A STUDY OF GRIEVANCE HANDLING AND ITS IMPACT ON CONSUMER PERCEPTION: THE CASE OF UBER & OLA

-Mahima Thakur, Associate Professor, Faculty of Management Studies, University of Delhi
-Mohini Yadav, Assistant Professor, Sri Venkateswara College, University of Delhi
-Mriganka Dutta, Manager - Operational Excellence, Amazon, London

ABSTRACT

The goal of any service provider is to satisfy the customer expectations in order to create a brand loyalty. However, no service provider can escape from the service errors as humans are involved in service delivery. Since the production and consumption of services usually occurs concurrently, the quality of a service is dependent upon the deliverability of the service provider and the recipient's utility. Thus, in order to overcome the limitation of inevitable errors, service providers must be concerned with service recovery. As attracting new customers is costly as compared to retaining existing customers, it becomes another important reason for service providers to must try hard for efficient service recovery. This empirical investigation is designed to test effective recovery processes for service failures in e-hailing by studying the relationship between compensation, apology, and response time on perceived justice, service recovery satisfaction, and repurchase intention of the customer. Our sample consist 160 students from University of Delhi, India, who are active e-hailing service users. The findings indicate that all three e-hailing service recovery attributes appear to be key in creating satisfied customers based on their effects on perceived justice.

INTRODUCTION

The cab industry in India is completely transformed by connecting the smartphone apps with internet users in the past few years. We don't even remember the last time when we called up local cab agency, do you? If we go back to the evolution of cab service providers, Meru cabs were launched in India in 2006, primarily used for airport commutations. It is famous for providing quality services, AC, and well-organized rides (Meru, 2021). There are various other cab agencies in the e-hailing segment like EasyCabs and Mega Cabs, but Meru is undeniably the most sought after cab despite its relatively higher pricing (Nextbigwhat, 2016). However, despite growing preferences for Meru and other cabs agencies, there are many other commuters who are looking for an economical alternatives to travel to airports, offices and other purposes.

Taxiforsure started as an online portal in 2011 for easy online booking of cabs which was

architect upon multiple cab agencies. This was considered as a very smart move by Taxiforsure as customers no longer need to contact multiple agencies and instead can book the cab using just a mobile phone with internet. But Ola, which started operation in 2010, and initiated a different model by associating directly with cab drivers, resulting in elimination of cab agencies. This model reduced the ride rates significantly. This was the main reason that customers started preferring Ola cabs over other cabs in India (Nextbigwhat (2016)).

During 2013, when Ola started flourishing in the India markets, global taxi market leader Uber entered, which light up the competition to another level (Bhattacharya, 2019). However, the growth rate of Uber was slow in the initial years as it was operating in app-only model and provided credit card as the only payment option.

Due to cheap ride prices and high incentives to drivers, Ola was able to increase its customer base exponentially. Soon Taxiforsure started revising their strategies in line with Ola by eliminating the cab agencies and provided various promotional offers. Uber also in its attempt to understand Indian markets introduced other payment options like paytm, debit card, and cash (Nextbigwhat, 2016).

Various mergers and acquisitions happened in this sector like Ola acquired TaxiForSure in 2014, Mahindra & Mahindra acquired Meru in 2021,etc., which fueled up the growth of this sector and still remained competitive as it was before (Meru, 2001; Nextbigwhat, 2016).

If we look at the statistics of market share of this industry, as per ResearchAndMarkets.com report (2019), 2019, Uber's market share in India has reached to 21% and Ola cab's around 72.5%. Other players like Meru, Mega Cabs and Carzonrent together held 6.5% of the total market. This was the main reason that we have chosen Ola and Uber as our case studies as they are undoubtedly the leading companies in this segment in India.

Amidst their chase for offering discounts and other promotions to attract new customers, many instances of wrongdoing of drivers (like rash driving, drunk driving, sexual harassment, etc.), cancellation of bookings without valid reasons and taking long routes are reported in India. Cab drivers are running to complete their incentivized targets and cab aggregators are busy in increasing their market shares Nextbigwhat (2016). Tax and Brown (1998) recommended firms shift their paradigm from pursuing "offensive strategies" (seeking new customer) to "defensive strategies" (keeping and satisfying current customers). Thus, service providers like Ola and Uber should incorporate service recovery as part of their operations strategy, as it provides a second chance to amend failures and retain customers.

OBJECTIVE

The purpose of this study is to understand the importance of grievance handling mechanism and its impact on consumer's perception. Uber and Ola, e-hailing companies which connects drivers and riders for commuting within city or sometime out station as well, are considered for this study. As the dealing of this business involves lots of human interaction and directly serving the customers, a grievance handling mechanism is important to satisfy the unhappy customers.

