvenience or exert extra effort to overcome obstacles (Oliver 1999). In the context of customer complaints, one of the major objectives of a complaint handling system is to maintain customer loyalty after a customer has experienced dissatisfaction with a company's product or service. As mentioned earlier, when customers experience a perceived failure, the company risks losing the customer as well as members of the customer's network through negative word of mouth. Effective handling of complaints offers an opportunity for turning angry customers into loyal ones. For purposes of the current study, loyalty is defined as the degree to which a customer has continued the relationship with a company after the complaint and the degree to which the customer intends to do so in the future (McCollough, et al., 2000). As explained above, the evidence in the literature indicates that complaint satisfaction and overall customer satisfaction will likely affect the degree of customer loyalty after the complaint.

H5: Overall customer satisfaction after the complaint has a direct and positive effect on customer loyalty after the complaint.

H6: Complaint satisfaction has a direct and positive effect on customer loyalty after the complaint.

Figure 1 The Conceptual Model of Complaint Handling



The figure illustrates the conceptual model, where Procedural Justice, Interactional Justice and Distributive Justice affect the degree of Complaint Satisfaction. Complaint Satisfaction determines the degree of overall Customer Satisfaction after the complaint as well as Customer Loyalty.

## DATA AND METHODOLOGY

The data collection took place over two stages. The first exploratory stage involved collecting data of a qualitative nature through conducting a set of face-to-face expert interviews. The experts were selected through judgmental sampling and an interview discussion guide was used. The objective of the qualitative stage of data collection was to get an in-depth understanding of the complaint handling phenomenon before designing the conclusive quantitative questionnaire. Semi-structured in-depth interviews with experts explored customer complaints in general as well as specific efforts exerted by the experts' companies in order to resolve customer complaints. Additional interviews with complaining customers were conducted to understand their feedback on how company complaint handling affected their relationship with the companies, and if they were still loyal to those companies. The output of those interviews as well as the literature review was used to develop the proposed theoretical framework.

The second phase of data collection used a closed ended questionnaire to test and identify the variables affecting customer loyalty after the complaint handling process. The questionnaire relied on items developed on a five-point likert scale, graded from “Strongly Disagree” to “Strongly Agree”. The scale items measuring both the independent and dependent constructs are based on the questionnaire presented by Homburg & Fürst (2005). The researchers used a mixture of judgmental and convenience sampling to pick the survey respondents, to which the survey was administered in person through a paper-and-pencil format. The sampling criterion was selected based on the views of the experts, who reported that most of those who file complaints are between the ages of 18 and 40 years old. Accordingly, convenience sampling was used to select respondents from among the visitors, clients and members of sporting clubs, universities, cafés, hotels, multinational companies and non-governmental organizations (NGO’s) in Egypt.

The researchers chose to ask the respondents to use the self administered questionnaire face-to-face instead of distributing them through the internet as this allowed the opportunity to explain to the respondents any unclear questions and ask them for clarifications or further information. This face-to-face interaction with the survey respondents helped the researchers to further understand the reactions of the complainants toward the companies. Based on the expert interviews, the total population for complaining customers is around 500,000 customers. Based on Sekaran (2003) and Krejcie and Morgan (1970), the minimum sample size for populations over 100,000, is 384. Therefore, our target sample size was to get 420 responses and we succeeded in collecting 330 responses. Out of 330 total responses, 61 persons answered the full survey questions on 3 different complaint incidents (totaling 183 responses), 26 persons answered 2 complaints (totaling 52 responses) and 95 persons answered 1 complaint. The total number of persons who were asked to answer the questionnaire was 202 out of which 3 persons refused to answer, and 17 persons had never filed a complaint before, giving a response rate of 90%.

## RESULTS AND DISCUSSION

The data analysis followed Anderson and Gerbing’s (1988) two step approach in which the analysis task is divided into two steps; the first step is a confirmatory measurement or factor analysis specifying the relations of the observed measures to their posited underlying construct and the second step is a confirmatory structural model that specifies the causal relations of the constructs to one another as posited by theory. In this regard, LISREL 8.72 was selected as the software tool used in the analyses.

### Analysis of the Measurement Model of Complaint Handling

The evaluation of the measurement model consisted of confirmatory factor analysis to assess four classes of tests: unidimensionality tests, convergent validity, reliability, and discriminant validity (Anderson & Gerbing, 1988; Steenkamp & Van Trijp, 1991). Confirmatory factor analyses were further used for measures purification whereby items involved in high residuals were removed. This further improved the model fit and construct validity and reliability. The overall model fit statistics for complaint handling are within the generally accepted thresholds and suggest an acceptable goodness-of-fit ( $\chi^2 = 153.10$ ,  $DF = 89$ ;  $\chi^2/df = 1.72$ ;  $RMSEA = 0.045$ ;  $NNFI = 0.99$ ;  $CFI = 0.99$ ;  $GFI = 0.95$ ;  $AGFI = 0.92$ ;  $SRMR = 0.027$ ) and all loadings were substantial and highly significant. Moreover, construct reliability values exceeded the recommended threshold of 0.60 (Bagozzi & Yi, 1988). Accordingly with all the analysis performed on the measurement model, unidimensionality might be suggested. Because unidimensionality is a necessary but not sufficient condition for construct validity (Anderson & Gerbing, 1988), the following paragraph addresses the issues of reliability, convergent validity and discriminant validity.

