

PERSONALITY TRAITS AND REPATRONAGE INTENTIONS AFTER SERVICE FAILURE

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ABSTRACT

This research investigates how personality traits and attitudes can be used to classify customers into categories that suggest how they will respond to service failures in a restaurant setting. Study participants reported the extent to which they agreed or disagreed with statements that reflected their attitudes towards service failures and that provided insight into their personalities. Factor analysis revealed four personality types: indifferent and self-critical, mixed-up, empathetic, and intolerant. Factors identified through EFA were validated through CFA. This was followed by application of the data mining techniques of feature selection and C&RT to generate rules that indicate which personality traits are associated with greater or lower likelihood of revisiting a restaurant after a service failure.

Keywords: Big Five Factors of Personality; factor analysis; data mining; service failure; feature selection; C&RT

INTRODUCTION

Service failure, or service breakdown, can be defined as service that does not meet customer expectations. There are numerous reactions customers may have to service failures, but the most commonly investigated are changes in satisfaction, emotive reactions (such as anger, displeasure, or remorse), and behavioral consequences (such as complaining or switching service providers). A significant behavioral outcome of service failure relates to the repatronage of service providers

(Blodgett 1994; Huang, Hung, Fu, Hsu, and Chiu 2015). Long-term loyalty is likely to be affected by service failure (Buttle and Burton 2002; Komunda and Osarenkhoe 2012), especially when there is a chance to change suppliers. Indeed, Keaveney (1995) found that one of the most common reasons for people switching firms was service failure. Ok, Back, and Shanklin (2005) demonstrated in a study undertaken in a restaurant setting that the manner in which a service failure is handled affects behavioral intentions of customers, including the likelihood of a repeat visit.

The hospitality sector has several characteristics that distinguish it from other sectors. Services are relatively intangible, and customers generally evaluate them on the basis of their individual experience. Moreover, the provision of hospitality services is typically on-demand, and production and consumption are often simultaneous. As a result, service failures are guaranteed to occur. Although striving to reduce the number of failures is an important goal, recovery from service failure events is equally important (Dabholkar and Spaid 2012; Forrester and Maute 2013; Hoffman, Kelley, and Rotalsky 2016; Sparks and Fredline 2007).

Research has shown that customers' perceptions of service quality affect their level of satisfaction; thus service quality is an antecedent of customer satisfaction (Cronin and Taylor 1992; Orel and Kara 2014; Ryu, Lee, and Kim 2012). Comments such as "in the past they did a good job, but

I was really dissatisfied with the service this time” indicate the intermittent nature of customer satisfaction. If the performance of the service firm has been good in the past and the current failure in service is not too serious, the consumer will usually give the firm another opportunity. However, if the service failure is grave in nature or the service firm has not performed well in the past, the customer is likely to choose another provider the next time (Augusto de Matos, Henrique, and de Rosa 2013; Chuang, Cheng, Chang, and Yang 2012; Clow and Kurtz 2004; Liang, Ma, and Qi 2013).

In cases of service failure, the level of customer dissatisfaction depends to a large extent on the attitude of the customers and what the customers perceive as the cause of the failure (Folkes, Koletsky, and Graham 1987; Harrison-Walker 2012; Tsai, Yang, and Cheng 2014). Customer attitudes towards service failures are also influenced by personality (Mano and Oliver 1993; Mooradian and Olver 1997; Westbrook and Oliver 1991). As such, more research on the effect of personality on repurchase behavior is needed (Tan, Foo, and Kwek 2004).

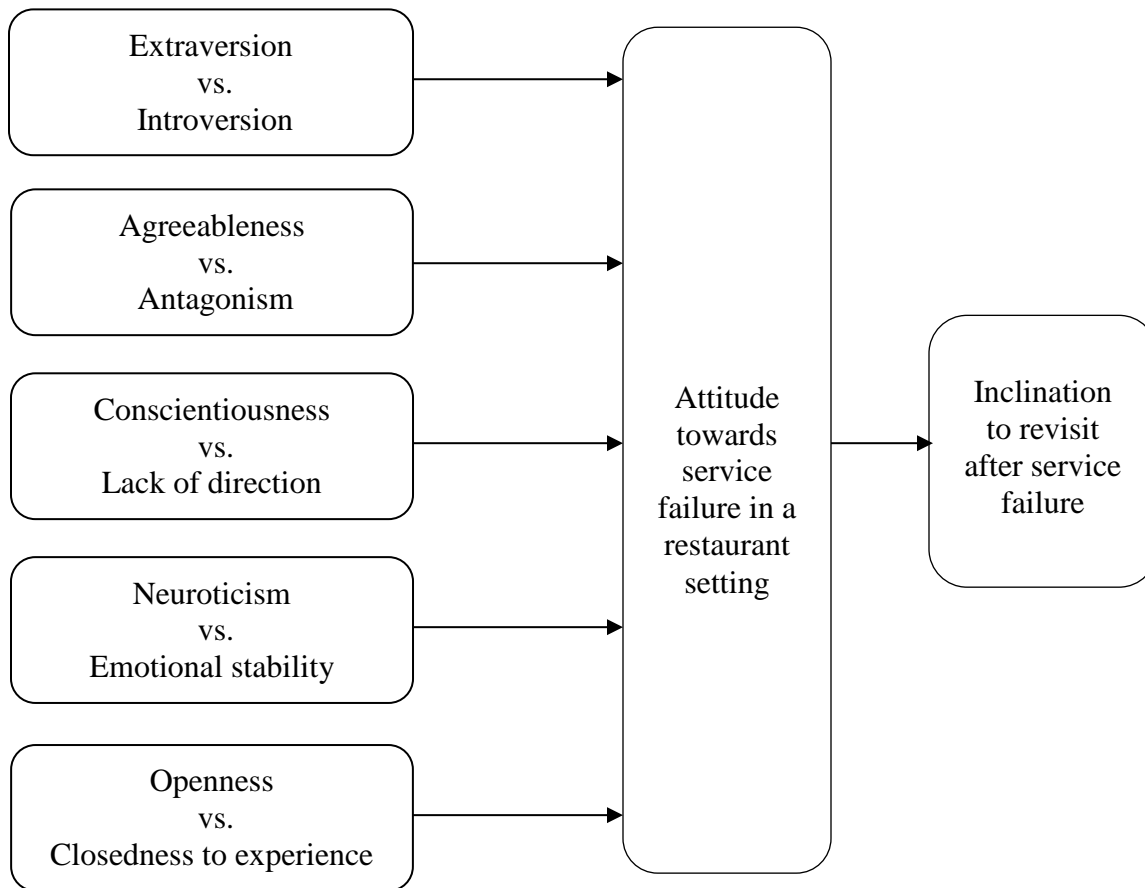
The basis for the current research is the Big Five Factors (dimensions) of personality (Goldberg 1993). This is depicted in our theoretical model shown in Figure 1. Statements based on the Big Five Inventory (BFI) were formulated to assess personality type and attitude toward service failure.

