Used Durables and Online Buying: An Attitudinal Study of Indian Youth

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Abstract

The present paper is an empirical paper based on an online survey conducted in the first quarter of the year 2013. Preliminary findings were presented at an international conference in the last quarter of 2013, and changes were made based on suggestions received from the co-delegates. The study attempts to investigate the attitude, perception, and motivation of Indian youth, especially management students, regarding their adoption of a distinguished selling/ buying online platform for used laptops through a consumer to consumer discount e-commerce portal. With an exploratory research design, this paper uses multivariate analyses to draw perceptual mapping of the proposed portal vis-à-vis other e-commerce sites. It simulates a business model with an integrated value chain from acquisition and selling of used laptops at a discounted price to a value added after sales/ post purchase service in a committed manner. A focus group discussion was carried out initially among the sampling units from the sampling frame of a management college to understand the antecedents. Based on the findings, a questionnaire was developed and pre-tested through a survey design. Across its two stages, the research used both exploratory and descriptive design in sequence. The second part of the research helps in conceptualizing an optimum marketing mix, and explaining differentiation and positioning variables for the commercial launch of such a venture. However, the current paper discusses only the first part of the study.

Keywords : **consumerism, performance marketing, disposal behavior, consumer adoption, e-commerce**

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In the parlance of world-wide movement on consumerism and customer centric performance marketing, planned obsolescence has created many debates for organizations. Digital technologies have ushered immense opportunities for entrepreneurial minds leading to innovative business models. Disposal behavior for technological gadgets, equipments and devices, for example, mobile phones, personal computers, laptops, and so forth constitute a potential market for both buyers and sellers, and helps in conceptualizing a sustainable venture.

A laptop being an immediate requirement for management students, the sampling frame chosen for the present study was a management college campus and the consumer durable chosen was the laptop. Economic paucity of students in a majority of the cases gave a feasible indication to the niche level venture. The proposed portal aims at dealing only in used laptops of all brands - procuring from and consequently selling them to management students. The pricing is psychological, reasonable, and at the same time, protects the margin. Offers of warranty are a potential differentiator. Other few existing and potential competitors would be OLX, eBay, Quikr, Backpage, Domesticsale, who are already in similar trade. Operations include procurement, repair, quality check, warranty preparation, and dispatch/ delivery, with few service stations in remote parts, where demand is high.

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Literature Review

➲ **Product Context :** According to Rondell (2000), Vance Packard, in his book *The Waste Makers,* criticized planned obsolescence adopted by organizations today to maintain product superiority that shortens the usable life span of products, stimulates replacement purchases, and stay competitive in the market. Sonntag (2000) noted that competitive considerations create additional pressures for obsolescence. As noticed by Boland (2001) and Slade (2006), when consumer durables, for example, personal computers, mobile phones, laptops, and so forth fully loaded with components using harmful chemicals like lead, mercury, and so forth are discarded, they cause serious environmental damage.

Research has revealed that 50 - 80% of the recycled electronics are exported to 3rd world economies. As per Bulow (1986), market of used durables limits the scope of higher price of replacement introduced by companies. This, in turn, compels firms to make the product revision cycle more frequent, as observed by Iizuka (2007). Box (1983) and Boone, Lemon, and Staelin (2001) observed that technological obsolescence acts more to drive replacement purchases, and rapid introductions of upgrades motivate faster replacement, irrespective of actual quality enhancement. However, a concept of moral imagination (Werhane, 2002) places an economic system in the larger context of an ecological system. Though the existing environmental policy wisdom favors upstream solutions (design and marketing of green products) over downstream solutions (recycling incentives and taxes) (Thøgersen, 2000), start- up ventures in the domain of downstream solutions can be instrumental.

