

## *Chapter VII*

# *Path Analysis*

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## CHAPTER VII

# PATH ANALYSIS – THE RELATIONSHIP BETWEEN CONSUMER PERCEPTION AND ATTITUDE, IMPACT OF INTERNET ADVERTISEMENTS AND CONSUMER SATISFACTION ON PURCHASE DECISIONS AND ACCESS OF SERVICES

### 7.1 INTRODUCTION

The objective of the study is to analyse the relationship *inter se* of women consumers' perception and attitude towards internet advertisements, impact of internet advertisements on purchase decisions and access of services and their satisfaction towards internet advertisements.

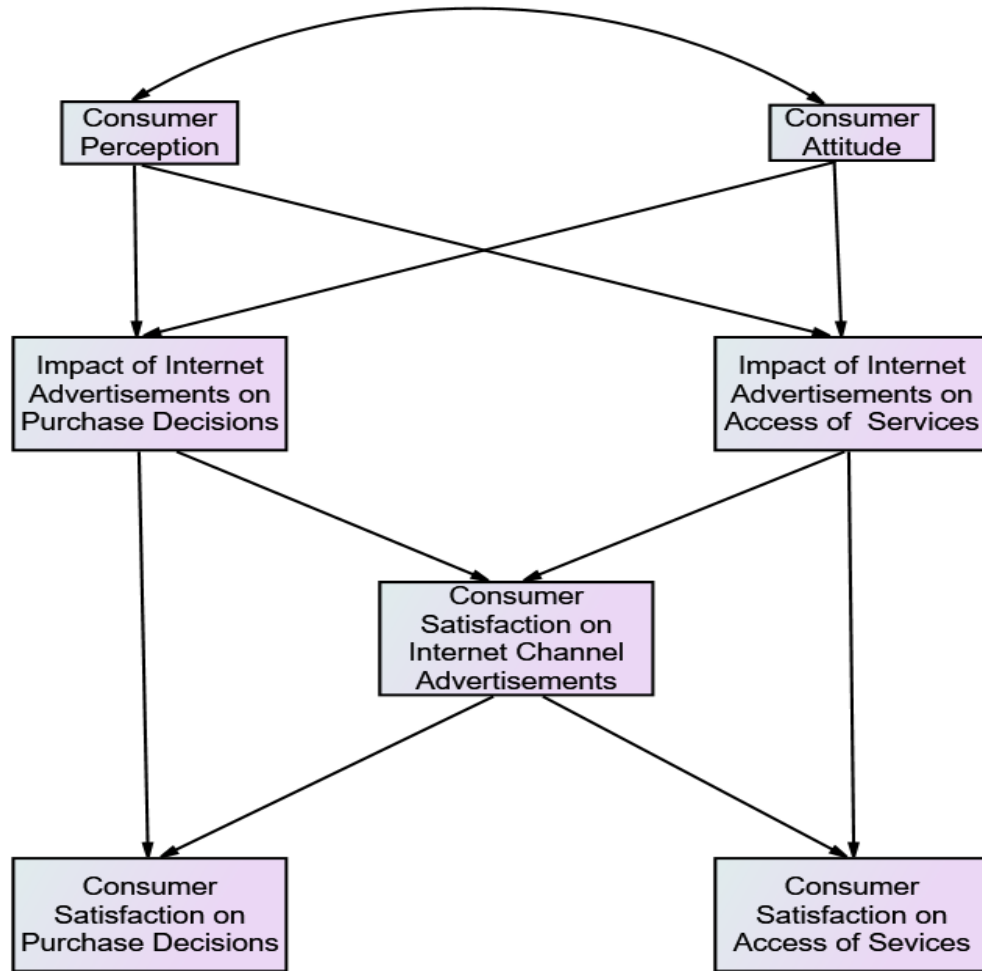
The relationship of consumer perception and attitude between the impact of internet advertisements with respect to purchase decisions and access of services are studied. The impact of internet advertisements with respect to purchase decisions and access of services on consumer satisfaction towards internet channel advertisements which further leads to the consumer satisfaction towards internet advertisements in taking purchase decisions and access of services are considered in this study. The theoretical path analysis model explains the relationship between exogenous and endogenous variables is given below.

#### List of Variables Used in Path Analysis

- Consumer Perception
- Consumer Attitude
- Impact of Internet Advertisements on Purchase Decisions
- Impact of Internet Advertisements on Access of Services
- Consumer Satisfaction on Internet Channel Advertisements
- Consumer Satisfaction on Purchase Decisions  
(Consumer Satisfaction towards Internet Advertisements on Purchase Decisions)
- Consumer Satisfaction on Access of services  
(Consumer Satisfaction towards Internet Advertisements on Access of Services)

### Exhibit 7.1

#### Path Model - Consumer Perception and Attitude, Impact of Internet Advertisements and Consumer Satisfaction on Purchase Decisions and Access of Services



#### Research Model

The initial proposed research model is shown in the Exhibit 7.1. The factors used in the path model are consumer perception, consumer attitude, impact of internet advertisements on purchase decisions and access of services, consumer satisfaction on internet channel advertisements and consumer satisfaction on purchase decisions and access of services.