In this research we seek to understand the relationship between personality traits/attitudes and responses to service failures, especially in service settings. In particular, we (1) analyze the traits of customers given their reactions to service failures, (2) classify customers on the basis of their repatronage behavior, (3) compute the impact of different traits on the classes of customers identified, and (4) identify the demographic characteristics of the extracted customer groups. We begin with a review of the literature, followed by a description of our methodology and analysis. This is followed by a discussion of the research findings and managerial implications. We conclude with limitations of the research and directions for future research.

LITERATURE REVIEW

Personality

In the words of Lazarus and Monat (1979), “personality can be explained as the psychological characteristics and makeup of an individual that are fundamental, comparatively stable and that organize human experience while shaping his/her actions and responses to the environs.” In other words, personality is the combination of the behavioral and mental characteristics of an individual that make him or her distinctive (Bermúdez 1999; Batia 2007). The present study has been undertaken to identify how personality variables affect post-purchase consumer behavior.

FIGURE 1: THEORETICAL MODEL

Five-Factor Model of Personality

The current research uses the Five-Factor Model (FFM) of personality as the basis for analyzing the personalities of customers in the context of how they respond to service failures. The FFM of personality is evaluated using the NEO Five-Factor Inventory (NEO-FFI) as advanced by Costa and McCrae in 1992. Customers are analyzed on five dimensions of personality: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Neuroticism can be described as the propensity of a person to experience negative affect and consequent

emotional upheaval. Extraversion denotes a person's inclination towards constructive emotions, friendliness, and eagerness. Openness to experience indicates a readiness to entertain new and progressive ideas. Agreeableness is the predisposition to be affable and humane. The fifth dimension, conscientiousness, represents a determined, resolute and ordered individual (McAdams 1994; Marshall, Wortman, Vickers, Kusulas, and Hervig 1994; Paunonen and Ashton 2001; Wiggins and Trapnell 1997, De Raad and Doddema-Winsemius 1999; John and Srivastava 1999; Liao and Chuang 2004).

**TABLE 1: BIG FIVE DIMENSIONS
(SOURCE: JOHN AND SRIVASTAVA 1999)**

Big Five Dimensions	Facet (and correlated trait adjective)
Extraversion vs. introversion	Gregariousness (sociable) Assertiveness (forceful) Activity (energetic) Excitement-seeking (adventurous) Positive emotions (enthusiastic) Warmth (outgoing)
Agreeableness vs. antagonism	Trust (forgiving) Straightforwardness (not demanding) Altruism (warm) Compliance (not stubborn) Modesty (not show-off) Tender-mindedness (sympathetic)
Conscientiousness vs. lack of direction	Competence (efficient) Order (organized) Dutifulness (not careless) Achievement striving (thorough) Self-discipline (not lazy) Deliberation (not impulsive)
Neuroticism vs. emotional stability	Anxiety (tense) Angry hostility (irritable) Depression (not contented) Self-consciousness (shy) Impulsiveness (moody) Vulnerability (not self-confident)
Openness vs. closedness to experience	Ideas (curious) Fantasy (imaginative) Aesthetics (artistic) Actions (wide interests) Feelings (excitable) Values (unconventional)

The NEO PI-R evaluates six facets of personality for each of the Big Five dimensions (Costa and McCrae 1992) as shown in Table 1.

Research investigating the relationship between personality traits and consumer behavior in a service setting is limited. Understanding this relationship is important, however, since personality may influence response to service failure (Lovelock and Young 1979; Normann,

1991). Thus, studying how customer characteristics in general and personality traits in particular contribute to customers' service experience and satisfaction is warranted (Tan et al. 2004).

In the current study, the statements used to measure customer attitudes towards service failures were related to the above mentioned facets within each personality trait, and names were assigned to the factors accordingly.

Personality and Consumer Behavior

Kassarjian and Sheffet (1991) proclaim that a significant amount of vagueness exists in the relationship between personality and consumer behavior; however, there are various theoretical models related to post-purchase behavior and customer response to unsatisfactory experience that put forward personality as an important precursor to post-purchase behavior (Singh 1990). Earlier, Howard and Sheth (1969) had described personality traits as the characteristics of customers that differentiate one individual from another and hence can be predictive of their behavior. Engel, Kollat, and Blackwell (1973) also highlight personality as a total of all the factors involved in each person's way of thinking, behaving, and responding to different situations. Percy (1976) proposes that an individual's personality is likely to affect his choice of surroundings, and since a person's purchase behavior and media mode selection are constituents of his surroundings, these can be considered to be influenced by his personality. McGuire (1968) has also

detailed the effects of specific personality traits of an individual on the various stages of the purchase process. The present study further applies the Five Factor Theory of personality to understand how personality affects customers' attitudes towards service failures and consequently repurchase intentions in response to the same.