Reliability of the measurement model was judged by computing the composite reliability for each of the constructs. As seen from Table 1 below, composite reliability is above Bagozzi and Yi’s (1988) 0.6 suggested threshold. Hence, reliability for the constructs present in the measurement model was judged to be adequate. Reliability is a necessary but not a sufficient condition for validity as a set of items can be

reliable without exhibiting convergent validity (Steenkamp & Van Trijp, 1991). Therefore, the following discussion tackles the convergent validity of the constructs. First, correlations between the items and the construct exceeded 0.5, supporting convergent validity (Hildebrandt, 1987). Also, Table 2 shows that all the average variances extracted (AVEs) were above 0.5 (Fornell & Larcker, 1981). We obtained evidence of discriminant validity as all AVEs exceeded the squared multiple correlations between the respective constructs (Ping Jr., 2004) with the exception of the correlation between Procedural Justice from one side and Interactional Justice, Distributive Justice and Complaint Satisfaction from the other side. In addition, the correlation between Distributive Justice and Complaint Satisfaction and the correlation between Customer Satisfaction and Customer Loyalty were also higher than the AVEs. However, correlations between these constructs significantly differed from unity. This would hence present further evidence of discriminant validity (Anderson & Gerbing, 1988; Bagozzi & Phillips, 1982; Steenkamp & Van Trijp, 1992; Ping Jr., 2004).

Table 1: Measurement Model Reliability and Average Variance Extracted

Construct	Item	$\lambda$	$\theta\delta$	Variance Extracted A $VE = \frac{\sum_{i=1}^n \lambda_i^2}{\sum_{i=1}^n \lambda_i^2 + \sum \theta_i}$	Variance Extracted B $VE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$	Composite Reliability $\rho_c = \frac{(\sum_{i=1}^n \lambda_i)^2}{(\sum_{i=1}^n \lambda_i)^2 + \sum \theta_i}$
Procedural Justice	PJ1	0.83	0.32	0.686	0.689	0.814
	PJ3	0.83	0.31			
Interactional Justice	IJ1	0.78	0.38	0.628	0.623	0.860
	IJ2	0.71	0.49			
	IJ4	0.87	0.24			
	IJ5	0.79	0.37			
Distributive Justice	DJ2	0.73	0.47	0.647	0.649	0.846
	DJ3	0.87	0.25			
	DJ4	0.81	0.34			
Complaint Satisfaction	COMPS1	0.73	0.47	0.626	0.628	0.769
	COMPS3	0.85	0.28			
Customer Satisfaction	SAT1	0.86	0.25	0.657	0.651	0.792
	SAT3	0.75	0.43			
Customer Loyalty	LOY1	0.87	0.24	0.778	0.780	0.913
	LOY2	0.88	0.23			
	LOY3	0.90	0.2			

The table shows the composite reliability measures for the model constructs.

A test of common method variance was performed. The reason for conducting such tests was to have an additional scrutiny of the validity of the results since common method variance was described as one of the main sources of systematic measurement error (Podsakoff et. al., 2003). Initially several ad-hoc design considerations were followed as recommended by Podsakoff and Organ as means to reduce common method bias namely protecting respondent anonymity and reducing evaluation apprehension, counterbalancing question order, and improving scale items, as also suggested by Podsakoff et al. (2003). A post-hoc statistical patching up further complemented this effort. In this regard, Harman’s single factor test was used (Podsakoff et. al., 2003). The basic assumption of this technique is that if a substantial amount of common method variance is present, either (a) a single factor will emerge from the factor analysis or (b) one general factor will account for the majority of the covariance among the measures. The Harman’s single-factor test when applied to this research resulted in the absence of one general factor that emerges from the analysis in addition to the absence of one general factor that accounts for the majority of the covariance among measures.