- The curved double headed arrow between consumer perception and attitude explains that these two variables are correlated.
- The single headed arrows leading from these two variables joining the impact of internet advertisements with respect to purchase decisions and access of services explain that consumer perception and attitude measure their direct effect on impact of internet advertisements with respect to purchase decisions and access of services.
- The arrows leading from impact of internet advertisements with respect to purchase decisions and access of services on consumer satisfaction towards internet channel advertisements measure the direct effects on impact of internet advertisements with respect to purchase decisions and access of services on consumer satisfaction towards internet channel advertisements. It is assumed that, any positive impact created by internet advertisements with respect to purchase decisions and access of services on consumer satisfaction towards internet channel advertisements.
- Finally, the arrows leading from consumer satisfaction towards internet channel advertisements on consumer satisfaction regarding purchase decisions and access of services measure direct effect of consumer satisfaction towards internet channel advertisements on consumer satisfaction regarding purchase decisions and access of services respectively. It is expected that consumer satisfaction towards internet channel advertisements will have positive correlation with consumer satisfaction regarding purchase decisions and access of services.
- The arrows leading from impact of internet advertisements with respect to purchase decisions and access of services to their respective satisfaction factors namely, consumer satisfaction regarding purchase decisions and access of services. It measures the direct effects of impact of internet advertisements with respect to purchase decisions on consumer satisfaction regarding purchase decisions and impact of internet advertisements with respect to access of services on consumer satisfaction regarding access of services.

- Apart from direct effects, the indirect effects of impact of internet advertisements with respect to purchase decisions and access of services on consumer satisfaction regarding purchase decisions and access of services when mediated by consumer satisfaction towards internet channel advertisements were also studied.

The scores of consumer perception, consumer attitude, impact of internet advertisements with respect to purchase decisions and access of services, consumer satisfaction toward internet channel advertisements and consumer satisfaction regarding purchase decisions and access of services were used in the model.

The path model has been developed to achieve the following objectives.

1. To examine how the impact of internet advertisements on purchase decisions and access of services have been explained by the consumer perception and attitude of women respondents towards internet advertisements.
2. To examine how the impact of internet advertisements on purchase decisions and access of services explain the relationship with consumer satisfaction on internet channel advertisements.
3. To examine how the impact of internet advertisements on purchase decisions and access of services explain the relationship with consumer satisfaction on purchase decisions and access of services respectively.
4. To examine how the consumer satisfaction on internet channel advertisements influence the consumer satisfaction on purchase decisions and access of services.
5. To establish a causal relationship between impact of internet advertisements on purchase decisions and access of services on consumer satisfaction towards purchase decisions and access of services, when mediated by consumer satisfaction on internet channel advertisements.

Once the overall goodness of fit the model is established, the following hypotheses will be tested.

