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Structural equation modelling on shoppers purchasing outcomes in shopping malls, Coimbatore City

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Abstract
This paper aims to examine the impact of situational factors on shoppers' purchasing outcomes in the Shopping Malls in Coimbatore city. It explores how store environment, social surroundings, temporal perspective, shopping task and antecedent situational dimensions influence the amount of money spent and number of items purchased. The model itself was tested with data collected from a consumer survey, carried out in the shopping malls in Coimbatore. The data were examined using Structural Equations Modeling (SEM) which is basically a combination of Confirmatory Factor Analysis (CFA), and linear Regression. It is concluded that there is a direct impact on the shoppers level of satisfaction basically decided from their purchase outcome. Research result indicates that managers need to be sensitive to the fact that companions positively influence purchasing outcomes. Thus, they should design such store environment that would attract a lot of shopping parties, parents with children, and foster discussion among them at the same time. Capture time is a further important factor in determining how much a shopper will buy. Store management initiatives should therefore address this situational variable in order to induce longer visits of their patrons.

Keywords: situational factors, consumer in-store, purchasing behaviour, purchasing outcomes, store management

Introduction
Retail markets become increasingly competitive and retailers are continuously looking to differentiate their retail offering. One way they can differentiate is by providing a shopping environment that is customized to meet customers' needs, not only in terms of merchandise, convenience and pricing but also in providing a pleasant and, possibly, exciting shopping atmosphere. Consumer purchasing decisions are frequently made at the point of purchase and may be heavily influenced by what takes place there. A great many factors contribute to purchase decision, including consumer characteristics, brand features and situational factors. By identifying those factors, retailers may improve store layout and design, merchandising, atmosphere and staffing decisions significantly. Structural Equation Modeling is a very general statistical modeling technique, which is widely used in the behavioral sciences. It can be viewed as a combination of factor analysis and regression or path analysis. Hence the researcher has SEM technique to create a model on shoppers purchase outcome behavior in retail industry in Coimbatore city.

Statement of the problem
The success of retail industry solely depends on how it performs in the market place at a given point of time. To entice the consumers, the retail industry must understand the behavior of the consumers. But understanding consumer behavior is complex, as it is related to psychology of consumers and also depends on various factors which have a direct bearing on consumer behavior. Retailers need to implement effective customer relation management and loyalty program. Efficient and effective Loyalty programs, home delivery of goods, customer retention strategies, offers, discounts etc. are the order of the day. This, in turn, led the retailers to revisit their existing marketing strategies and introduce appropriate changes in them in order to get themselves succeed in the industry and flourish. Hence, it is worthwhile to study the situational factors on shoppers' purchasing outcomes in malls.

Objectives of the study
1. To ascertain the influence of economic, socio, physical and temporal factors on purchase in malls.
2. To analyze the impact of task definition that have influence on the shoppers' behaviour.

Research Methodology
The study is descriptive in nature. Both primary and secondary data were collected systematically. Field survey method was employed to collect the primary data from 620 respondents in Coimbatore City. The respondents were selected by using stratified random sampling technique. For this purpose a well-structured questionnaire was used for collecting the data. The secondary data namely literature relating to the study were gathered from National and International journals, newspapers, magazines, articles, research reports, EBSCO, PROWESS, EMERALD, PROQUEST and various other records.

Limitations of the study
1. Resource and Time constraints led the researchers to select a limited sampling frame for the purpose of the current research.

2. Although the study offers exciting results and some great managerial implication yet they are not suitable for generalizing to the whole of Bangalore.
3. The study and the results of the study are confined to the city of Bangalore alone as the factors affecting the purchase behavior may vary according to the geographical area and socio-economic culture of the respective area.

Structural Equation Modelling (SEM)

Structural Equation Modeling is a very general statistical modeling technique, which is widely used in the behavioral sciences. It can be viewed as a combination of factor analysis and regression or path analysis. The interest in SEM is often on theoretical constructs, which are represented by the latent factors. The relationships between the theoretical constructs are represented by regression or path coefficients between the factors. The structural equation model implies a structure for the co-variances between the observed variables, which provides the alternative name covariance structure modeling. However, the model can be extended to include means of observed variables or factors in the model, which makes covariance structure modeling a less accurate name.