Table 2: Average Variance Extracted and Squared Correlation Measurement Model

Construct	Procedural Justice	Interactional Justice	Distributive Justice	Complaint Satisfaction	Customer Satisfaction	Customer Loyalty
Procedural Justice	<b>0.686</b>	<b>0.774</b>	<b>0.810</b>	<b>0.828</b>	0.672	0.624
Interactional Justice	0.880	<b>0.628</b>	0.548	0.608	0.533	0.423
Distributive Justice	0.900	0.740	<b>0.647</b>	<b>0.865</b>	0.608	0.504
Complaint Satisfaction	0.910	0.780	0.930	<b>0.626</b>	0.640	0.504
Customer Satisfaction	0.820	0.730	0.780	0.800	<b>0.657</b>	<b>0.865</b>
Customer Loyalty	0.79	0.65	0.71	0.71	0.93	<b>0.778</b>

Average Variance Extracted appears in the Matrix Diagonal Correlation Matrix appears below the diagonal Squared correlations appear above the diagonal

Analysis of the Structural Model for Complaint Handling

Having assessed the measurement model, the structural relations were added. The equations for the structural relations are shown below:

$$COMPS = \gamma_1 (PJ) + \gamma_2 (IJ) + \gamma_3 (DJ) \tag{1}$$

$$SAT = \beta_1 (COMPS) \tag{2}$$

$$LOY = \beta_2 (COMPS) + \beta_3 (SAT) \tag{3}$$

In terms of the overall model fit, the model’s goodness of fit indices are within thresholds indicating good fit:  $\chi^2 = 170.12$  ( $p=0.000$ ),  $DF=95$ ,  $\chi^2/df=1.79$ ,  $RMSEA= 0.048$ ,  $GFI = 0.94$ ,  $AGFI= 0.91$ ,  $NNFI= 0.99$ ,  $CFI= 0.99$  and standardized  $RMR = 0.031$ . These results suggest that overall the model fits well to the data. The results presented in Table 3 below show that four out of the six hypothesized relationships were supported. For instance, Procedural justice ( $Y=0.53$ ,  $t=1.96$ ) and Distributive justice ( $Y=0.47$   $t=2.75$ ) were found as predictors of complaint satisfaction, together explaining 96% of its variance. Interactional Justice on the other hand and contrary to what was hypothesized failed to be a statistically significant predictor of Complaint Satisfaction ( $Y=0.00$ ,  $t = -0.01$ ). As for overall Customer Satisfaction, as hypothesized, Complaint Satisfaction ( $\beta=0.84$ ,  $t = 12.69$ ) was found as a predictor for Customer Satisfaction explaining 70% of its variance. Finally, while overall Customer Satisfaction ( $\beta=0.99$ ,  $t = 7.25$ ) was found to be a significant predictor of Customer Loyalty, the direct relationship between Complaint Satisfaction and Customer Loyalty was not supported by the model.

These results present Customer Satisfaction as a mediator of the relationship between Complaint Satisfaction on one side and Customer Loyalty on the other. This result is further corroborated in the forthcoming Table 4, where the indirect effect of Complaint Satisfaction can be clearly seen. As highlighted by Diamantopoulos and Sigauw (2000), statistical power assessment is an important but often neglected issue in model evaluation that is the probability that an incorrect model will be rejected. For the proposed model, and to assess the power associated with testing for exact fit, tables compiled by MacCallum, Browne and Sugawara (1996, p.144) were used. In order to attain a minimum power of 80% which was deemed sufficient by Diamantopoulos and Sigauw (2000) there must be a minimum sample size. In the case of this research, degrees of freedom are 95 and hence the minimum sample size for exact fit is 136. Given that the sample size for this research is 330, it can be inferred that the power of the analysis is good.



Table 3: Structural Relations and Hypothesis Testing

Parameter	Path	Estimate	SE	T-Value	R <sup>2</sup>	Hyp.	Result
Procedural Justice → Complaint Satisfaction	γ	0.53	0.28	1.96**		H1	Supported
Interactional Justice → Complaint Satisfaction	γ	0.00	0.15	-0.01		H2	Not Supported
Distributive Justice → Complaint Satisfaction	γ	0.47	0.17	2.75***		H3	Supported
					<b>0.96</b>		
Complaint Satisfaction → Customer Satisfaction	β	0.84	0.07	12.69***		H4	Supported
					<b>0.70</b>		
Customer Satisfaction → Customer Loyalty	β	0.99	0.14	7.25***		H5	Supported
Complaint Satisfaction → Customer Loyalty	β	-0.06	0.12	-0.54		H6	Not Supported
					<b>0.87</b>		

\*, \*\*, \*\*\* indicates significance at the 10, 5 and 1 percent levels respectively. The table shows the values of the path coefficients, their significance tests and the R-squared measures for the structural model.