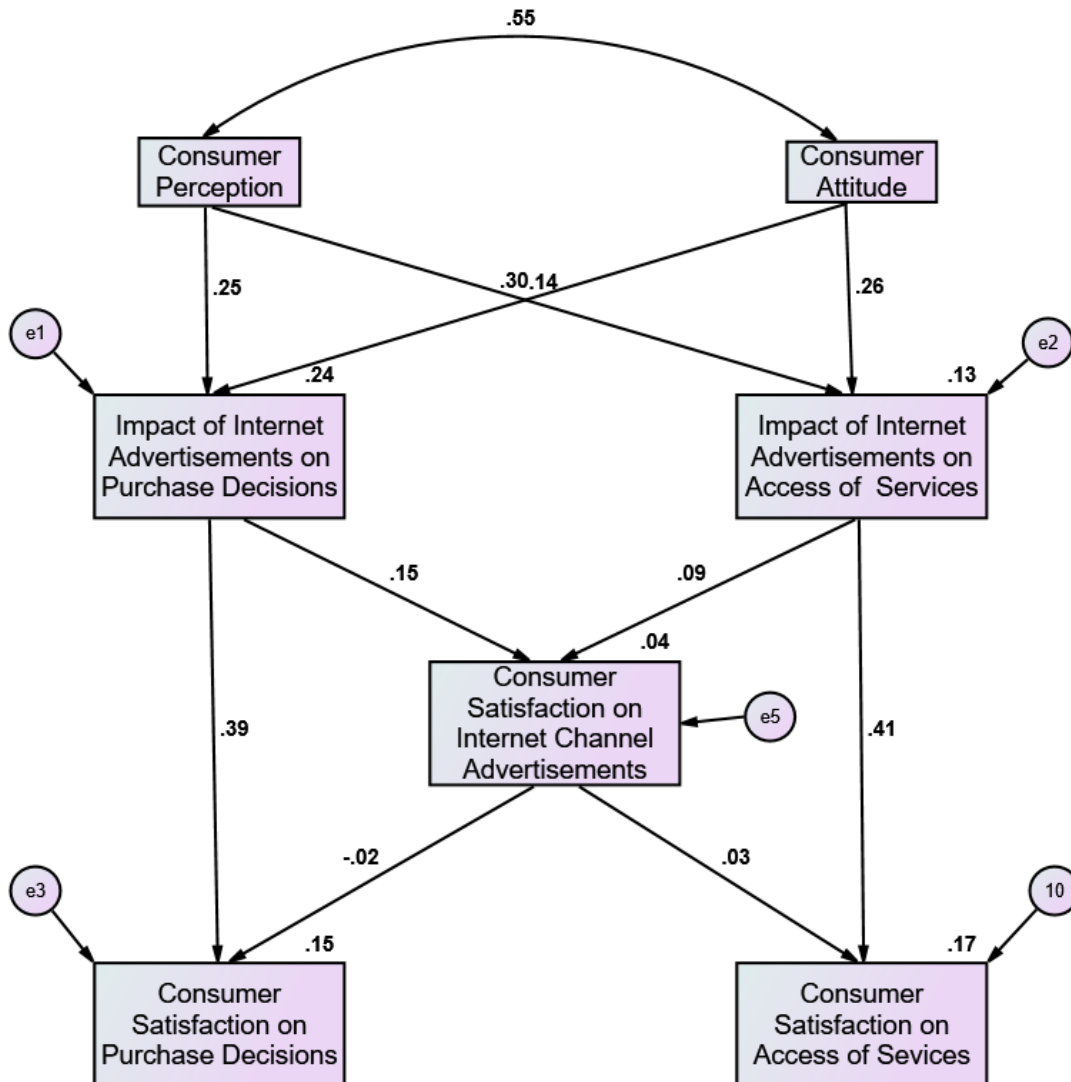
- H<sub>01</sub>:** There is a direct positive effect of the independent variables, namely, consumer perception and attitude on the dependent variable, namely, impact of internet advertisements on purchase decisions.
- H<sub>02</sub>:** There is a direct positive effect of the independent variables, namely, consumer perception and attitude on the dependent variable, namely, impact of internet advertisements on access of services.
- H<sub>03</sub>:** The independent variable, namely, impact of internet advertisements on purchase decisions has direct positive effects on the dependent variable, namely, consumer satisfaction on internet channel advertisements.
- H<sub>04</sub>:** The independent variable, namely, impact of internet advertisements on access of services has direct positive effects on the dependent variable, namely, consumer satisfaction on internet channel advertisements.
- H<sub>05</sub>:** There is a direct positive effect of the independent variable, namely, impact of internet advertisements on purchase decisions on the dependent variable, namely, consumer satisfaction on purchase decisions.
- H<sub>06</sub>:** There is a direct positive effect of the independent variable, namely, impact of internet advertisements on access of services on the dependent variable, namely, consumer satisfaction on access of services.
- H<sub>07</sub>:** There is a direct positive effect of the independent variable, namely, consumer satisfaction on internet channel advertisements on the dependent variable, namely, consumer satisfaction on purchase decisions
- H<sub>08</sub>:** There is a direct effect of the independent variable, namely, consumer satisfaction on internet channel advertisements on the dependent variable, namely, consumer satisfaction on access of services
- H<sub>09</sub>:** There is a mediation effect played by consumer satisfaction on internet channel advertisements between the independent variables, namely, impact of internet advertisements on purchase decisions and access of services and consumer satisfaction on purchase decisions and access of services.

The results of path analysis are given in the following model explaining the relationship between all the independent and dependent variables.

**Exhibit 7.2**

**Path Model**

**The Relationship between Consumer Perception, Consumer Attitude, Impact of Internet Advertisements and Consumer Satisfaction on Purchase Decisions and Access of Services**



Chi. Sq=31.950 P=.000 CMIN/df=3.195 GFI=.985 NFI=.952 CFI=.952 RMSEA=.028

## Measure of Model Fit

The exhibit 7.2 indicates the relationship between consumer perception and attitude, and impact of internet advertisements and consumer satisfaction regarding purchase decisions and access of services respectively and consumer satisfaction towards internet channel advertisements

The relationships between the variables are indicated by the paths with the corresponding values. These are called path coefficients which are standardized regression coefficients.

The regression estimates produced by AMOS for unstandardised regression are discussed below. The regression coefficients were estimated by Maximum Likelihood Method. AMOS ver.20 was used to estimate the path coefficients. It is expected that there is a covariate relationship between the variables consumer perception and attitude.

The following model fit statistics were employed to test the goodness of fit of the model.

**CMIN:** CMIN given by AMOS has a chi-square statistic, which compares the tested statistics with the theoretical model; (i.e) the non-significant chi-square value indicates the data fits the model well.

**CMIN/DF:** It has a relative chi-square measure, an index of how much the fit of data to the model has been reduced by one or more paths. The index having a value of 3 or below 3 says the data best fits the model, where as a value between 3 and 5 is good.