METHODOLOGY

Personal interviews were used to administer a structured questionnaire to 500 + 210 (CFA) respondents in five cities in the northern part of India: Lucknow, Kanpur, Allahabad, Agra, and Varanasi. In each city, two dine-in restaurants were selected on the basis of catering to similar segments of customers. At each restaurant, fifty respondents were invited to participate in the study. The questionnaire was administered to customers who had either visited the particular restaurant in the past or were still regular customers. Demographics of the initial 500 participants are shown in Table 2.

TABLE 2: DEMOGRAPHIC CHARACTERISTICS OF INITIAL SAMPLE

Gender		Household income (INR per month)	
Male	(60.2%)	<20000	(31.7%)
Female	(39.8%)	20001-35000	(37.2%)
		35001-50000	(22.2%)
		>50000	(8.9%)
Age (in years)		Number of family members	
15-25	(39.2%)	2	(6.3%)
26-40	(28.7%)	3	(57.5%)
41-55	(22.8%)	4-5	(23.4%)
> 55	(9.3%)	>5	(12.8%)

Responses to service failures were measured using statements that covered the different dimensions of personality as identified in the Five Factor Model of personality. The statements were framed so as to meaningfully and effectively elicit the personality traits of the respondents in the backdrop of FFM. To make the statements more pertinent, focused group discussions were conducted with different people from various age groups. After preparing the questionnaire, the initial draft was given to three professional scholars in related fields to review. The questionnaire was then pilot tested with fifty respondents. Based on the results of the pilot test, vague questions were removed and several alternative questions were introduced.

For each statement on the questionnaire, the respondent indicated his or her level of agreement or disagreement on a six-point Likert scale (strongly disagree=1, disagree=2, somewhat disagree=3, somewhat agree=4, agree=5, and strongly agree=6). Each respondent was also asked to indicate his or her likelihood of returning to the restaurant on a six-point scale, from highly unlikely (1) to highly likely (6).

ANALYSIS

Exploratory Factor Analysis

Of the 500 initial responses that were obtained, eight were excluded during the data cleaning process due to incomplete questionnaires, out-of-range entries, and unusual cases. Reliability of the nineteen items used to measure personality was 0.787. To determine whether it would be appropriate to run a factor analysis on these items, the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's Test of Sphericity were computed. Since the KMO (0.837) was greater than 0.5 and Bartlett's Test was statistically significant

(approximate Chi-Square=2405, $df=131$, $p=0.00$), sample size was deemed adequate for factor analysis.

Factor analysis with varimax rotation was run on the 19 items with eigenvalues greater than one. A five-factor solution was obtained initially with one of the factors having only a single item and some factors having items with high cross loadings ($>.35$). An iterative EFA process led to the removal of the single item factor (one item) and items with high cross loading (one item), leading to a four-factor solution with the remaining 17 items. These 17 items accounted for 56.80% of the total variance explained by EFA. Table 3 shows the matrix obtained using varimax rotation with Kaiser Normalization. Items with the highest loadings were selected as the variables comprising the factors. On the basis of the items included in each factor, the factors were named "Indifferent and Self-Critical - ISC" (factor 1), "Mixed-Up - MU" (factor 2), "Empathetic - E" (factor 3), and "Intolerant - I" (factor 4).

Next the identified factors were related to the five-factor theory of personality. Factor ISC is most closely related to "closed to experience." The statements included in this factor are "I tend to ignore service failure in the restaurant" (low on curiosity), "I don't usually bother to analyze the service failure in the restaurant" (low on interest), "Once I have figured out a single cause for service failure in the restaurant, I don't do anything about it" (low on feelings), "I wasn't communicative about my preferences and the services that I need" (not artistic [expressive]), and "I was over expecting from the restaurant and its fulfillment is not possible" (high on feelings).

Factor MU corresponds to the "lack of direction" trait of the BFI since it consists

of statements such as “I have little knowledge about other restaurants so I cannot compare” (incompetent), “I don’t have a particular choice of food which I like” (unorganized), and “I remain confused with the quality of service which I wish to receive” (careless).

Factor E relates to the “agreeableness” attribute of the BFI, since it includes statements such as “Employees are also human beings and they can serve up to a limit” (not demanding), “I tell the waiter to replace the food items but I would continue to visit the restaurant” (not stubborn), “I politely talk to the manager and give him suggestions” (warm), “I just leave the restaurant quietly thinking that the restaurant has been providing good service before and will continue that in the future” (forgiving), and “I give benefit of a doubt to the restaurant in case of service failure” (sympathetic).

Factor I refers to the “neuroticism” variable of the BFI. Statements include “I spread bad word of mouth about the restaurant after a service failure” (hostile), “I easily get frustrated with the waiting time in the restaurant and blame the restaurant” (not contented), and “I don’t give the restaurant a second chance to improve” (angry).

Confirmatory Factor Analysis

CFA was run on a new set of data from 210 respondents. The sample was comprised of 62% males and 38% females. With respect to age, 38% were 15-25 years old, 28% were

26-40, 23% were 41-55, and 11% were over 55. Household income was less than 20,000 for 31% of the respondents, between 20,000 and 35,000 for 33%, between 35,000 and 50,000 for 24%, and above 50,000 for 11%. Lastly, 7% reported having 2 family members, 53% reported having 3 family members, 24% reported having 4 or 5 family members, and 17% reported having more than 5 family members.