➲ **Service Context :** The technology acceptance model of Davis (1989) is grounded in the behavioral model like theory of reasoned action proposed by Fishbein and Ajzen (1975), who stated that perceived usefulness and ease are drivers of technology usage. As per Featherman and Pavlou (2003), technology features, that is, compatibility and usability (Venkatesh, 2000), or users' attitudes such as self-efficacy beliefs (Yi & Hwang, 2002), and desire for personal contact (Walker & Johnson, 2006) are antecedents of service acceptance and service satisfaction. Dabholkar and Bagozzi (2002), Parasuraman (2000), Zhu, Sarkis, and Geng (2005), and Zhu, Nakata, Sivakumar, and Grewal (2007) found that users' personal characteristics such as technological readiness, motivation, ability, role clarity, inherent novelty seeking, need for interaction, trust in technology, and self-consciousness, and so forth influence adoption behavior. Auh, Bell, McLeod, and Shih (2007) and Chan, Yim (Bennett), Yim, and Lam (2010) highlighted customers' participative behavior in service to be the main drivers of service usage, service effectiveness, customer satisfaction, value perception, quality, and recovery. Kelley, Donnelly, and Skinner (1990) expressed that there is need to inform customers about the activities and behaviors needed for an effective service encounter. However, customers perceive technology-mediated services as risky (Keh & Pang, 2010).

➲ **Ethics Context :** Many authors, for example, Ottman (1992) and Peattie and Crane (2005) have indicated that environmentally responsive consumerism is addressing the implications of buyer behavior. Changes in organizational management practices required for the entrepreneur (Strong, 1998) were also studied. The responsibility for the negative consequences of planned obsolescence was shared among technical professionals and managers. Giaretta (2005) argued that offering frequent product upgrades while touting minor or illusory benefit improvements might be considered a wasteful and potentially misleading practice.

➲ **Consumer Context :** Churchill Jr., Ford, Hartley, and Walker (1985) and Peter and Tarpey Sr. (1975) advocated consumers' reference groups and their influence on consumers' thoughts, feelings, behaviors, and purchase decision. Communication in buyer-seller relationships has an important role in boosting relationship performance (Kang, 2014). Moisander (2007) observed that a consumer's motivation to act partly depends on his/her perception of the degree of behavioral control they have in a given situation. Consumer behavior plays a big role in making an innovative business model a real success based on the acceptance of an innovative retail channel. Customer value is not given, but needs to be communicated. Five main obstacles suggested are deficits in value assessment, communication, lack of effective market segmentation, sales force, and management (Hinterhuber, 2008).

Fulfilling the individual product requirements does not mean high customer satisfaction, in fact, perceived product quality should be considered (Sauerwein, Bailon, Matzler, & Hinterhuber, 1996). Psychological pricing results from consumers' limited capacity for strong directly accessible information (Brenner & Brenner, 1982). According to Johar and Sirgy (1989), a normative model showed how positioning can be done effectively by two famous positioning models: Image strategy given by David Ogilvy in his book *Confessions of an Advertising Man* (1963) and unique selling proposition in the book *Reality in Advertising* by Rosser Reeves (1961).

Since the Internet has the ability to reach the customer's home, the distribution channels have started to assume new meaning for the B2C E-commerce (Shalini & Kamalaveni, 2013). Business-to-consumer/ consumer-to-consumer discount ecommerce portals offer a service encounter experience to customers and necessitate marketers to identify factors affecting technology acceptance and usage behavior of surfers. This can help marketers address the design elements in the interactive medium, keeping in mind all relevant technology features and user attitudes. Marketers have studied the determinants of brand choice for products and services. The most common approach is to ask respondents to "self-report" the importance of many product/service attributes and benefits in a product-category. Later, it became clear that what respondents said was important was not reflected in their brand choices (Clancy, Berger, & Krieg, 2013). Hence, it seems to be a prejudice to assume buyer's choice of brands only on the basis of product attributes.

Thus, for any start up venture in a niche business segment of this nature and magnitude, it requires a match between perceived performances with the consumers' desired functional characteristics. Hence, positioning on the *functional congruity model* is more pertinent than the *self-congruity model*.

Objectives of the Study

The present study is an empirical study of youth's attitude, adoption, and usage of used laptops through a technology-intensive business of a proposed discount portal. As an online survey design conducted among youths, that is, management students in India, it captures relevant factors for an exploratory study.