**GFI:** The Goodness of Fit Index shows what proportion of the variance in the sample variance-covariance is accounted for by the model. It should be above 0.90 and below 1 for a good model fit. A value of 1 is considered as saturated model.

**NFI:** Normed Fit Index is simply the difference between the two models' (default and independence) chi-square values divided by the chi-square value of independent model. The NFI value above 0.90 is considered to be good fit.

**CFI:** The Comparative Fit Index uses a similar approach and is said to be a good index which can be used for even small sample. The value above 0.90 is considered to be good fit.



**RMSEA:** The Root Mean Square Error of Approximation estimates lack of fit compared to the saturated model. RMSEA value of 0.05 or less indicates good fit and between 0.05 and 0.08 is adequate fit.

**Table 7.1**

**The Model Fit Statistics Estimated by AMOS**

<b>CMIN (Chi.Sq)</b>	<b>31.950 (P&lt;0.01)</b>
<b>DF</b>	<b>10</b>
<b>CMIN/DF</b>	<b>3.195</b>
<b>GFI</b>	<b>0.985</b>
<b>NFI</b>	<b>0.952</b>
<b>CFI</b>	<b>0.952</b>
<b>RMSEA</b>	<b>0.028</b>

(Source: Computed)

The result shows that all the goodness of fit indices namely, GFI , NFI and CFI satisfy the criterion value of being above 0.90 and the Chi-square value is significant ( $P>0.05$ ), but the CMIN/DF value is within the admissible limit of less than 5. The RMSEA value falls below 0.05. Since, all the goodness of fit indices is within the admissible limits. It is inferred that the model is good; (i.e) the data fits the model well.

The model shown above gives the standardized regression weights of the corresponding variables and also squared multiple correlations. The regression coefficients show that these coefficients are comparable since they are independent of units of measurement. Among the variables, the relationships expressed in terms of regression coefficients, show that all the regression coefficients are positive except the path from consumer satisfaction towards internet channel advertisements to consumer

satisfaction regarding purchase decisions. The relationship between the consumer satisfaction towards internet channel advertisements and consumer satisfaction regarding purchase decisions is negative.

The direct effect of consumer perception on impact of internet advertisements with respect to purchase decisions and access of services are 0.25 and 0.30 respectively; (i.e) the effect of consumer perception on impact of internet advertisements with respect to access of services is more compared to impact of internet advertisements with respect to purchase decisions. Similarly, when consumer attitude is considered, the respective path coefficients on purchase decisions and access of services are 0.14 and 0.26 respectively; (i.e) Consumer perception and attitude have more direct effect on impact of internet advertisements with respect to access of services than impact of internet advertisements with respect to purchase decisions.

When direct effects of impact of internet advertisements with respect to purchase decisions and access of services are considered, purchase decisions have more direct effect on consumer satisfaction towards internet channel advertisements (0.15) against access of services (0.09).

The direct effect of consumer satisfaction towards internet channel advertisements explains more on consumer satisfaction regarding access of services with a regression weight of 0.03 compared to consumer satisfaction regarding purchase decisions with a regression weight of -0.02. The direct effect of impact of internet advertisements with respect to purchase decisions is more on consumer satisfaction regarding purchase decisions (0.39) compared to consumer satisfaction towards internet channel advertisements (0.15)

Similarly, the direct effect of impact of internet advertisements with respect to access of services is more on consumer satisfaction regarding access of services (0.41) compared to consumer satisfaction towards internet channel advertisements (0.09)

The magnitude and direction of relationship between all the dependent and independent variables are studied in detail with the unstandardized regression weights produced by AMOS which is given below.

**Table 7.2**

**Estimate of Path Coefficients Regression Estimate of Path Coefficient**

<b>Variable to (Dependent)</b>	<b>Path</b>	<b>Variable to (Independent)</b>	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>
Impact of Internet Advertisements on Access of Services	<----	Consumer Attitude	.263	.056	4.705	**
Impact of Internet Advertisements on Access of Services	<----	Consumer Perception	.156	.063	2.461	*
Impact of Internet Advertisements on Purchase Decisions	<----	Consumer Attitude	.369	.063	5.844	**
Impact of Internet Advertisements on Purchase Decisions	<----	Consumer Perception	.345	.072	4.820	**
Consumer Satisfaction on Internet Channel Advertisements	<----	Impact of Internet Advertisements on Purchase Decisions	.013	.004	2.990	**
Consumer Satisfaction on Internet Channel Advertisements	<----	Impact of Internet Advertisements on Access of Services	.010	.005	1.847	Ns
Consumer Satisfaction on Purchase Decisions	<----	Consumer Satisfaction on Internet Channel Advertisements	-.312	.605	-.515	Ns
Consumer Satisfaction on Access of Services	<----	Consumer Satisfaction on Internet Channel Advertisements	.391	.544	.719	Ns
Consumer Satisfaction on Access of Services	<----	Impact of Internet Advertisements on Access of Services	.509	.058	8.814	**
Consumer Satisfaction on Purchase decisions	<----	Impact of Internet Advertisements on Purchase Decisions	.443	.053	8.334	**