Maximum likelihood estimation was run in Amos 21.0 to estimate the four-dimensional model extracted from the EFA. The item loadings as per CFA are shown in Figure 2. According to the correlations that range from 0.63 to 0.91, it can be deduced that the items highly correlate with the latent model (Kline 2005). Moreover, all are positive, signifying uni-dimensionality. The final model depicts acceptable fit indices (CMIN/DF=2.121, $p=0.000$; CFI=0.929, TLI=0.913) supporting construct validity (Hair, Black, Babin, Anderson, and Tatham 2006). RMSEA is 0.073, which is within acceptable limits of 0.05 to 0.08 (Hair et al. 2006). Table 4 shows that the average variance extracted (AVE) for each dimension exceeds the minimum desired limit of 0.5, and the square root of AVE for the construct is higher than the correlation between constructs. This supports both the convergent and discrepant validity of the construct (Fornell and Larcker 1981). Table 4 shows that the model displays good composite reliability (>0.60).

TABLE 3: ROTATED COMPONENT MATRIX

	Component				Factor Names
	1	2	3	4	
4_5 I tend to ignore service failure in the restaurant.	.794				Indifferent and Self-Critical (ISC)
4_4 I don't usually bother to analyze the service failure in the restaurant.	.777				
4_6 Once I have figured out a single cause for service failure in the restaurant, I don't do anything about it.	.714				
4_13 I wasn't communicative about my preferences and the services that I need.	.633				
4_10 I was over expecting from the restaurant and its fulfillment is not possible.	.621				
4_17 I generally remain unsatisfied with everything.		.782			Mixed-up (MU)
4_19 I have little knowledge about other restaurants so I cannot compare.		.761			
4_18 I don't have a particular choice of food which I like.		.759			
4_16 I remain confused with the quality of service which I wish to receive.		.753			
4_11 Employees are also human beings and they can serve up to a limit.			.675		Empathetic (E)
4_15 I tell the waiter to replace the food items but I would continue to visit the restaurant.			.672		
4_7 I politely talk to the manager and give him suggestions.			.655		
4_9 I just leave the restaurant quietly thinking that the restaurant has been providing good service before and will continue that in the future.			.600		
4_3 I give benefit of a doubt to the restaurant in case of service failure.			.600		
4_1 I spread bad word of mouth about the restaurant after a service failure.				.816	Intolerant (I)
4_2 I easily get frustrated with the waiting time in the restaurant and blame the restaurant.				.754	
4_14 I don't give the restaurant a second chance to improve.				.543	

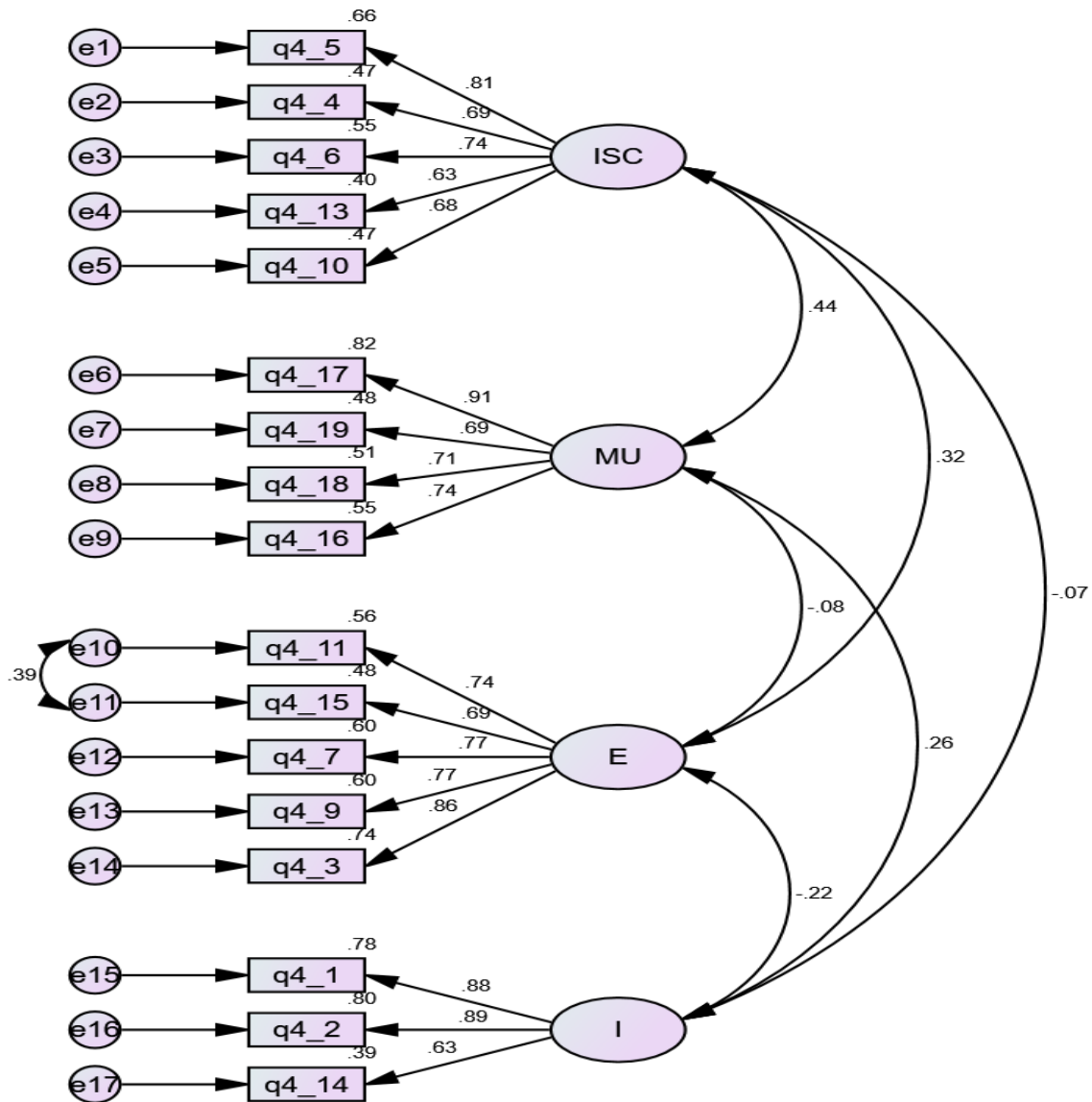
Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a a. Rotation converged in 6 iterations.