The object of this study is to find out below relationships for taxi aggregators like Ola and Uber

1.How grievance handling techniques (compensation, respond speed and apology) impact on customer's perceived justice in e-hailing
2. How perceived justice constructs and their interaction impact customer's satisfaction
3. How perceived justice constructs and their interaction influence customers for repurchase

LITERATURE REVIEW

E - Services

E-services are not the same as traditional face-to-face services, most noticeably in the absence of any requirement of physical facility. The concept of e-service is translated many ways in the academic literature and popular press. Traditionally, e-commerce was mainly linked with "communicating the brand and or enabling sales transactions" (De Ruyter et al., 2001).

De Ruyter et al. (2001) provide a comprehensive conceptualization of e-services as "E-service is an interactive, content-centred and Internet-based customer service, driven by the customer and integrated with related organizational customer support processes and technologies with the goal of strengthening the customer-service provider relationship". There is dearth of service research literature in context of e-service. To date, more researchers have acknowledged e-service and more research has incorporated eservices, but it is still relatively scarce as compared to research in manufacturing. Service recovery incorporates all the required actions taken by a service provider during service failures and the process the firm uses to rectify the failure (Kelley and Davis, 1994).

Studies have shown that dissatisfaction with a particular service does not necessarily follow a service failure. Customers are more often restored to a more satisfied state if the recovery process is done immediately. The recovery process could be in the form of an apology to the customer or providing compensation commensurate to their difficulties. Conversely, Kelley and Davies (1994) suggested that the lack of response from organizations after a failure is a significant cause of dissatisfaction to customers. Therefore, e-service providers must make an effort to re-establish a customer's state of well-being following a failure.

Online service quality and customer satisfaction

Many studies on service quality have been expanded to the e-commerce environment (Santos, 2003). The quality of e-service is measured by the consumers' overall judgment of the excellence and quality of e-service offerings in the virtual marketplace (Santos, 2003). Firms could have potentially valuable service offerings, but quality issues such as incomplete transactions, lack of response from service providers, and late delivery of products could threaten the e-service business. A stream of research has found evidence of inadequate service quality being delivered over the Internet.

A link between service quality and improved customer loyalty and retention is evident in e-services. Past research on eservice quality focused on consumer and Web site interaction. However, studies suggest that consumers are interested in the way the services are delivered

as well as the end result of the service. Holloway and Beatty's (2003) research supports this notion and suggests that delivery is the most frequently stated problem. Consumers are interested in the whole process from searching for the products, delivery of the products, and service recovery processes if anything goes wrong. Understanding factors that could contribute to service delivery failures is important to both traditional and online retailers.

Service Failure

The key outcome of the marketing process and the goal of the market economy is customer satisfaction. All service providers strive to perform services without error in order to achieve customer satisfaction. However, Boshoff (1997) suggests that mistakes are an unavoidable feature in service industry due to the intangible nature of services. Since customers are present during traditional service delivery, failures are practically inevitable and service recovery attempts are important to prevent harmful outcomes caused by these mistakes.

In the relationship between service providers and customers, service failure and recovery encounters act as "moments of truth" in maintaining or terminating the relationship. In the restaurant, hotel, and airline industries, over 23 percent of satisfactory encounters are the results of the service recovery attempts (Bitner et al. 1990). Customer reformulate their re-patronage intentions after a service recovery. Therefore, if service providers incorporate a successful service recovery, it can transform customers' dissatisfaction into satisfaction.

Service Recovery and Justice Theory

There are numerous studies which have established the relationship between service recovery and justice theory (Tax et al., 1998; Lind and Taylor, 1988; Goodwin and Ross, 1992). Justice theory has its roots in social psychology, and provides a foundation of how customers' perceive service failures and its recovery process. In this section, the impact of service recovery on procedural, distributive, and interactional justice is considered. In a service recovery setting, procedural justice incorporates the perceived fairness of the policies and actions which the service provides use while rectifying the error (Tax et al., 1998). Distributive justice is related with the perceived fairness of the solution offered by the service provider. Interactional justice is the manner in which complaints are treated, information is exchanged, and outcomes are communicated while going through the recovery process (Maxham & Netmeyer, 2002b). It takes into account interpersonal fairness. Bitner et al. (1990) suggested that how front-line employees or employees that are involved in the recovery process respond to customers will result in the service encounter being remembered as satisfactory or dissatisfactory. How customers' feel they are treated influences their perception of interactional justice. Customers are more emotionally attached to the service providers if they respond and exhibit concern after a service failure.

Service Recovery Satisfaction

Satisfaction is related to fulfilled expectations. If all requirements are met, the outcome will be a satisfied customer. Oliver (1977) suggested, "Satisfaction is the consumer's fulfilment response". Thus, fulfilment of

customers' expectations should be proportional to satisfaction. One of the main aims of service recovery is to transform a customer's emotional response from being dissatisfied with a particular service to a more acceptable condition. Service recovery is an organization's response to poor quality service (Gronroos, 1988). The definition is enhanced by Johnston (1995) who states that it is important for any service organization to take any corrective action post service failure to reduce the damage in the relationship and to make a dissatisfied customer to a satisfied one.