(Source: Computed) (\*\*- Significant at 1 Percent Level,\* - Significant at 5 Percent Level, Ns –Not Significant)

It is observed from table 7.2 that, the estimates are unstandardised regression estimates. The values given above are the regression estimates of the corresponding independent variables. S.Es is the Standard Errors of respective regression coefficients. C.R (Critical ratio) is the ratio of regression estimate values to S.E. Probability (P) shows which regression coefficients significantly contribute to the dependent variables (\*\* or \* indicates the respective regression weights are significant at less than 1 per cent or 5 per cent respectively. Ns indicate the regression weights are not significant).

It is found from the table 7.2 that, consumer attitude and perception are found to have a significant effect on impact of internet advertisements with respect to purchase decisions and access of services either at 5 per cent or 1 per cent level.

The path coefficient of impact of internet advertisements with respect to purchase decisions on consumer satisfaction towards internet channel advertisements is significant at 1per cent level, whereas, the path coefficient of impact of internet advertisements with respect to access of services on consumer satisfaction towards internet channel advertisements is not significant. It is shown that, the variable consumer satisfaction towards internet channel advertisements has no significant effect on consumer satisfaction regarding purchase decisions and access of services.

The impact of internet advertisements with respect to purchase decisions and access of services have significant effect on consumer satisfaction regarding purchase decisions and access of services respectively.

The table 7.2 shows that the variable consumer perception and consumer attitude have significant positive effect on impact of internet advertisements on purchase decisions at 1per cent level. Hence the hypothesis,

***H<sub>01</sub>: 'There is a direct positive effect of the independent variables, namely, consumer perception and attitude on the dependent variable, namely, impact of internet advertisements on purchase decisions' is accepted.***

The regression coefficient of consumer perception on impact of internet advertisements with respect to access of services is 0.156 which is found to be significant at 5 per cent level and also the regression coefficient of consumer attitude on impact of

internet advertisements with respect to access of services is 0.263 which is also found to be significant at 1 per cent level. Both the regression coefficients are positive and significant and hence the hypothesis,

**H<sub>02</sub>: *‘There is a direct positive effect of the independent variables, namely, consumer perception and attitude on the dependent variable, namely, impact of internet advertisements on access of services’ is accepted.***

The direct effect of independent variable namely, impact of internet advertisements with respect to purchase decisions on consumer satisfaction towards internet channel advertisements is shown by the regression coefficients as 0.013 which is significant at 1 per cent level. Hence the hypothesis

**H<sub>03</sub>: *‘There is a direct positive effect of the independent variable, namely, impact of internet advertisements on purchase decisions on the dependent variable, namely, consumer satisfaction on internet channel advertisements’ is accepted.***

The direct effect of impact of internet advertisements with respect to access of services on consumer satisfaction towards internet channel advertisements is 0.010 which is found to be not significant. This shows that impact of internet advertisements with respect to access of services has no significant impact on consumer satisfaction towards internet channel advertisements. Hence the hypothesis,

**H<sub>04</sub>: *‘There is a direct positive effect of the independent variable, namely, impact of internet advertisements on access of services on the dependent variable, namely, consumer satisfaction on internet channel advertisements’ is not accepted.***

The direct effect of consumer satisfaction on impact of internet advertisements with respect to purchase decisions on consumer satisfaction regarding purchase decisions by the regression coefficient as 0.443 which is significant at 1 per cent level; (i.e) the consumer satisfaction regarding purchase decisions is positively and significantly influenced by the impact of internet advertisements with respect to purchase decisions. Hence the hypothesis

**H<sub>05</sub>:** *‘There is a direct positive effect of the independent variable namely, impact of internet advertisements on purchase decisions on the dependent variable namely, consumer satisfaction on purchase decisions’ is accepted.*

The direct effect of consumer satisfaction on impact of internet advertisements with respect to access of services on consumer satisfaction regarding access of services by the regression coefficient as 0.509 which is significant at 1 per cent level; (i.e) the consumer satisfaction regarding access of services is positively and significantly influenced by the impact of internet advertisements with respect to access of services. Hence the hypothesis

**H<sub>06</sub>:** *‘There is a direct positive effect of the independent variable, namely, impact of internet advertisements on access of services on the dependent variable, namely, consumer satisfaction on access of services’ is accepted.*

The direct effect of independent variable, namely, consumer satisfaction towards internet channel advertisements on consumer satisfaction regarding purchase decisions is shown by the regression coefficients as –0.312 which is found to be not significant ( $p > 0.05$ ); (i.e) the effect of consumer satisfaction towards internet channel advertisements on consumer satisfaction regarding purchase decisions is negative but not significant. Hence the hypothesis