Structural Equation Modeling provides a convenient framework for statistical analysis that includes several traditional multivariate procedures, for example factor analysis, regression analysis, discriminant analysis, and canonical correlation, as special cases. Structural equation models are often visualized by a graphical path diagram. The statistical model is usually represented in a set of matrix equations.

Structural Equation Modeling has its roots in path analysis, which was invented by the geneticist Sewall Wright (Wright, 1921). It is still customary to start a SEM analysis by drawing a path diagram. A path diagram consists of boxes and circles, which are connected by arrows. In Wright's notation, observed (or measured) variables are represented by a rectangle box, and latent (or unmeasured) factors by a circle or ellipse or square box. Single headed arrows or 'paths' are used to define causal relationships in the model, with the variable at the tail of the arrow causing the variable at the point. Double headed arrows indicate covariances or correlations, without a causal interpretation. Statistically, the single headed arrows or paths represent regression coefficients, and double-headed arrows covariances. Extensions of this notation have been developed to represent variances and means (cf. McArdle, 1996).

Shoppers purchase outcome model

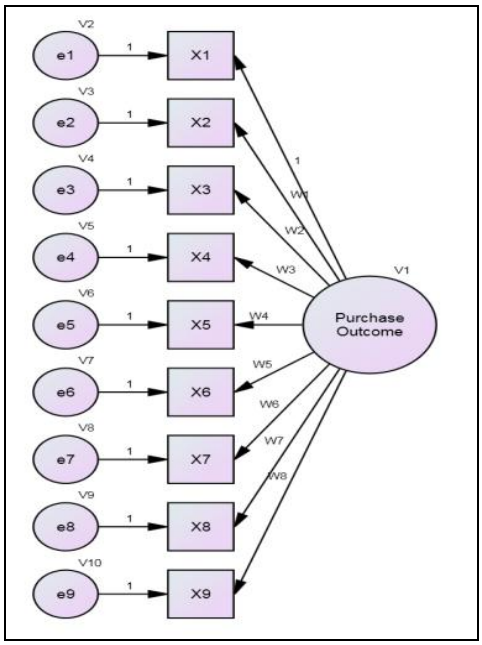

Fig 1: Showing shoppers purchase outcome model

Table 1: Regression Weights

Measured Variables			Estimate	S.E.	C.R.	P
Physical Surroundings	<---	Purchase_Outcome	0.79	0.03	29.71	***
Social Surroundings	<---	Purchase_Outcome	0.85	0.02	35.95	***
Task Perception	<---	Purchase_Outcome	0.84	0.02	37.70	***
Task Definition	<---	Purchase_Outcome	0.83	0.02	39.55	***
Price Perception	<---	Purchase_Outcome	0.79	0.02	33.29	***
Shopper frame of mind	<---	Purchase_Outcome	0.83	0.02	38.89	***
Hedonic value	<---	Purchase_Outcome	0.84	0.02	36.93	***
Service satisfaction	<---	Purchase_Outcome	0.83	0.02	40.70	***
Satisfaction towards Infrastructure Facilities	<---	Purchase_Outcome	1.00			

The above table shows the regression coefficient of the exogenous variables. It is noted that the critical ratio of all the variables namely, Physical Surroundings, Social Surroundings, Task Perception, Task Definition, Price Perception, Shoppers Frame of Mind, Hedonic Values, Service Satisfaction, Satisfaction towards Infrastracture Facilities were found to be significant at 1 percent level. Among the selected variables, which reveals that only due to each and every factors influence the satisfaction of shoppers outcome is achieved.

Table 2: CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	18	1111.575	37	.000	30.043
Saturated model	55	0.000	0		
Independence model	10	7259.256	45	.000	161.317

CMIN is a chi-square statistics comparing the default model and the independence model with the saturated model. The above table infers that the default model has been associated as 30 percent with saturated model and other side, the independence model has been associated as 161.3 percent with saturated model.