A study by Michel (2002) indicated that service recovery efforts that go beyond customer expectations could improve customer satisfaction with the company. Their study provides support for the example given in Hart et al. (1999) who showed how the manager in Club Med Cancun implemented their service recovery strategy and overcame customers' remorse and dissatisfaction from flight delays.

Past researchers have maintained support for the link between satisfaction and service quality. Parasuraman, Ziethaml, and Berry (1988) suggested that "incidents of satisfaction over time result in perceptions of service quality". Thus, satisfaction has been hypothesized as an antecedent to service quality. However, more researchers have found quality as an antecedent to customer satisfaction.

According to Boshoff (2012), the outcomes of service recovery are improved customer satisfaction. If a customer perceives good service quality, then this should lead to repeat purchases and customer loyalty that would eventually impact the firm's bottom line. So, it is important to understand and identify attributes that could influence this factor. A review of the literature found that many studies examined the relationship between service recovery/failure and satisfaction (Johnston, 1995). However, researchers are in agreement that customer satisfaction can be achieved through the recovery of a service failure. The procedures to reach the outcome and the interactions during the recovery process contribute to customer satisfaction (Goodwin & Ross, 1990).

Repurchase Intention

Repurchase intention is the customer's perception of the likelihood that they will return and purchase the service or not. If a customer is unhappy or if there is a defect in the service transaction, a customer might not want to repeat the experience. Repurchase intention is associated with satisfaction. In a recovery effort, the change in repurchase intention is a more tangible result than the level of customer satisfaction. Customer dissatisfaction as a variable affects repurchase intention (Fang et al., 2011). However, if customer dissatisfaction is resolved by the e-service provider, customers are found to be 8% more loyal than those having no grievance with the e-service provider.

Conceptual Framework and Hypotheses

The model for this study is based on theory developed by Chihyung Ok in 2004. We have replicated the study to test the same hypothesis in the e-hailing sector in India. In the model, the focal point is on how respondents perceived the service recovery process after facing a failure. The interaction effects between the service recovery process attributes and the failure context are considered, and their impact on perceived justice is tested. This investigation looks at the relationship between the e-service recovery

process and its effect on customers' perceptions of service failure. The theoretical model is presented in Figure 1 (adapted from Chihyung Ok in 2004).

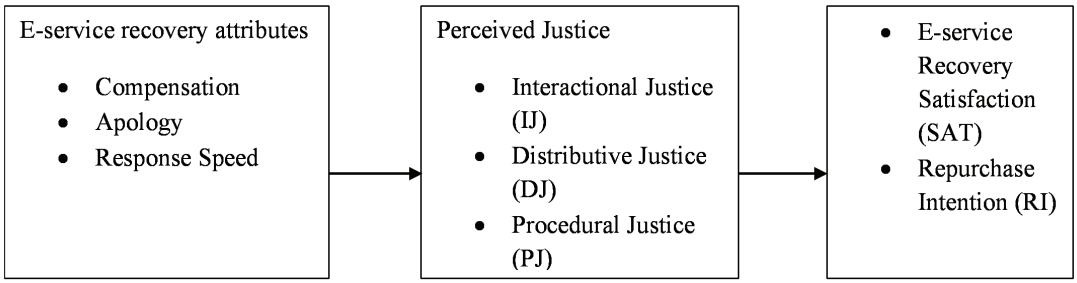

Figure 1: Conceptual Model

The following are proposed hypotheses on the effects of compensation on perceived justice constructs:
H1: There will be significant relationship between compensation and perceived justice in an e-hailing service environment
H1a: There will be significant relationship between compensation and perceived interactional justice in an e-hailing service environment
H1b: There will be significant relationship between compensation and perceived distributive justice in an e-hailing service environment
H1c: There will be significant relationship between compensation and perceived procedural justice in an e-hailing service environment
H2: There will be significant relationship between response speed and perceived justice in an e-hailing service environment
H2a: There will be significant relationship between response speed and perceived interactional justice in an e-hailing service environment
H2b: There will be significant relationship between response speed and perceived distributive justice in an e-hailing service environment
H2c: There will be significant relationship between response speed and perceived procedural justice in an e-hailing service environment
H3: Interaction of response speed and compensation will have significant relationship with perceived justice in an e-hailing service environment
H4: There will be significant relationship between apology and perceived justice in an e-hailing service environment
H4a: There will be significant relationship between apology and perceived interactional justice in an e-hailing service environment
H4b: There will be significant relationship between apology and perceived distributive justice in an e-hailing service environment

H4c: There will be significant relationship between apology and perceived procedural justice in an e-hailing service environment
H5: Interaction of apology and compensation will have significant relationship with perceived justice in an e-hailing service environment
H6: There will be significant relationship between perceived justice and e-hailing service recovery satisfaction
H7: There will be significant relationship between perceived justice and repurchase intention

RESEARCH METHODOLOGY

This study adopted a 2 x 2 x 2 factorial between subject's experimental design (Ok, Chiyung, 2004), to examine the effects of manipulating the independent service recovery variables on respondents' perceived justice, satisfaction, and repurchase intention in an e-hailing service setting. The factors of response speed (immediate versus delayed), apology (automated versus personal call), and compensation (no compensation versus 40% refund) are between-subjects factors. Scenarios are used to administer the manipulated effects of the service recovery variables. It allows the researcher to focus only on the effect of the variable that is most important in a particular study. At the same time, scenarios reduce the possibility of memory biases (Smith et al., 1999).
The design has eight scenarios, each with a combination of service recovery attributes (Fig. 2).