TABLE 4: VALIDITY OF SCALE (CONFIRMATORY ANALYSIS)

	CR	AVE	MaxR(H)	I	ISC	MU	E
I	0.850	0.659	0.892	0.812			
ISC	0.837	0.509	0.932	-0.068	0.713		
MU	0.851	0.590	0.956	0.260	0.440	0.768	
E	0.880	0.595	0.967	-0.220	0.315	-0.077	0.771

FIGURE 2: CFA STRUCTURE – ITEM LOADINGS

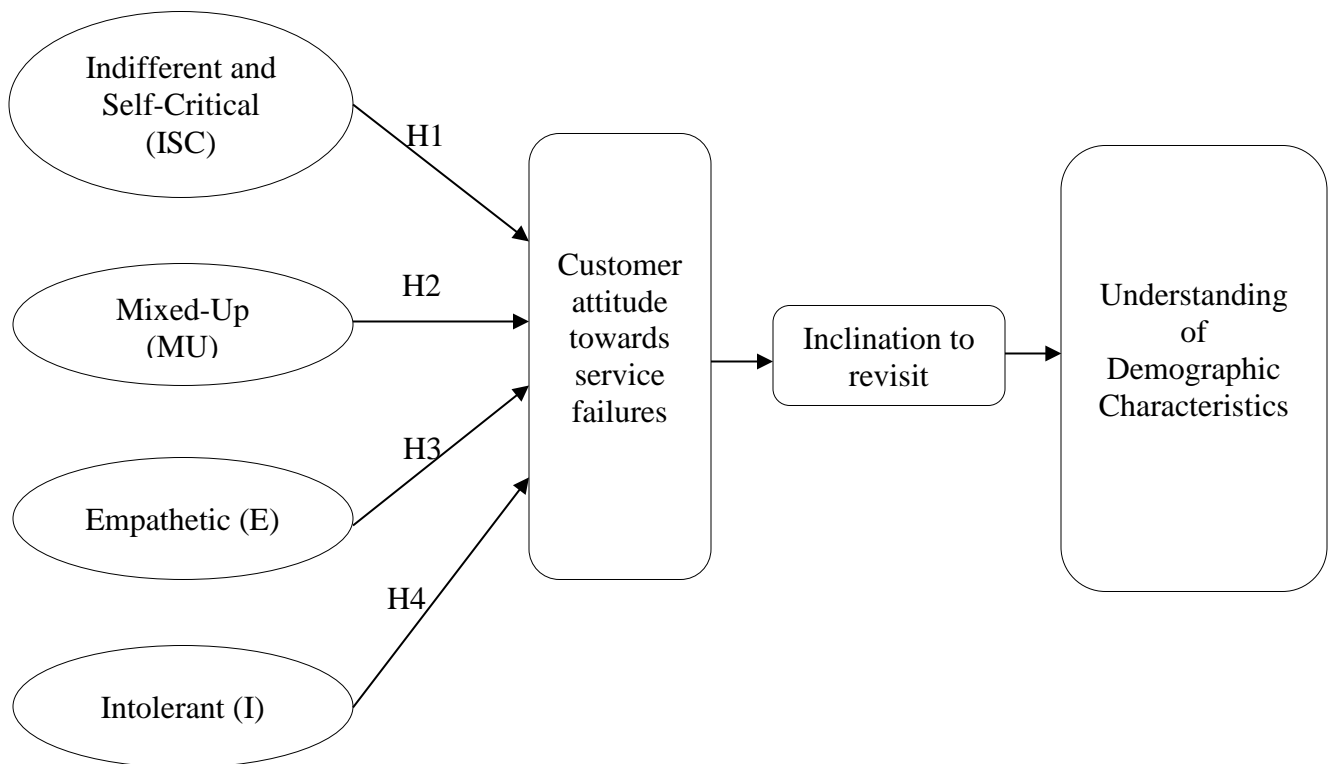


The proposed predictive model (Figure 3) and hypotheses (Table 5) are as follows:

TABLE 5: PROPOSED HYPOTHESES BASED ON PREDICTIVE MODEL

H1	If the customer is higher on indifferent and/or self-critical level his/her inclination to revisit will be positive
H2	If the customer is higher on mixed-up level his/her inclination to revisit will be positive
H3	If the customer is higher on empathetic level his/her inclination to revisit will be positive
H4	If the customer is higher on intolerant level his/her inclination to revisit will be negative

FIGURE 3: PROPOSED PREDICTIVE MODEL



Classification and Regression Tree (C&RT) Analysis

Classification and Regression Tree (C&RT) is a tree-based method of data mining for classification, prediction, and further classification of outcomes into segments based on similar output values. We chose C&RT to analyze the data for two reasons: (1) C&RT is able to generate easily-understood decision rules that are more likely to be followed by practitioners, and (2) C&RT has sophisticated methods for dealing with missing values. The main disadvantage of C&RT is that it is not based on a probabilistic model, but this is outweighed by its advantages in this context.

Prior to applying C&RT analysis, the factors were subjected to feature selection, which is a screening technique for preparing data for data mining. Feature selection helps to identify important variables for predicting an outcome. Feature selection is used primarily for three reasons, namely, (1) simplification of models by focusing on important variables, (2) reduction in training time, and (3) improved and enhanced generalization by reduction in variance. The

four factors were defined as the input variables, and customer intention to continue visiting the restaurant was defined as the output variable. Feature selection ranked the variables in descending order of importance based on Pearson's p -value for categorical predictors: (1) indifferent and self-critical, (2) empathetic, (3) mixed-up, and (4) intolerant. All four factors were deemed to be important predictors.