RMR, GFI

The Root Mean Square residual is the mean absolute value of the covariance residuals, which reflect the difference between observed and model- estimated covariance. Specifically, RMR is the co-efficient which results from taking the square root of the mean of the squared residuals. The closer is RMR is to 0, the better the model fit. The GFI is the goodness-of-fit index and is equal to 1-(chi-square for the default model / chi-square for the null model).

Table 3: RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	0.064	0.721	0.586	0.485
Saturated model	0.000	1.000		
Independence model	0.380	0.168	-0.017	0.137

From the above table it is indicated that the model is good fit by the influence of RMR value which is more than half and closer to one, i.e., 0.64. GFI (Goodness of Fit Index) refers to 72.1 percent has been fitted in Default model for the proportion of variance-covariance matrix. On the other hand, 16.8 percent fit in Independence model.

Baseline Comparisons

The NFI, normed fit index, also known as (Δ_1), was developed as the alternative to CFI, comparative fit index, is also known as the Bentler Comparative Fit Index, compares the existing model fit with the null model which assumes the latent variables correlates with the independent variables.

Table 4: Baseline Comparison

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	0.847	0.814	0.851	0.819	0.851
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

From the above table, it is noted that the model fit indices are good fit with the evidence of NFI (0.847) and CFI (0.851) which is greater than 0.8.

RMSEA

Root Mean Square Error of Approximation is the popular measure of fit, because it does not require comparison with the null model. It is one of the fit indexes less affected by sample size. There is good model fit if RMSEA less than or equal to 0.05.

Table 5: RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.217	0.206	0.228	0.000
Independence model	0.509	0.499	0.519	0.000

It could be noted from the above table that the RMSEA value is 0.0217 which is lesser than 0.05 and the model resulted as good fit.

Results

Table 6: Bootstrapping

PATHS			Estimate	SE	Mean	't' Value	Result
Physical Surroundings	<---	PurchaseOutcome	0.253	.014	2.2210	71.459	H_1 Accepted
Social Surroundings	<---	PurchaseOutcome	0.145	.008	2.3048	73.306	H_1 Accepted
Temporal perspective	<---	PurchaseOutcome	0.183	.010	2.1500	70.291	H_1 Accepted
Task Definition	<---	PurchaseOutcome	0.161	.009	2.2355	75.594	H_1 Accepted
Price Perception	<---	PurchaseOutcome	0.197	.011	2.3903	80.126	H_1 Accepted
Shopper frame of mind	<---	PurchaseOutcome	0.153	.009	2.4194	80.931	H_1 Accepted
Hedonic value	<---	PurchaseOutcome	0.176	.010	2.2694	73.686	H_1 Accepted
Service satisfaction	<---	PurchaseOutcome	0.198	.011	2.2726	77.391	H_1 Accepted
Satisfaction towards Infrastructure Facilities	<---	PurchaseOutcome	0.246	.014	2.1468	73.473	H_1 Accepted

The above table reveals the values from the Critical Ratio was found to be significant at 1% level and it is clear that the shopping perception of the respondents from the malls has significant and direct influence towards their purchase outcome. All the values were found significantly associated with each other. Hence, it is clear that the shopping in the malls influence the respondents significantly towards their purchase outcome.

Structural Equations: Methodology and Technical Application

The following path analysis is used to prove the selected hypotheses.

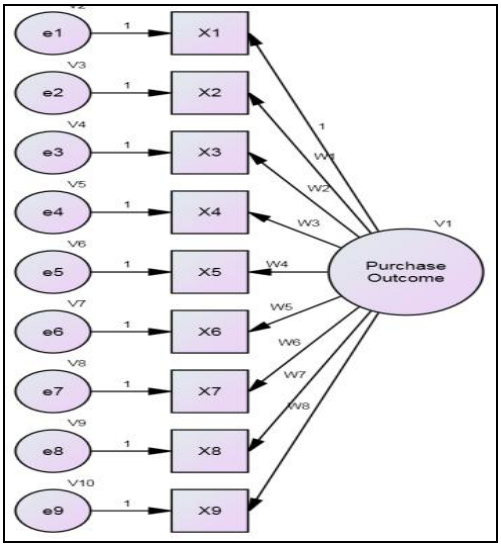

Fig 2: Showing Hypothesis Model

Testing of Hypotheses

The following table represents the results of the testing of the hypotheses.