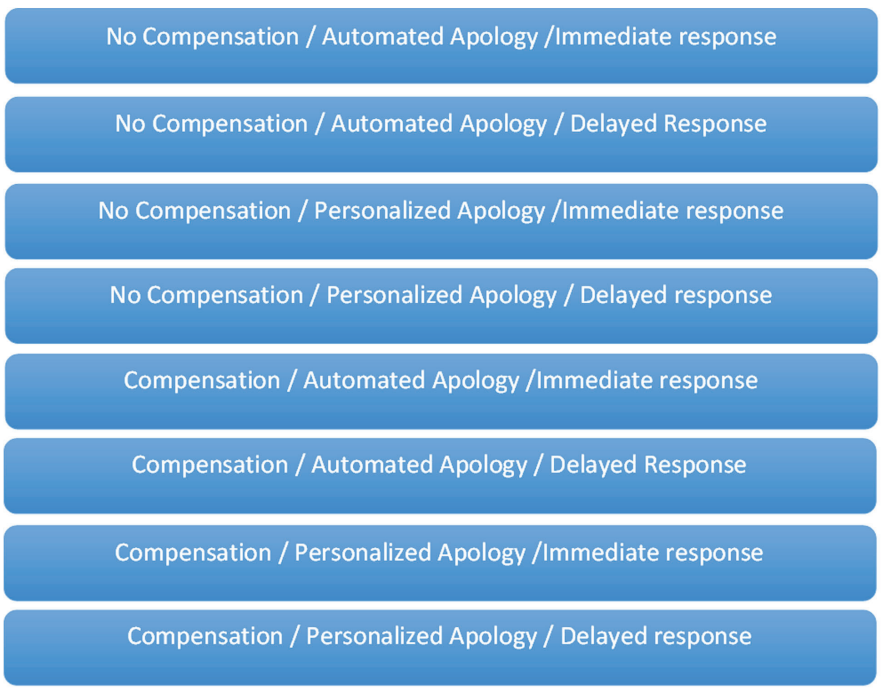

Figure 2: Proposed Manipulations for Independent Variables

The first manipulated factor is whether a customer receives an immediate or delayed recovery response after an e-hailing service failure. Receiving a service recovery response within 24 hours represented an immediate response, and responses occurring five days after a complaint is lodged depicted a delayed response. Within 24 hours are viewed as an immediate response as it is consistent with current practice. Five days is consistent with a delayed response. Manipulation checks confirm that 24 hours versus five days appropriately depict the immediate versus delayed factor levels.

In the current literature apology is often manipulated as an apology is offered or no apology offered (Smith et al., 1999). In e-haling service studies, apology is usually offered via e-mail. For this study, the two levels of apology are 1) apology offered via e-mail, or 2) a personal telephone call. A personal telephone call is an appropriate representation of a personal apology in an e-hailing service environment because a face-to-face interaction is usually not possible. Manipulations checks confirm that apology offered via e-mail versus a personal telephone call appropriately depict the automated versus personal factor levels.

In practice, compensation for e-hailing service failure is usually given in the form of different levels of monetary refunds or discounts for future purchases. For example, Smith et al. (1999) used different levels of discounts as compensation. Offering different levels of compensation allow a variation of responses from the respondents. In this study, I use two levels of compensation: 1) no compensation, and 2) a 40% refund.

RESPONDENTS

Sample consists of the individuals having experience with e-hailing services. Random sampling is done mostly from Delhi University students, India as college students are generally active Internet users and e-hailing service users.

SAMPLE SIZE

For MANOVA, a minimum of 20 observations per cell is recommended (Hair et al., 1998). Following Hair et al, the suggested sample size is above 160 (20 x 8 groups). Our sample is exact 160 participants.

INSTRUMENTS

For interactional justice, we adapted four items out of the 10 items scale from the instrument of Collier and Bienstock, (2006) (reliability coefficient of 0.929), with a slight replacement in the wording e-retailer with e-hailing service provider.

For procedural and distributive justice, we adapted the instrument by Maxham & Netemeyer (2002) (reliability coefficients of .91 and .90, respectively). The authors based their study on two traditional settings where they look at the impact of perceived justice on the consumer's satisfaction and repurchase intent following a service failure.

For service recovery satisfaction, we adapted the instrument from Bakar (2017) (reliability coefficient of .93). This scale is used to measure the level of customer satisfaction after experiencing e-service failure.