**H<sub>07</sub>:** *‘There is a direct positive effect of the independent variable, namely, consumer satisfaction on internet channel advertisements on the dependent variable, namely, consumer satisfaction on purchase decisions’ is not accepted.*

The direct effect of consumer satisfaction towards internet channel advertisements on consumer satisfaction regarding access of services is shown by the regression coefficients as 0.391 which is found to be not significant at 5 per cent level; (i.e) the effect of consumer satisfaction towards internet channel advertisements on consumer satisfaction regarding access of services is positive but not significant. Hence the hypothesis

**H<sub>08</sub>:** *‘There is a direct effect of the independent variable, namely, consumer satisfaction on internet channel advertisements on the dependent variable, namely, consumer satisfaction on access of services’ is not accepted.*

**Table 7.3**

**Direct, Indirect and Total Effects – Unstandardised**

Variables	Independent Variables				
	Consumer Perception	Consumer Attitude	Impact of Internet Advertisements on Access of Services	Impact of Internet Advertisements on Purchase Decisions	Consumer Satisfaction on Internet Channel Advertisements
<b>Direct Effect</b>					
Impact of Internet Advertisements on Access of Services	.156	.263	----	----	----
Impact of Internet Advertisements on Purchase Decisions	.345	.369	----	----	----
Consumer Satisfaction on Internet Channel Advertisements	----	----	.010	.013	----
Consumer Satisfaction on Access of Services	----	----	.509	----	.391
Consumer Satisfaction on Purchase Decisions	----	----	----	.443	-.312
<b>Indirect Effect</b>					
Impact of Internet Advertisements on Access of Services	----	----	----	----	----
Impact of Internet Advertisements on Purchase Decisions	----	----	----	----	----
Consumer Satisfaction on Internet Channel Advertisements	.006	.007	----	----	----
Consumer Satisfaction on Access of Services	.082	.137	.004	.005	----
Consumer Satisfaction on Purchase Decisions	.151	.161	-.003	-.004	----
<b>Total Effect</b>					
Impact of Internet Advertisements on Access of Services	.156	.263	----	----	----
Impact of Internet Advertisements on Purchase Decisions	.345	.369	----	----	----
Consumer Satisfaction on Internet Channel Advertisements	.006	.007	.010	.013	----
Consumer Satisfaction on Access of Services	.082	.137	.513	.005	.391
Consumer Satisfaction on Purchase Decisions	.151	.161	-.003	.438	-.312

(Source: Computed)

### **Direct Effects – Estimates**

The coefficients associated with the single-headed arrows in a path diagram are sometimes called direct effects. In unstandardised model, for instance, consumer perception has a direct positive effect on impact of internet advertisements with respect to access of services (0.156); (i.e) due to the direct effect of consumer perception, when it goes up by 1, impact of internet advertisements with respect to access of services score increases by 0.156.

Similarly, the direct effect of consumer attitude on impact of internet advertisements with respect to access of services is 0.263; (i.e) when consumer attitude score goes up by 1 unit the impact of internet advertisements with respect to access of services score goes up by 0.263.

Similarly, the direct effects of consumer perception and attitude on impact of internet advertisements with respect to purchase decisions are 0.345 and 0.369 respectively. The effects are direct and positive.

The variables, impact of internet advertisements with respect to access of services and impact of internet advertisements with respect to purchase decisions also have direct positive effect on consumer satisfaction towards internet channel advertisements with regression coefficients of 0.010 and 0.013 respectively.

The direct effect of impact of internet advertisements with respect to access of services on consumer satisfaction regarding access of services is 0.509 which shows that the impact of internet advertisements with respect to access of services increases correspondingly. There will be proportionate increase in the satisfaction level of the respondents on access of services.

Similarly, the direct effect of impact of internet advertisements with respect to purchase decisions on consumer satisfaction regarding purchase decisions is 0.443 which shows that the impact of internet advertisements with respect to purchase decisions increases correspondingly there will be proportionate increase in the satisfaction level of the respondents on purchase decisions.



### **Indirect Effects – Estimates**

The table 7.3 describes that the indirect effect of each of the column variable on each row variable. The table 7.3 shows that the indirect effects of consumer perception on consumer satisfaction towards internet channel advertisements, consumer satisfaction regarding access of services and consumer satisfaction regarding purchase decisions are 0.006, 0.082 and 0.151 respectively. The effects are positive and indirect; (i.e) these three variables are positively and indirectly also affected by consumer perception.

Similarly, consumer attitude also has indirect effect on the three variables, namely, consumer satisfaction towards internet channel advertisements, consumer satisfaction regarding access of services and consumer satisfaction regarding purchase decisions with regression coefficients of 0.007, 0.137 and 0.161 respectively. These effects are indirect and positive; (i.e) increase in consumer attitude will indirectly increase the scores of these three factors explained above. Also, impact of internet advertisements with respect to access of services has indirect and positive effect on consumer satisfaction regarding access of services and negative effect on consumer satisfaction regarding purchase decisions with regression coefficients of 0.004 and -0.003 respectively.