➲ **Business Rationale :** The pseudo-name suggested for the online portal is 'Laptopmart' (www.thewackyheads.com/lmart) - a niche e-commerce company planning to launch an online portal for buying and selling of used laptops from all the management students across the country. The findings from real time, online behavior of the visitors of the site constitutes the second stage of this paper, and is beyond the scope of the current study. Procurement of used laptops will be panned from management students who have either completed their studies or are willing to sell the same during the course of their studies due to any reason. The analysis is based on customer attitude studies, segmentation, and positioning strategies. The study aims at the following specific objectives:

(1) To understand the various underlying factors influencing consumers' buying/ selling through the proposed e-commerce portal,

(2) To identify positioning variables for an e-commerce portal with respect to used laptops,

(3) To understand different consumer clusters and their characteristics.

Hypotheses of the Study

The hypotheses to be tested are based on the association tests between various demographic variables of the consumers and their perceptual, attitudinal, and behavioral responses towards online shopping of used laptops through the proposed/ conceptualized portal.

Methodology

A focused group discussion was conducted first to gain first-hand insights into youth's perceptions and potential

Table 1. Scale Validity: Mean & *SD* of Responses

SCALE (weights)	A	B	C	D	E	F
7	32	3	6	16	20	19
6	35	5	3	10	7	39
5	5	26	4	29	36	7
4	6	16	10	22	11	8
3	6	8	18	2	7	9
2	2	10	31	4	2	3
1	2	20	16	5	5	3
MEANS	72.42	44.14	36	60.57	62.28	67.14
STD. DEV.	14.42	8.40	9.96	10.16	11.81	12.83

adoption barriers. This helped in forming the basis of the planned exploratory study in a B2C and C2C context. The comprehensive framework for understanding users' perceptual, attitudinal, and behavioral responses to such online services was based on the findings from such a moderated discussion. In total, 192 respondents participated in the study. The questionnaire checked the willingness of the prospective buyers in buying used laptops and the variables affecting such buying behavior. Subsequently, these factors were further investigated to understand acceptance drivers systematically and in-depth. In the second part, the responses of 88 respondents were recorded. Various statistical packages such as SPSS and MS-Excel with tools such as correlation and regression analysis (to test the hypotheses), factor analysis (to group influential factors), cluster analysis (to segregate respondents into clusters), and multidimensional scaling (to draw perceptual maps and study positioning variables) had been used.

➲ **Marketing Scales :** The marketing scales used in the questionnaires were taken from Bearden, Netemeyer, and Haws (2011). The scales talk about the description, development, sample, and validity of the data set used for research. Price perception and brand parity marketing scales were also used. The price perception scale of Lichtenstein, Ridgway, and Netemeyer (1993) offered a conceptual view of perception of price in a "negative role" and a "positive role". In a negative role, price represents the amount of money that must be given up to engage in a given purchase transaction. However, in a positive role, price is the signal to indicate quality affecting purchase positively. The negative role classifies purchasers as value conscious, price conscious, coupon/ sales offer prone, and price-mavens. However, under the positive role, the purchasers can be classified to possess price-quality schema and being prestige sensitive. A total of 88 respondents were surveyed on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7).The output (Table 1) generated with the mean and standard deviation is as follows :

A = I always try to maximize the quality I get for the money I spend,
B = I am not willing to make an extra effort to find lower prices,
C = I believe that using coupons fetch me a good deal,
D = A product on sale gives me a reason to buy it,
E = I am perceived as an expert when it comes to knowing the prices of the products,
F = Generally speaking, the higher is the price of the product, the higher is the quality.

Majority of the respondents, that is, 72.42% (*SD* = 14.42) belonged to the value-conscious category. This shows that the proposed venture should try to maximize value provided to prospective customers for a certain amount of consideration ; 67.14% (*SD* =12.83) of the respondents belonged to the category of being prestige sensitive, 62.28% (*SD* =11.81) of the respondents possessed price-quality schema, followed by 60.57% of the respondents (*SD* =10.16), who were price-mavens; 44.14% of the respondents (*SD* =8.40) were price conscious, followed by 36% of the respondents, (*SD* = 9.96) who were coupon prone. Since most of the respondents focused on value, it should be the prime objective of the proposed online portal so as to broaden its customer base.