Repurchase intention is measured using an adapted scale from Maxham (1999). This study

is conducted in a traditional setting looking at perceived justice on consumer complaint behaviour, with a reliability coefficient of .93.

All the instruments used in this study are adapted to fit the e-hailing service environments and all the statements are measured on a seven point Likert-scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (7).

DATA ANALYSES

SPSS version 19.0 is used for analysing the data. Reliability analysis are performed to confirm the dimensionality, validity, and reliability of the instrument. This is followed by MANOVA and multiple regressions to test the aforementioned hypotheses. For hypothesis testing, multivariate analysis of variance (MANOVA) is used. The relationship between perceived justice and e-recovery satisfaction is examined using multiple regressions.

RESEARCH FINDINGS

Demographics of Respondents

The sample consist adequate representation of female and male respondents (41% and 59% respectively) (Table 1). In terms of age, 90.6% respondents are within the ages of 20 and 39. All the respondents belonged to Metro cities.

Table 1: Demographics of Respondents.

Demographics		Number	Percentage
Gender	Male	94	58.8%
	Female	66	41.3%
Age (Yrs)	<20	12	7.5%
	20-29	136	85.0%
	30-39	9	5.6%
	40-49	3	1.9%
	>50	0	0.0%
City	Metro	159	99.4%
	Non-Metro	1	0.6%

Table 2 shows that 23.8% of the samples use e-hailing service daily basis and 50.6% use e-hailing service several times per week. 43% respondents agree that they faced e-hailing service problem and 34% strongly agreed for the same. Hence, the respondents' experiences with e-hailing service and its failure and it is concluded that the respondents could provide good data for this study.

Table 2: Internet Activity of Respondents.

Activity		Number	Percentage
Frequency of e-ride in Ola/Uber/Meru etc	Daily	38	23.8%
	Several times per week	81	50.6%
	Several times per month	13	8.1%
	Less often than monthly	28	17.5%
Faced problem while taking e-ride	Strongly disagree	2	1.3%
	Disagree	29	18.1%
	Neutral	5	3.1%
	Agree	69	43.1%
	Strongly agree	55	34.4%

Normality Test

Normality test is conducted using skewness and kurtosis statistics from SPSS. All variables had values in the range of -.339 to .150 for skewness and -1.410 and -.912 for kurtosis (refer table 3). Normality assumption is not violated as the normal acceptable range of kurtosis and skewness by Leech, Barrett, and Morgan (2014) and Hair et al. (2010) are satisfied.

Table 3: Skewness and Kurtosis.

Statistics

		IJ	DJ	PJ	SAT	RI
N	Valid	160	160	160	160	160
	Missing	0	0	0	0	0
Skewness		-.339	-.065	.150	-.232	-.216
Std. Error of kewness		.193	.192	.193	.192	.192
Kurtosis		-1.025	-1.410	-1.270	-.920	-.912
Std. Error of Kurtosis		.382	.382	.382	.382	.381

HYPOTHESIS TESTING

This study adopted a 2 x 2 x 2 full factorial between-subjects multivariate analysis of variance (MANOVA). The effect of no compensation vs. Rs 150 compensation, email apology vs. personal apology, and 1 day response speed vs. 5 day response speed are investigated. The dependent variables

are three types of perceived justice constructs - interactional, distributive, and procedural justice. In addition, regression is used to predict the relationship between the perceived justice variables and e-hailing service recovery satisfaction. Although repurchase intention was initially considered as one of the dependent variables in the MANOVA model, it was dropped due to very high correlation (R=0.876, Table 4) between satisfaction and repurchase intention. Severely high correlation indicates the variables are measuring the same thing. E-hailing service recovery satisfaction was deemed more germane to the study and retained. Table 5 provides the descriptive statistics.

Table 4: Intercorrelations, Mean and Standard Deviation for Dependent Variables.

Variable	IJ	DJ	PJ	SAT	RI	M	SD
Interactional Justice	1	0.815	0.735	0.871	0.871	4.43	1.48
Distributive Justice		1	0.564	0.866	0.864	3.91	1.60
Procedural Justice			1	0.703	0.628	3.97	1.66
Satisfaction				1	0.876	3.91	1.29
Repurchase Intention				1	3.83	1.31	

IJ = Interactional Justice, DJ = Distributive Justice, PJ = Procedural Justice
RI = Repurchase Intention, M = Mean, SD = Standard Deviation

Table 5: Means and Standard Deviations for Interactional Justice (IJ), Distributive Justice (DJ), Procedural Justice (PJ), satisfaction (SAT), and Repurchase Intention (RI) as a Function Attributes of Service Recovery.