Similarly, The indirect effects of impact of internet advertisements with respect to purchase decisions has indirect and positive effect on consumer satisfaction regarding access of services and indirect negative effect on consumer satisfaction regarding purchase decisions with regression coefficients of 0.005 and -0.004.

However, before considering the mediating effect of consumer satisfaction towards internet channel advertisements between the independent variables, impact of internet advertisements with respect to purchase decisions and access of services respectively and the dependent variables, namely, consumer satisfaction regarding purchase decisions and access of services, separate regressions were run for the these factors and the results are produced below.

**Table 7.4**

**Regression Table for Selected Independent and Dependent Variables without Mediation Variable Effects**

<b>Variable To (Dependent)</b>	<b>Path</b>	<b>Variable from (Independent)</b>	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>
Consumer Satisfaction on Purchase Decisions	<---	Impact of Internet Advertisements on Purchase Decisions	0.437	0.052	8.332	**
Consumer Satisfaction on Access of Services	<---	Impact of Internet Advertisements on Access of Services	0.517	0.057	8.988	**

(Source: Computed)

(\*\*- Significant at 1 Per Cent Level)

The regression result shows that when the direct effect of impact of internet advertisements with respect to purchase decisions on the dependent variable, namely, consumer satisfaction regarding purchase decisions is considered, which simple regression is, the results show that impact of internet advertisements with respect to purchase decisions affects significantly and positively consumer satisfaction regarding purchase decisions at 1 per cent level with regression estimate of 0.437. The regression coefficient of impact of internet advertisements with respect to access of services for the respective dependent variable, namely, consumer satisfaction regarding access of services is 0.517. These are unmediated effects.

It is observed from the table 7.4 that indirect effect of impact of internet advertisements with respect to purchase decisions on consumer satisfaction regarding purchase decisions and access of services are only -0.003 and 0.004 respectively. These effects are observed when the mediation variable, consumer satisfaction towards internet channel advertisements is introduced.

Further, the regression result (Table 7.1) shows that when the mediation variable is introduced, the regression estimate of impact of internet advertisements with respect to

purchase decisions on consumer satisfaction regarding purchase decisions is 0.509 and significant at 1 per cent level. Similar observations can be made from the regression results, impact of internet advertisements with respect to access of services on the same dependent variable, namely, consumer satisfaction regarding access of services; (i.e) the result shows that even after the introduction of the mediating variable consumer satisfaction towards internet channel advertisements, the effect of impact of internet advertisements with respect to purchase decisions and access of services on consumer satisfaction regarding purchase decisions and access of services respectively remained significant and the mediation variable influence is negligible between the independent and dependent variables. Hence the hypothesis

**H<sub>09</sub>: *‘There is a mediation effect played by consumer satisfaction on internet channel advertisements between the independent variables, impact of internet advertisements on purchase decisions and access of services and consumer satisfaction on purchase decisions and access of services’ is not accepted.***

#### **Total Effects – Estimates**

The total effect is the combined direct and indirect effect of each column variable on each row variable. For example, total effect of impact of internet advertisements with respect to purchase decisions on consumer satisfaction regarding purchase decisions is 0.438, which is the sum of the direct effect and indirect effects of the same variables (0.443-0.004~=0.438); (i.e) due to direct and indirect effects of impact of internet advertisements with respect to purchase decisions, a unit increase in this variable will result in an increase of 0.438 in the dependent variable, consumer satisfaction regarding purchase decisions. Similarly, observation can also be made for access of services.

**Table 7.5**

**Direct and Indirect Effects – Standardised**

Variables	Independent Variables				
	Consumer Perception	Consumer Attitude	Impact of Internet advertisements on access of Services	Impact of Internet Advertisements on Purchase decisions	Consumer Satisfaction on Internet Channel Advertisements
<b>Direct Effect</b>					
Impact of Internet Advertisements on Access of Services	.138	.263	---	---	---
Impact of Internet Advertisements on Purchase Decisions	.252	.305	---	---	---
Consumer Satisfaction on Internet Channel Advertisements	---	---	.092	.149	---
Consumer Satisfaction on Access of Services	---	---	.405	---	.033
Consumer Satisfaction on Purchase Decisions	---	---	---	.390	-.024
<b>Indirect Effect</b>					
Impact of Internet Advertisements on Access of Services	---	---	---	---	---
Impact of Internet Advertisements on Purchase Decisions	---	---	---	---	---
Consumer Satisfaction on Internet Channel Advertisements	.050	.070	---	---	---
Consumer Satisfaction on Access of Services	.057	.109	.003	.005	---
Consumer Satisfaction on Purchase Decisions	.097	.117	-.002	-.004	---
<b>Total Effect</b>					
Impact of Internet Advertisements on Access of Services	.138	.263	---	---	---
Impact of Internet Advertisements on Purchase Decisions	.252	.305	---	---	---
Consumer Satisfaction on Internet Channel Advertisements	.050	.070	.092	.149	---
Consumer Satisfaction on Access of Services	.057	.109	.408	.005	.033
Consumer Satisfaction on Purchase Decisions	.097	.117	-.002	.387	-.024

(Source: Computed)

The standardized effects are free from units of measurements and hence are comparable. For example, the direct effect on impact of internet advertisements with respect to access of services by consumer attitude is higher (0.263) when compared to consumer perception (0.138).