Table 2. Multicollinearity Check: Correlations Matrix for Independent Variables

		Income (*X*1)	Willing to pay (*X*2)	Attributes (*X*3)	Brand (*X*4)	Delivery (*X*5)	Offers & Schemes (*X*6)	After Sales Services (*X*7)	Willingness to Resell (*X*8)
Income (*X*1)	Pearson Correlation	1	.212**	-.034	-.033	.118	.042	-.056	-.161*
	Sig. (2-tailed)		.003	.638	.646	.102	.564	.442	.026
	N	192	192	192	192	192	192	192	192
Willing to pay (*X*2)	Pearson Correlation	.212**	1	-.255**	-.282**	.059	.040	.083	-.143*
	Sig. (2-tailed)	.003		.000	.000	.414	.583	.254	.048
	N	192	192	192	192	192	192	192	192
Attributes (*X*3)	Pearson Correlation	-.034	-.255**	1	.241**	.123	-.040	.065	.093
	Sig. (2-tailed)	.638	.000		.001	.089	.586	.372	.202
	N	192	192	192	192	192	192	192	192
Brand (*X*4)	Pearson Correlation	-.033	-.282**	.241**	1	-.010	.009	-.101	.038
	Sig. (2-tailed)	.646	.000	.001		.888	.900	.162	.602
	N	192	192	192	192	192	192	192	192
Delivery (*X*5)	Pearson Correlation	.118	.059	.123	-.010	1	.477**	.516**	-.010
	Sig. (2-tailed)	.102	.414	.089	.888		.000	.000	.892
	N	192	192	192	192	192	192	192	192
Offers &Schemes (*X*6)	Pearson Correlation	.042	.040	-.040	.009	.477**	1	.364**	.106
	Sig. (2-tailed)	.564	.583	.586	.900	.000		.000	.144
	N	192	192	192	192	192	192	192	192
After Sales Services (*X*7)	Pearson Correlation	-.056	.083	.065	-.101	.516**	.364**	1	.036
	Sig. (2-tailed)	.442	.254	.372	.162	.000	.000		.623
	N	192	192	192	192	192	192	192	192
Willingness to Resell (*X*8)	Pearson Correlation	-.161*	-.143*	.093	.038	-.010	.106	.036	1
	Sig. (2-tailed)	.026	.048	.202	.602	.892	.144	.623	
	N	192	192	192	192	192	192	192	192

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Table 3. Correlations Coefficient of Variables (<0.7)

	Income (*X*1)	Willing to pay (*X*2)	Attributes (*X*3)	Brand (*X*4)	Delivery (*X*5)	Offers & Schemes (*X*6)	After Sales Services (*X*7)	Willingness to Resell (*X*8)
Income (*X*1)	1							
Willing to pay (*X*2)	0.212379627	1						
Attributes (*X*3)	-0.034181235	-0.254763787	1					
Brand (*X*4)	-0.03331696	-0.282115253	0.241197125	1				
Delivery (*X*5)	0.118270015	0.059271325	0.123088758	-0.01023354	1			
Offers & Schemes (*X*6)	0.041914118	0.039817319	-0.039509332	0.009171821	0.477097389	1		
After Sales Services (*X*7)	-0.055787493	0.08265068	0.064832522	-0.101357571	0.516350651	0.36375278	1	
Willingness to Resell (*X*8)	-0.161094772	-0.142937086	0.092557209	0.037855631	-0.009888891	0.105881771	0.035655232	1

Table 4. Regression Statistics: Impact of IDVs on DV

Multiple *R*	0.556401183
R Square	0.309582277
Adjusted *R* Square	0.279400081
Standard Error	19.61189677
Observations	192