C&RT analysis was then applied to the four factors as input variables and intention to return after a service failure as the output variable. The decision tree generated by the C&RT analysis is shown in Figure 4, and the misclassification matrix in Table 6 shows the classification rate for the model. According to the matrix, the accuracy of the model is 84.14% (the correct number of classifications divided by the total number of cases). From the decision tree, we derived nine decision rules (see Table 7). Four of the nine rules profile customers as positively inclined to revisit the restaurant after a service failure, and five of the rules profile customers as negatively inclined to revisit.

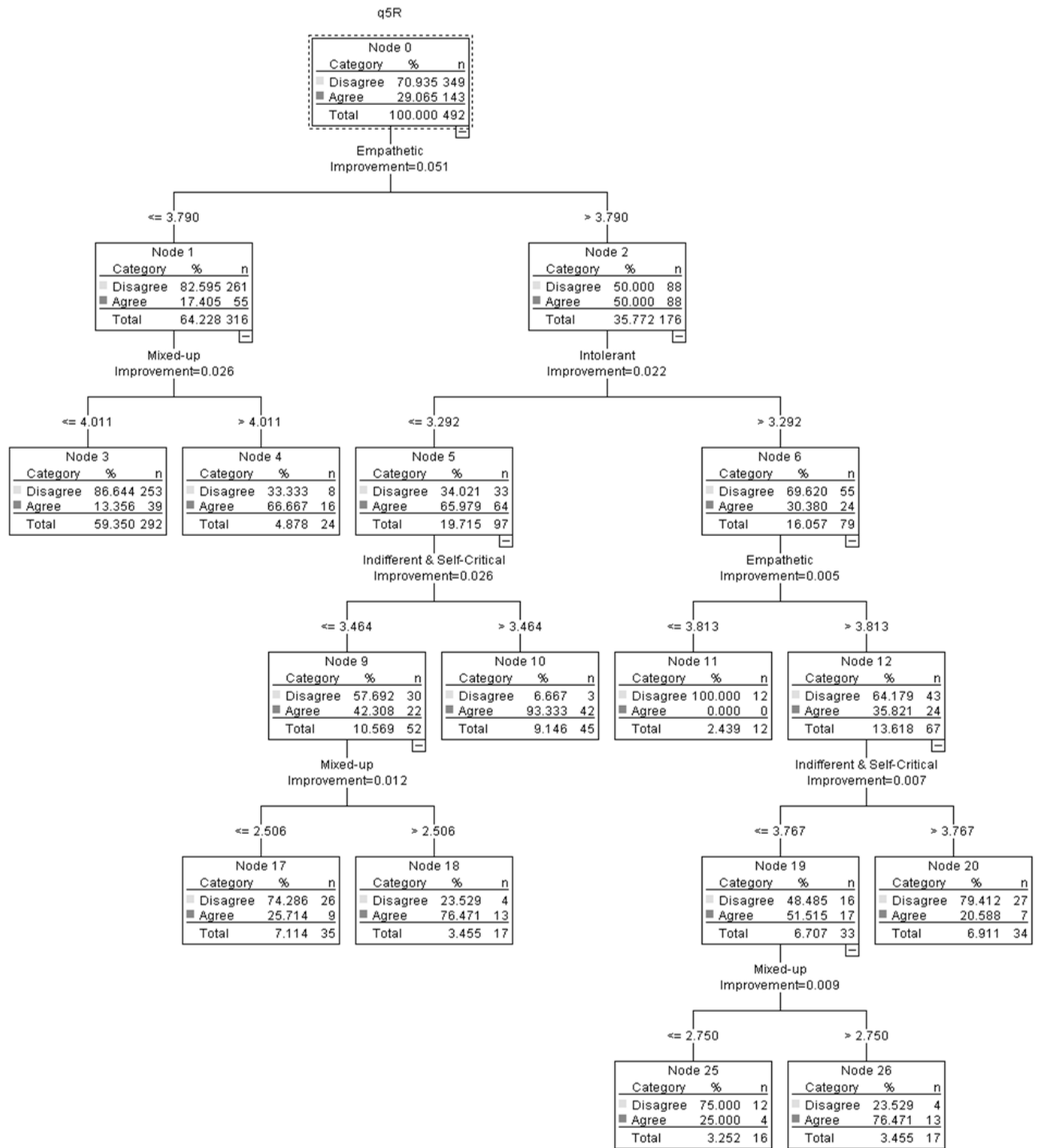
TABLE 6: MISCLASSIFICATION MATRIX

	A	B	C	D
1		Disagree	Agree	Total
2	Disagree	330	19	349
3	Agree	59	84	143
4	Total	389	103	492
			% Correct	84.14%