Table 4: Effect Decomposition

Parameter	Direct Effect	Indirect Effect	Total Effect
Procedural Justice → Complaint Satisfaction	0.53	0.00	0.53
Interactional Justice → Complaint Satisfaction	0.00	0.00	0.00
Distributive Justice → Complaint Satisfaction	0.47	0.00	0.47
Procedural Justice → Customer Satisfaction	0.00	0.45	0.45
Interactional Justice → Customer Satisfaction	0.00	0.00	0.00
Distributive Justice → Customer Satisfaction	0.00	0.40	0.40
Complaint Satisfaction → Customer Satisfaction	0.84	0.00	0.84
Procedural Justice → Customer Loyalty	0.00	0.41	0.41
Interactional Justice → Customer Loyalty	0.00	0.00	0.00
Distributive Justice → Customer Loyalty	0.00	0.36	0.36
Customer Satisfaction → Customer Loyalty	0.99	0	0.99
Complaint Satisfaction → Customer Loyalty	-0.07	0.83	0.76

This table shows the decomposition of the total effects to direct and indirect effects in the relation between each of the three complaint handling justice constructs and complaint satisfaction, overall customer satisfaction and customer loyalty respectively. When the indirect effect is larger than the direct effect, this may indicate the presence of a mediating construct, in this case Complaint Satisfaction.

### Industry Type

As mentioned earlier on the section on data and methodology, the sample included complaints filed in ten different industries. One of the interesting and novel contributions of the current study is to show variance among industries in the degree of perceived justice in complaint handling, as well as the degree of customer satisfaction and loyalty as a result of complaint satisfaction. This analysis promises useful insights that may inform complaint-handling practice in the various industries. We tested for differences in the endogenous constructs, Complaint Satisfaction, overall Customer Satisfaction and Customer Loyalty, according to the industry using ANOVA with post-hoc Scheffe test. The results show that perceptions of procedural justice are significantly higher in Cafés and Restaurants than in Banking and Investment (Sig.0.021), Automotive Industry (Sig. 0.056) and Internet Service Providers - ISPs (Sig. 0.028). Perceptions of Interactional Justice are significantly higher in Cafés and Restaurants than in the ISP (Sig. 0.083) industry. Perceptions of Distributive Justice are also significantly higher in Cafés and Restaurants than in the Automotive (Sig. 0.023) and ISP (Sig. 0.095) industries.

These results possibly indicate that in Egypt, Cafés and Restaurants have better complaint handling systems than Banking, Automotive and ISP businesses. The same tests were also conducted to explore the industry differences in the levels of complaint satisfaction, overall customer satisfaction and customer loyalty after the complaint. The results show no significant differences between industries in the levels of complaint satisfaction. Both the Mobile Operators (Sig. 0.002) and Cafés and Restaurants (Sig. 0.024) showed markedly higher levels of overall customer satisfaction after the complaint than in Banking and Investment. Moreover, levels of customer loyalty after the complaint were higher for Mobile operators than they were for Automotive (Sig. 0.038), Banking and Investment (Sig. 0.000) and Hospitals (Sig. 0.09). Cafés and

Restaurants also showed higher levels of customer loyalty after the complaint than Automotive (Sig. 0.079), Banking and Investment (Sig. 0.003) and Hospitals (Sig. 0.017). These results possibly imply higher levels of satisfaction and loyalty in Mobile Operators and Cafés and Restaurants, which suggests that in Egypt, these industries are more successful in keeping their customers happy and retaining them after complaints. On the other hand, customers are less satisfied and loyal to businesses in Banking and Investment and in the Automotive industry after complaints. Business operating in these industries may need to make more investments in their complaint handling systems.

## CONCLUDING COMMENTS

This study extends previous literature on complaint handling processes and their impact on customer satisfaction and loyalty and applies the resulting conceptual model to a novel context, namely Egypt. Moreover, the study draws on a relatively large sample from ten different service industries, which enriched previous findings in the literature. One of the key findings of the study points to a higher impact of procedural justice than distributive justice on complaint satisfaction. This result is consistent with Maxham and Netemeyer (2002) and Gelbrich and Roschk (2011). The implication is that often customers care more about being heard, and having their complaint handled in a timely manner as well as feeling they had control over the process than the actual outcome they get. The study has shown that overall customer satisfaction after the complaint mediates the impact of complaint-handling justice on customer loyalty after the complaint. Therefore, it is imperative that companies make sure their customers perceive their complaint handling procedures and outcomes to be fair and are satisfied with the complaint handling experience. The current study has shown that this is an important mechanism if the business aims at retaining its customers and enhancing customer loyalty. Specific implications for particular industries are an important contribution of the study and have been alluded to in the previous section. A key lesson is that several of the service industries examined in this study need to focus on their complaint handling systems and adopt valid measures to track customer satisfaction and loyalty. It is important to note that the results of the study have are limited to the Egyptian context, and more specifically to customers living in the capital cities of the two biggest Egyptian governorates, namely Cairo and Alexandria. Future research on the topic may fruitfully conduct the research from the perspective of the employees to understand how they seek customer complaint satisfaction and how to make customer complaint satisfaction part of the corporate culture. Moreover, moderating variables like brand may be tested and cross-cultural comparisons between Egyptian customers and customers from other nationalities may yield interesting insights.

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