Table 5(a) and Table 5(b) . ANOVA

	df	SS	MS	*F*	Significance *F*
Regression	8	31561.26813	3945.158516	10.25711585	8.26152E-12
Residual	183	70386.64854	384.6264948		
Total	191	101947.9167			

	Coefficients	Standard Error	*t* Stat	*p* -value	Lower 95%	Upper 95%
Intercept	59.6151663	8.542710511	6.978483728	5.2976E-11	42.76029703	76.47003556
Income (*X*1)	2.941831956	1.341832247	2.192399209	0.029612354	0.294381002	5.58928291
Willing to pay (*X*2)	6.814517531	1.535773494	4.437189181	1.57109E-05	3.784418194	9.844616869
Attributes (*X*3)	-0.671139484	2.036757272	-0.329513729	0.742144267	-4.689685765	3.347406797
Brand (*X*4)	-0.527486685	0.778907889	-0.677213175	0.49912591	-2.064281197	1.009307828
Delivery (*X*5)	0.990795783	1.87672904	0.527937577	0.598182228	-2.712012896	4.693604461
Offers & Schemes (*X*6)	-5.440700128	1.770902192	-3.072275902	0.002448733	-8.934711178	-1.946689078
After Sales Services (*X*7)	2.935402913	2.675711442	1.097055111	0.274058777	-2.34380753	8.214613356
Willingness to Resell (*X*8)	-14.56782666	3.265708295	-4.460847493	1.42251E-05	-21.0111079	-8.124545422

Table 6. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.602
Bartlett's Test of Sphericity	Approx. Chi-Square	183.391
	df	28
	Sig.	.000

Results and Discussion

Primary Dataset

Correlation analysis of independent variables helps to check multicollinearity (Table 2), which may erratically influence the coefficient estimates in regression even with a slight change in the model or data. Variables taken for correlation are - income, willingness to pay, attributes, brand, delivery, offers and schemes, after sales services, and willingness to resell. Using analysis tool pack in MS excel, a correlation matrix among the variables was established to identify if any variable should be dropped or clubbed due to multicollinearity. It was observed that no variable had any influencing relationship on the other, as the correlation coefficient for all the variables was less than 0.7(Table 3).

Regression analysis, done using analysis tool pack in MS Excel, stated the impact of independent variables on the dependent variable purchase likelihood (Table 4). Purchase likelihood of respondents can be categorized into three different types, for example, purchaser (yes), non-purchaser (no), and future purchaser (may be in the near future). Based on likelihood, different probabilities assigned are: Purchaser (80), non-purchaser (30), and future

Table 7. Correlation Matrix (Identity matrix)

		Income (*X*1)	Willing to pay (*X*2)	Attributes (*X*3)	Brand (*X*4)	Delivery (*X*5)	Offers & Schemes (*X*6)	After Sales Services (*X*7)	Willingness to Resell (*X*8)
Correlation	Income (*X*1)	1.000	.212	-.034	-.033	.118	.042	-.056	-.161
	Willing to pay (*X*2)	.212	1.000	-.255	-.282	.059	.040	.083	-.143
	Attributes (*X*3)	-.034	-.255	1.000	.241	.123	-.040	.065	.093
	Brand (*X*4)	-.033	-.282	.241	1.000	-.010	.009	-.101	.038
	Delivery (*X*5)	.118	.059	.123	-.010	1.000	.477	.516	-.010
	Offers & Schemes (*X*6)	.042	.040	-.040	.009	.477	1.000	.364	.106
	After Sales Services (*X*7)	-.056	.083	.065	-.101	.516	.364	1.000	.036
	Willingness to Resell (*X*8)	-.161	-.143	.093	.038	-.010	.106	.036	1.000

Table 8. Communalities (Goodness of Fit)

	Initial	Extraction
Income (*X*1)	1.000	.620
Willing to pay (*X*2)	1.000	.562
Attributes (*X*3)	1.000	.530
Brand (*X*4)	1.000	.568
Delivery (*X*5)	1.000	.744
Offers & Schemes (*X*6)	1.000	.567
After Sales Services (*X*7)	1.000	.628
Willingness to Resell (*X*8)	1.000	.479