TABLE 7: RULES DERIVED FROM THE C&RT ANALYSIS

Rules Framed	Result	Interpretation
Rules for 1 (Agree to revisit) - contains 4 rule(s)		
Rule 1 for 1.0 (Agree to revisit) if Empathetic <= 3.790 and Mixed-up > 4.011 then 1.000	Positively Inclined to Revisit	Customer is not clear on where the fault lies and thus gives the restaurant the benefit of the doubt.
Rule 2 for 1.0 if Empathetic > 3.790 and Intolerant <= 3.292 and Indifferent & Self-Critical <= 3.464 and Mixed-up > 2.506 then 1.000	Positively Inclined to Revisit	Customers are high on empathy and low on intolerance; thus they are not very rigid (negative) about their response to service failure.
Rule 3 for 1.0 if Empathetic > 3.790 and Intolerant <= 3.292 and Indifferent & Self-Critical > 3.464 then 1.000	Positively Inclined to Revisit	Since customers show high empathy with the restaurant, they are not very critical towards the restaurant and thus will revisit even after a service failure.
Rule 4 for 1.0 if Empathetic > 3.790 and Intolerant > 3.292 and Empathetic > 3.813 and Indifferent & Self-Critical <= 3.767 and Mixed-up > 2.750 then 1.000	Positively Inclined to Revisit	Though the customers are intolerant, their high level of empathy makes them revisit the restaurant even after a service failure.
Rules for 0 (Disagree to revisit) - contains 5 rule(s)		
Rule 1 for 0.0 (Disagree to revisit) if Empathetic <= 3.790 and Mixed-up <= 4.011 then 0.000	Negatively Inclined to Revisit	Customers are low on empathy and less likely to give the benefit of the doubt, thus they are less likely to revisit after service failure.
Rule 2 for 0.0 if Empathetic > 3.790 and Intolerant <= 3.292 and Indifferent & Self-Critical <= 3.464 and Mixed-up <= 2.506 then 0.000	Negatively Inclined to Revisit	Though the customers show empathy, they are more likely to blame the other party (i.e., the service provider) for the failure and hence are less likely to revisit the restaurant after a service failure.
Rule 3 for 0.0 if Empathetic > 3.790 and Intolerant > 3.292 and Empathetic <= 3.813 then 0.000	Negatively Inclined to Revisit	Customers who are average on empathy and high on intolerance are less forgiving and consequently not inclined to revisit after a service failure.
Rule 4 for 0.0 if Empathetic > 3.790 and Intolerant > 3.292 and Empathetic > 3.813 and Indifferent & Self-Critical <= 3.767 and Mixed-up <= 2.750 then 0.000	Negatively Inclined to Revisit	Similar to rule 3, customers in this rule are high on intolerance and low on self-criticism; thus they are more likely to blame the restaurant for a service failure and less likely to revisit.
Rule 5 for 0.0 if Empathetic > 3.790 and Intolerant > 3.292 and Empathetic > 3.813 and Indifferent & Self-Critical > 3.767 then 0.000	Negatively Inclined to Revisit	Customers in this rule are high on intolerance and low on self-criticism; thus they are more likely to blame the restaurant for any failure that occurs and less likely to revisit.

FIGURE 4: DECISION TREE



It can be seen from Table 7 that Rule 1 for Positively Inclined to Revisit states that if a customer is high on the mixed-up factor, the customer is likely to revisit the restaurant even though he might be low on empathy. This could be because such customers are in doubt as to who is actually to blame for the service failure. They might also feel that they may not have been sufficiently clear about their expectations and could have done something differently, which would not have led to the service failure. Consequently, even though these customers are low on empathy, their reactions to service failures are not highly negative, and they may continue visiting the restaurant even after an unfavorable experience. These characteristics can be observed by restaurant employees and can be turned to their advantage by dealing appropriately with their customers' dissatisfaction. This rule suggests that if a customer blames himself rather than the company for a service failure, he is less likely to be dissatisfied and to engage in complaining behavior or spread negative word-of-mouth.

Rule 2 for Positively Inclined is the most comprehensive, involving all four input variables. Customers under this rule are high on empathy, low on intolerance, high on mixed-up, and low on indifferent and self-critical. Respondents falling under this rule are empathetic and personify the adage that "to err is human"; thus they are ready to give the restaurant another chance, provided they perceive an intention to improve on the part of the restaurant. These customers indirectly show loyalty to the restaurants they visit. This presents an opportunity for restaurants to win back the trust of these customers by addressing their dissatisfaction.

Rule 3 for Positively Inclined to Revisit includes customers who are high on empathy, low on intolerance, and high on indifference. This suggests that if customers are empathetic and have a tendency to be self-critical, their chances of blaming the restaurant for the service failure are low.

Rule 4 shows that respondents who are high on intolerance, high on empathy, mixed-up, and low on indifference (more open to experience) are more likely to analyze the failure objectively. These characteristics cause customers to consider the instance of service failure with empathy, and this overcomes their intolerant nature, making them positively inclined to revisit a restaurant even after a service failure. The customers under this rule are expected to not be impulsive in reacting to a service failure. As such, they can be won back if the restaurant takes steps towards resolving their dissatisfaction and removing any doubts regarding the cause of the service failure.

Statistics for various terminal nodes in the tree are shown in Table 8. Gains provide a measure of how far the mean or proportion at a given node differs from the overall mean. The greater the difference, the more useful the tree. The index column shows the difference in proportion at each node with respect to the overall proportion. Nodes with an index greater than 100% are associated with a better chance of the customer responding positively to efforts to be won back. Thus, nodes 10, 18, 26, and 4 have the highest possible success rates for the entire sample, with indexes of 321.12%, 263.10%, 263.10% and 229.37%, respectively. This indicates that customers with the traits associated with nodes 10, 18, 26, and 4 are 2.3–3.2 times more likely to respond positively to efforts made by the

TABLE 8: GAINS TABLE FOR “AGREE” CATEGORY OF OUTPUT VARIABLE

	Nodes	Node: n	Node (%)	Gain: n	Gain (%)	Response (%)	Index (%)
1	10	45.00	9.15	42.00	29.37	93.33	321.12
2	18	17.00	3.46	13.00	9.09	76.47	263.10
3	26	17.00	3.46	13.00	9.09	76.47	263.10
4	4	24.00	4.88	16.00	11.19	66.67	229.37
5	17	35.00	7.11	9.00	6.29	25.71	88.47
6	25	16.00	3.25	4.00	2.80	25.00	86.01
7	20	34.00	6.91	7.00	4.90	20.59	70.84
8	3	292.00	59.35	39.00	27.27	13.36	45.95
9	11	12.00	2.44	0.00	0.00	0.00	0.00