Table 7: testing of hypotheses

Hypotheses	Hypothetical Relationship	Result
H1 : There is a positive impact of Physical Surroundings on Purchase Outcome	Positive	Confirmed
H2 : There is a positive impact of Social Surroundings on Purchase Outcome	Positive	Confirmed
H3 : There is a positive impact of Temporal perspective on Purchase Outcome	Positive	Confirmed
H4 : There is a positive impact of Task Definition on Purchase Outcome	Positive	Confirmed
H5 : There is a positive impact of Price Perception on Purchase Outcome	Positive	Confirmed
H6 : There is a positive impact of Shopper frame of mind on Purchase Outcome	Positive	Confirmed
H7 : There is a positive impact of Hedonic value on Purchase Outcome	Positive	Confirmed
H8 : There is a positive impact of Service satisfaction on Purchase Outcome	Positive	Confirmed
H9 : There is a positive impact of Satisfaction towards Infrastructure Facilities on Purchase Outcome	Positive	Confirmed

Discussion of the result

From the path diagram, measured variables with latent variable of situational factors is having positive relationship and also significant at 1 percent and 5 percent level. It is concluded that there is a direct impact on the shoppers level of satisfaction basically decided from their purchase outcome.

Suggestions and Recommendations

Situational factors are any factors that contribute to the set of different conditions to which an individual acts or reacts to. The situational effects are widely recognised to understand and predict the consumer behaviour in retailing. A shopping situation is a particular act of buying behaviour occurring at a specific point in space and time. A situation serves as an interface between the person and the stimulus object and all those factors defining that interface constituting situational variables. Situational variables refer to all those factors with respect to time and place of observation which do not follow from knowledge of personal (intra-individual) and stimulus (choice-alternative) attributes. Situational variables include task definition, perceived risk, physical surroundings, temporal aspects, and social surroundings which was specifically taken as dimensions of the study to verify the level of satisfaction of the shoppers from their purchase outcome.

In this connection, the practical value of this study is that the retailers may be better able to explain and predict the effects of situational factors and their changes on consumers' shopping behaviour. Research result indicates that managers need to be sensitive to the fact that companions positively influence purchasing outcomes. Thus, they should design such store environment that would attract a lot of shopping parties, parents with children, and foster discussion among them at the same time. Capture time is a further important factor in determining how much a shopper will buy. Store management initiatives should therefore address this situational variable in order to induce longer visits of their patrons.

References

1. Dhivya Sathish, Venkatrama Raju D. The Growth of Indian Retail Industry, Advances In Management. 2010; 3(7).
2. Katole Hemant J. A study of problems faced by customers during visit of organized retail malls, Asian Journal of Management Research. 2011; 2:1.
3. Michael Morrison, Sarah Gan, Chris Dubelaar, Harmen Oppewal. In-store music and aroma influences on shopper behavior and satisfaction, Journal of Business Research. 2011; 64:558-564.

4. Nancy M. Puccinelli, Ronald C. Goodstein, Dhruv Grewal, Robert Price, Priya Raghubir, David Stewart. Customer Experience Management in Retailing: Understanding the Buying Process, Journal of Retailing. 2009; 85:15-30.
5. Kumar V, Morris George. Joseph Pancras Richard and Susan Lenny. Cross-buying in retailing: Drivers and consequences", Journal of Retailing. 2008; 84:15-27.
6. Vanessa Jackson, Leslie Stoel, Aquia Brantley. Mall attributes and shopping value: Differences by gender and generational cohort, Journal of Retailing and Consumer Services. 2011; 18:1–9.
7. Yuanfeng Cai, Randall Shannon. Personal Values and Mall Shopping Behavior: The Mediating Role of Attitudes of Chinese and Thai Consumers, ANZMAC, 2010.