				IJ		DJ				SAT		RI	
COMP	APO			M	SD	M	SD			M	SD	M	SD
Comp	Email			5.96	0.38	5.89	0.41			5.26	0.39	4.63	0.48
				5.15	0.67	4.70	0.71			4.44	0.53	4.71	0.33
	PC			6.11	0.37	5.62	0.61			5.60	0.48	5.74	0.33
				4.62	0.52	4.97	0.53			4.34	0.38	4.43	0.44
No Comp	Email			3.24	0.62	2.46	0.61			3.10	0.65	2.77	0.33
				2.04	0.59	1.75	0.40			2.08	0.67	1.78	0.49
	PC			5.57	0.54	3.67	0.72			4.26	0.49	4.12	0.43
				3.13	0.46	2.30	0.36			2.40	0.28	2.57	0.51

HYPOTHESIS TESTING - MANOVA

ZAll main effects and interactions of the combinations are tested for significance (refer Table 6). The results indicate that consumers perceived interactional justice, distributive justice, and procedural justice levels are significantly different for each factor level of attributes of service recovery (compensation, response speed, and apology). All independent variables showed significant effects at p<.005, implying that all of the service recovery process attributes had a significant impact.
As hypothesized, compensation had a significant main effects on consumers' distributive justice, procedural justice, interactional justice, p<.001. These results show that compensation improved the customer's perceived justice level in the service recovery process. Hence, H1, H1a, H1b, H1c are supported.

The main effect of response speed had a statistically significant main effects on consumers' distributive justice, procedural justice, interactional justice, p<.001. This indicates that a faster response speed will improve the customer's perceived justice. Therefore, response speed is a key driver in a service recovery route. This result supports H2, H2a, H2b and H2c.

Similarly, the main effect of apology is also statistically significant with p<.005. These results indicate that a more personal form of apology in the service recovery process increases the perceived justice of consumers. Therefore, H4, H4a, H4b, H4c are supported.

Table 6: Multivariate Effects of Service Recovery Attributes on Perceived Justice.

Effect	Pillai's Trace	F	df	Error df	P	η2
COMP	0.905	477.7	3	150	0.000***	0.905
APO	0.398	33.0	3	150	0.000***	0.398
RS	0.901	452.7	3	150	0.000***	0.901
COMP X APO	0.508	51.6	3	150	0.000***	0.508
COMP X RS	0.179	10.9	3	150	0.000***	0.179

Significant at ***p <.001

The follow-up ANOVAs (see Table 7) indicate that the effects of compensation, response speed and apology are statistically significant for all perceived justice constructs. Hence, service recovery attributes can be utilized to positively affect respondents' perceptions of equity and e-hailing service recovery satisfaction when failure occurs.

The interaction effect for compensation and response speed is statistically significant with p<.001. The follow-up ANOVA analysis (refer to Table 4.7) indicates that the interaction effect of compensation and response speed is not significant for distributive justice at p<.10. This effect could indicate that the positive impact of a response speed as part of a service recovery process

could be exacerbated when accompanied by monetary compensation. Therefore, H3 is supported. The interaction effect for compensation and apology is statistically significant with p<.001. Hence, H5 is supported.

In summary, H1, H2, H3, H4, and H5 are supported based on MANOVA results.

Table 7: Univariate Effects of Service recovery process attributes on Perceived Justice.

Source	Dependent Variable	Df	F	P	η2
COMP	IJ	1	548.6	0.000***	0.783
	DJ	1	974.6	0.000***	0.865
	PJ	1	191.4	0.000***	0.557
APO	IJ	1	82.0	0.000***	0.351
	DJ	1	24.8	0.000***	0.140
	PJ	1	10.4	0.002**	0.064
RS	IJ	1	313.3	0.000***	0.673
	DJ	1	122.4	0.000***	0.446
	PJ	1	1235.8	0.000***	0.890
COMP X APO	IJ	1	127.9	0.000***	0.457
	DJ	1	24.9	0.000***	0.141
	PJ	1	42.9	0.000***	0.220
COMP x RS	IJ	1	16.1	0.000***	0.096
	DJ	1	0.5	0.491	0.003
	PJ	1	8.5	0.004**	0.053
APO X RS	IJ	1	33.2	0.000***	0.179
	DJ	1	0.1	0.738	0.001
	PJ	1	12.3	0.001**	0.075
COMP X APO X RS	IJ	1	2.8	0.096†	0.018
	DJ	1	11.6	0.001**	0.071
	PJ	1	5.6	0.019*	0.036
Error	IJ	152			
	DJ	152			
	PJ	152			

Significant at ***p <.001, **p <.01, *p <.05, † marginally significant at p < .10

HYPOTHESIS TESTING – MULTIPLE REGRESSION

Multiple regressions are used to determine the relationship between the perceived justice constructs and the dependent variable in e-hailing services satisfaction. In order to determine whether the independent variables are multicollinear, Tolerance and Variance Inflation Factors (VIF) are checked. VIF is considered the most reliable approach to examine multicollinearity. Based on the summary of tolerances and VIF values presented in Table 8, there is no multicollinearity issue, between the perceived justice variables, as the VIF values are less than 5.0 (Hair et al., 2010).

Table 8: VIF value of multiple regressions.