TABLE 9: CHARACTERISTICS OF CUSTOMERS IN NODE 10

		Response: Continue to Visit	
Gender	%	House hold income level(INR per month)	%
Female	44.44%	20001-35000	44.44%
Male	55.56%	35001-50000	11.11%
		Less than 20000	44.44%
Age Group	%	No of family numbers	%
15-25	26.67%	2	11.11%
26-40	8.89%	3-4	55.56%
41-55	42.22%	4-5	20.00%
above 55	22.22%	more than 5	13.33%

restaurant to reduce their level of dissatisfaction. Therefore, it is advisable for restaurants to target customers matching the profiles of nodes 10, 18, 26, and 4. Consider, for example, Table 9, which shows the characteristics of customers corresponding to node 10. Customers in the 41 to 55 age group are more likely to revisit a restaurant after an unfavorable experience. Similarly, families with 3-4 members are

more likely to be repeat visitors even after a service failure. Note that, with the exception of income level, these customer characteristics can be deduced simply by observing restaurant patrons. This is important from a managerial perspective, since restaurants may not have access to this information by other means, such as a CRM system.

DISCUSSION AND MANAGERIAL IMPLICATIONS

Guided by our review of the literature, our analysis of the data suggests that personality traits of customers can be categorized into four factors: indifferent and self-critical, mixed-up, emphatic, and intolerant. These factors were related to the five-factor theory of personality and validated using confirmatory factor analysis. Once the factors were validated, they formed the basis for our proposed predictive model. Data mining, specifically C&RT, was then used to generate rules (see Table 7) for predicting the presence/absence of personality traits that make a customer likely or unlikely to revisit a restaurant after a service failure. From the rules derived, it can be deduced that, in general, if customers are high on empathy and low on intolerance, they are more likely to revisit a restaurant even after a service failure, since they more willingly give the benefit of the doubt to the restaurant and are not rigid in blaming the restaurant for the failure. Relating these findings to the five-factor theory of personality, it can be said that if customers show traits of agreeableness (not demanding, not stubborn, warm), lack of direction (no particular choice, not able to compare), and are low on neuroticism (hostility, high on anger, not contended), they are more likely to continue visiting a restaurant after a service failure.

This paper offers managers a fresh perspective on how to think about customer responses to service failures and how to manage these responses. The present study shows that customers think about service interactions and assign responsibility for failures based on their dominant personality traits. What is critical for service providers to note is how the different personality traits

affect customers' reactions to service failures. If customers are intolerant in nature, they might generally feel that a service provider could have done something to solve the problem or to avoid the failure but failed to do so; thus the customers are likely to experience a greater degree of negative emotions, which in turn would affect their perception of the service provider's attitude towards its customers and would increase their disinclination to revisit the restaurant after the failure.

Several key managerial implications emerge. An important implication is that, on the basis of their personality traits, customers analyze why things went wrong and why specific actions were taken by a service provider. Thus, providing explanations to customers becomes all the more important. Inculcating this skill in employees would include developing communication skills to ensure that customers get explanations that do not appear to be mere excuses. If problems are anticipated, a manager should provide explanations in advance so that customers are prepared and understand why the problem has occurred. For example, a restaurant might state on its menu that certain dishes may take more time to cook; hence if a customer orders that particular dish, he is prepared for the delay. An important lesson for organizations is that customer perception of whether the service provider made all possible efforts to avoid service failures or to recover from them is critical. Other research (Sirdeshmukh, Singh, and Sabol 2002) has shown that the problem-solving skills of frontline staff significantly affects the trust judgments customers form of service providers.

When a service provider shows empathy and sincerity in addressing a service failure, this may produce a “halo” effect for other justice dimensions, such as fairness of procedures or outcomes (McCull-Kennedy and Sparks 2003). Thus proper attention to the training of staff to effectively display problem-solving ability is required. If, as in our study, personality traits are identified for customers who are more likely to forgive a service provider after a service failure, employees should be trained to observe these traits and react appropriately.

LIMITATIONS AND FUTURE RESEARCH

Based on a theoretical model, this research tested and found complex path relationships. Though general principles emerge, it must be noted that this study is based on a particular industry at a particular point in time and thus might be limited in its application to other industries. In addition, we examined intention to revisit rather than actual revisiting behavior. Furthermore, only a small set of variables potentially relevant to complaining and post-purchase behavior were examined. It is possible that other factors might influence consumer reactions.

Keeping in mind the above-mentioned limitations, the results suggest that personality traits affect the degree of anger customers feel after service failures and directly and indirectly influence their desire to revisit and/or recommend the restaurant to others. As such, this field study suggests a more complex relationship between customer traits and post-purchase behavior than has been tested in the past. Our results indicate that empathy, tolerance,

confusion, and self-criticism all influence post-purchase behavior after a service failure. Of course, there may be additional determinants of post-purchase behavior after a failure. For example, consumers consider the time and effort to complain (Day and Ash 1979; Huppertz 2003, 2014). A comprehensive model of consumer post-purchase behavior in response to failures would need to include factors other than personality traits.

Another limitation is that the sample for this research was limited to a specific geographical area (the northern part of India). The study, therefore, is limited to the extent that this sample can be projected to the entire state, country, or other countries. One cannot ignore differences in perceptions of people belonging to different geographical areas due to cultures and subcultures. The study could be extended to other areas so that the findings may be more generalizable.

Despite these limitations, the results reported in this paper highlight the value of consumer traits for explaining consumer complaint behavior and post-purchase action. Moreover, our research offers a practical classification scheme for understanding and analyzing complaint behavior. Descriptive profiles of consumers (in terms of demographics and personality characteristics) who are more likely to revisit a restaurant after a service failure would be of considerable interest to companies, which could use this information to design more effective procedures and processes for avoiding and recovering from service failures.

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