Similarly, the direct effect of consumer attitude on impact of internet advertisements with respect to purchase decisions is more (0.305) when compared to the direct effect of consumer perception (0.252). The direct effect of impact of internet advertisements with respect to purchase decisions on consumer satisfaction towards internet channel advertisements (0.149) is comparatively higher than that of impact of internet advertisements with respect to access of services (0.092). Similarly, consumer satisfaction towards internet channel advertisements has more direct effect on consumer satisfaction regarding access of services (0.033) compared to its effect on consumer satisfaction regarding purchase decisions (-0.024).

When, the standardized indirect effects are considered, the effects of consumer attitude on consumer satisfaction towards internet channel advertisements (0.070), consumer satisfaction regarding access of services (0.109) and consumer satisfaction regarding purchase decisions (0.117) are higher when compared to consumer perception.

Similarly, the indirect effect of impact of internet advertisements with respect to access of services is higher on consumer satisfaction regarding access of services (0.003) when compared to the effect on consumer satisfaction regarding purchase decisions (-0.002). Also, the indirect effect of impact of internet advertisements with respect to purchase decisions is higher on consumer satisfaction regarding access of services (0.005) when compared to the effect on consumer satisfaction regarding purchase decisions (-0.004)

Considering the total effect, it is observed that the total effect of impact of internet advertisements with respect to access of services (0.408) on consumer satisfaction regarding access of services is higher than the total effect of impact of internet advertisements with respect to purchase decisions (0.387) on consumer satisfaction regarding purchase decisions.

## Summary

Path analysis has been applied to find the effects of consumer perception and attitude on the impact of internet advertisements with respect to purchase decisions and access of services. The mediation effect of consumer satisfaction towards internet channel advertisements between the impact and consumer satisfaction regarding purchase decisions and access of services factors were also studied.

The necessary hypotheses were framed. The path model was developed and the goodness of fit statistics has been employed to test the validity of the model. The goodness of fit statistics was within the admissible limits and it has inferred that the model is good. Therefore, the data and the variables fit the model well.

Finally, the path coefficients were estimated direct, indirect and total effects of exogenous and endogenous variables were found out. The unstandardized and standardized regression weights were calculated. The result has shown that significant direct positive effects of both consumer perception and attitude on impact of internet advertisements with respect to access of services as well as purchase decisions.

The direct effect of impact of internet advertisements with respect to purchase decisions was significant on consumer satisfaction towards internet channel advertisements. Whereas, the effect of impact of internet advertisements with respect to access of services influence consumer satisfaction towards internet channel advertisements was not significant.

The effects of consumer satisfaction towards internet channel advertisements were not significant on consumer satisfaction regarding access of services and consumer satisfaction regarding purchase decisions.

The effect of impact of internet advertisements with respect to access of services on consumer satisfaction regarding access of services was significant. Similarly, the effect of impact of internet advertisements with respect to purchase decisions on consumer satisfaction regarding purchase decisions was also significant.

The standardized effect calculated for each independent variable directly or indirectly shows that when direct effects are considered, the effect of consumer attitude

on impact of internet advertisements with respect to access of services is higher compared to consumer perception.

Similarly, the direct effect of consumer attitude on impact of internet advertisements with respect to purchase decisions is more when compared to the direct effect of consumer perception. The direct effect of impact of internet advertisements with respect to purchase decisions affects consumer satisfaction towards internet channel advertisements is comparatively higher than that of impact of internet advertisements with respect to access of services. Similarly, consumer satisfaction towards internet channel advertisements has more direct effect on consumer satisfaction regarding access of services than the effect on consumer satisfaction regarding purchase decisions.

When, the standardized indirect effects are considered, the effects of consumer attitude on consumer satisfaction towards internet channel advertisements, consumer satisfaction regarding access of services and consumer satisfaction regarding purchase decisions are higher when compared to consumer perception.

Similarly, the indirect effect of impact of internet advertisements with respect to access of services is higher on consumer satisfaction regarding access of services when compared to the effect on consumer satisfaction regarding purchase decisions. Also, the indirect effect of impact of internet advertisements with respect to purchase decisions is higher on consumer satisfaction regarding access of services when compared to the effect on consumer satisfaction regarding purchase decisions.

Considering the total effect, it is observed that the total effect of impact of internet advertisements with respect to access of services on consumer satisfaction regarding access of services is higher than the total effect of impact of internet advertisements with respect to purchase decisions on consumer satisfaction regarding access of services.