Excluded Variables[a]

					Collinearity Statistics			
Model	**Beta In**	**T**	**Sig.**	**Partial Correlation**		**Tolerance**	**VIF**	**Minimum Tolerance**
1.	DJ	.465b	8.198	.000	.547	.336	2.976	.336
	PJ	.136b	2.388	.018	.187	.459	2.178	.459
2.	PJ	.173c	3.690	.000	.283	.455	2.195	.225

a. Dependent Variable: SAT
b. Predictors in the Model: (Constant), IJ
c. Predictors in the Model: (Constant), IJ, DJ

Table 9: Coefficients of multiple regressions.

	Unstandarized B	Coefficients std error	Standarized coefficient beta
IJ	0.306	0.058	0.350
DJ	0.392	0.044	0.483
PJ	0.135	0.037	0.173

Table 10: R value of multiple regressions.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1.	.871a	.758	.756	.63895	
2.	.911b	.830	.828	.53638	
3.	.919c	.844	.841	.51605	1.951

a. Predictors: (Constant), IJ
b. Predictors: (Constant), IJ, DJ
c. Predictors: (Constant), IJ, DJ, PJ
d. Dependent Variable: SAT

Adjusted R square value (Table 10) is 0.841 which shows there is very high level of correlation between the perceived justice constructs and the dependent variable e-hailing services satisfaction. 84.1% of the variance in e-hailing service satisfaction can be explained by predictors - interactional justice, distributive justice and procedural justice. The coefficients of interactional justice, distributive justice, and procedural justice are shown on table 4.9. And we already found out that there is high correlation between e-hailing service recovery satisfaction and repurchase intension. Hence, H6 and H7 are supported.

CONCLUSION

This study investigated how certain e-hailing service recovery attributes impacted perceived justice and how perceived justice can be used to predict customer satisfaction with a service recovery. These relationships have been examined in traditional services, but not in e-hailing services. Despite their similarities, there are a few significant differences. E–hailing service consumers appear to be influenced more by compensation and response speed than apology type when compared to consumers on traditional services. For policy makers, in e-hailing service organization, it is essential to have an effective recovery process. The results of this study shed light on the importance of certain service recovery attributes on creating customer satisfaction through perceived justice. The findings indicate that compensation has the largest impact on distributive justice, apology has the largest influence on interactional justice, and response speed has the largest effect on procedural justice. So all three e-hailing service recovery attributes appear to be key in creating satisfied customers based on their effects on perceived justice.

DISCUSSION

The intention of this study is to contribute to the stream of research in e-hailing services in context of justice theory. Ola and Uber, the major players in the market, are specifically chosen to identify and test effective recovery processes for failures in depth. It is utmost important for any service provider to ensure the satisfaction of customers, as it can be a catalyst for continuous patronage to their services (Ranaweera and Prabhu, 2003). It is not possible for the e-hailing service providers to be completely error-free as humans are prone to errors (Boshoff, 1997). Although there may be no human interaction in e-services, errors can still occur; for example, navigation can cause customer dissatisfaction, congestions on road or website/app errors can cause transactions to fail (Agarwal et. al, 2021). Service providers address such issues to deliver quality e-service and customer satisfaction and when failures occur, a good service recovery system helps create customer satisfaction and perhaps, loyalty (Boshoff, 2012 and Ok, Chihyung, 2004). There is dearth of literature in understanding customers' perceptions of quality

and customer satisfaction, and the associated recovery attributes in context of e-hailing services.

The results indicate that consumer's levels of perceived justice are significantly different for each level of compensation, apology and response speed. Without compensation, distributive justice is substantially lower while when monetary compensation is provided, distributive justice exceeds procedural justice and the gap between interactional justice is small. In addition, the level of interactional justice exceeds procedural justice, and widens when compensation is given. Interactional justice indicates that it is the most sensitive to the apology type. Furthermore, the gap between procedural justice and distributive justice decreases more with a personal apology. When a response speed is slow, interactional and distributive justice has similar levels, with procedural justice much lower, while response speed is high, procedural and interactional justice are similar, with distributive justice much lower. This implies that procedural justice is the most sensitive to the length of the response time taken to fix service recovery failure.

The interaction effect for compensation and response speed is statistically significant (with $p<.001$) with perceived justice in an e-hailing service environment. However, their interaction effect is not significant for distributive justice. This effect could indicate that the positive impact of a response speed as part of a service recovery process could be exacerbated when accompanied by monetary compensation.
Also, the interaction effect for compensation and apology is statistically significant (with $p<.001$) with perceived justice in an e-hailing service environment.

This study provides empirical support regarding the impact of recovery attributes on perceived justice in e-hailing service environments. E-hailing service is revolutionizing business and provides an increasingly rich area for conducting research in service operations. E-service providers must make an effort to re-establish a customer's state of well-being following a failure. This study developed a new variable for e-hailing service recovery satisfaction and also contributed to the research on perceived justice and how it predicts e-hailing service recovery satisfaction.

References

1. Agarwal, S., Mani, D. and Telang, R. (2021). The Impact of Ride-hailing Services on Congestion: Evidence from Indian Cities. SSRN Electronic Journal. doi:10.2139/ssrn.3410623
2. Bhattacharya, A. (2019). Ola vs Uber: The latest score in the great Indian taxi-app game. Retrieved from https://qz.com/india/1545042/ola-vs-uber-the-latest-score-in-the-great-indian-taxi-app-game/
3. Bitner, M., Booms, B., & Tetreault, M. (1990). The Service Encounter: Diagnosing Favorable and Unfavorable Incidents. Journal of Marketing, 54(1), 71-84. doi:10.2307/1252174
4. Boshoff, C. (1997), "An Experimental Study of Service Recovery Options."
5. Boshoff, C. and Leong, J. (1998), "Empowerment, attribution and apologising as dimensions of service recovery: An experimental study", International Journal of Service Industry Management, Vol. 9 No. 1, pp. 24-47. https://doi.org/10.1108/09564239810199932

6. Boshoff, C. (2012). A Neurophysiological Assessment of Consumers' Emotional Responses to Service Recovery Behaviors: The Impact of Ethnic Group and Gender Similarity. Journal of Service Research, 15(4), 401–413. https://doi.org/10.1177/1094670512453879
7. Brown, S.W., Fisk, R. P., & Bitner, M. J. (1994). The Development and Emergence of Services Marketing Thought.
8. Collier, J. E., & Bienstock, C. C. (2006). Measuring service quality in e-retailing.
9. De Ruyter, K., Wetzels, M., & Kleijnen, M. (2001). Customer adoption of e-service: an experimental study
10. Fang, Y.H., Chiu, C.M. & Wang, E.T. (2011). Understanding customers' satisfaction and repurchase intentions: An integration of IS success model, trust, and justice
11. Goodwin, C., & Ross, I. (1992). Consumer responses to service failures: influence of procedural and interactional fairness perceptions
12. Hair Jr., J. F. et al. (1998). Multivariate Data Analysis with Readings. Englewood Cliffs, NJ: Prentice-Hall.
13. Hair.Jr., J. F., Black., W. C., Babin., B. J., Anderson., R. E., & L.Tatham., R. (2006). Multivariant Data Analysis. New Jersey: Pearson International Edition.
14. Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). Multivariate Data Analysis. Seventh Edition. Prentice Hall, Upper Saddle River, New Jersey.
15. Holloway, B. B., & Beatty, S. E. (2003). Service Failure in Online Retailing: A Recovery Opportunity
16. Kelley, S.W. & Davis, M.A. (1994). Antecedents to customer expectations for service recovery
17. Lind, E. & Tyler, Tom. (1988). The Social Psychology of Procedural Justice. 10.2307/2073346.
18. Maxham III, J. G., & Netemeyer, R. G. (2002) a. A longitudinal study of complaining customers' evaluations of multiple service failures and recovery efforts
19. Maxham III, J. G. (1999). Service recovery's influence on consumer satisfaction, positive word-of-mouth, and purchase intentions
20. Medjahed, B., Benatallah, B., Bouguettaya, A., Ngu, A.H.H., & Elmagarmid, A.K. (2003). Business-to-Business Interactions: Issues and Enabling Technologies
21. Meru (2021). About us. Retrieved from https://www.meru.in/about-us/our-investors
22. Nextbigwhat (2016). The Curious Case Of Indian Cab Industry. Retrieved from https://nextbigwhat.com/indian-cab-industry/
23. Ok, Chihyung (2004). The effectiveness of service recovery and its role in building long term relationships with customers in a restaurant setting. Retrieved from https://core.ac.uk/download/pdf/5164187.pdf
24. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research
25. Ranaweera, C. and Prabhu, J. (2003). On the relative importance of customer satisfaction and trust as
26. determinants of customer retention and positive word of mouth. Journal of Targeting, Measurement and Analysis for Marketing. Vol. 12, 1, pp. 82–90
27. ResearchAndMarkets.com report (2019). Online Taxi Services Market in India: Profiles of Leading Market Players Including ANI Technologies, Carzonrent and Uber India - ResearchAndMarkets.com. Retrieved from https://www.businesswire.com/news/home/20200515005415/en/Online-Taxi-Services-

Market-in-India-Profiles-of-Leading-Market-Players-Including-ANI-Technologies-Carzonrent-and-Uber-India---ResearchAndMarkets.com
28. Santos, J. (2003). E-service quality!: A model of virtual service quality dimensions.
29. Smith, A. K., Bolton, R. N., & Wagner, J. (1999). A Model of Customer Satisfaction with Service Encounters Involving Failure and Recovery
30. Tax, S. S., & Brown, S. W. (1998). Recovering and learning from service failure.
31. Tax, S. S., Brown, S. W., & Chandrashekaran, M. (1998). Customer evaluations of service complaint experiences: implications for relationship marketing