Extraction Method: Principal Component Analysis.

purchaser (50). The model is a good model since the value of R^2 is 0.309 (between 0 and 1), which measures the explanatory power of the model that is defined as the explained sum of squares divided by the total sum of squares. Higher the value of R^2, the higher is the fitness of the model. Value of *F* being far more than 1 in ANOVA (Tables 5a and 5b), the null hypothesis is rejected, and beta values are significant. Variables like income, and offers & schemes have their *p* -value <= 0.05 (at the 5% level of significance), and the null hypotheses are rejected. It confirms significant associations between predictors and dependent variables. However, the variables - attributes, brand, delivery, and after sales services have *p*-values more than 0.05 and the alternate hypotheses are rejected. It states that the associations are insignificant. The business venture may pay a note to include promotional offers accordingly. This confirms that the *functional congruity model will be more pertinent*. A contradiction was

Table 9. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.941	24.265	24.265	1.941	24.265	24.265	1.936	24.198	24.198
2	1.629	20.357	44.622	1.629	20.357	44.622	1.501	18.757	42.955
3	1.129	14.108	58.731	1.129	14.108	58.731	1.262	15.776	**58.731**
4	.869	10.862	69.592						
5	.816	10.198	79.790						
6	.658	8.225	88.015						
7	.542	6.772	94.787						
8	.417	5.213	100.000						

Extraction Method: Principal Component Analysis.

Figure 1. Scree Plot

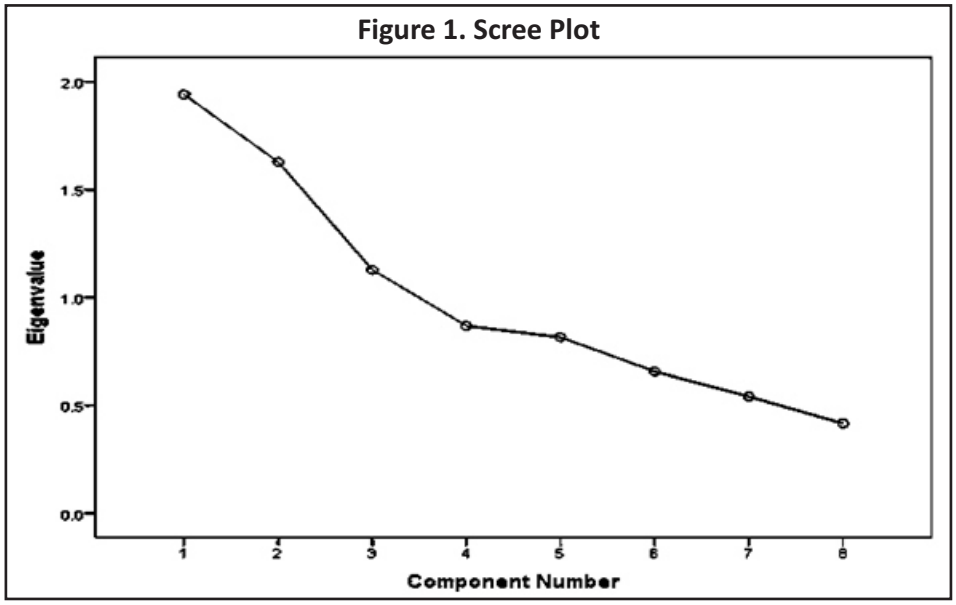


Table 10. Rotated Component Matrix[a]

	Component		
	1	2	3
Delivery (*X*5)	.844		
After Sales Services (*X*7)	.783		
Offers & Schemes (*X*6)	.750		
Brand (*X*4)		.748	
Attributes (*X*3)		.719	
Willing to pay (*X*2)		-.637	
Income (*X*1)			.784
Willingness to Resell (*X*8)			-.680

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
[a.] Rotation converged in 4 iterations.

Table 11. Component Score Coefficient Matrix

	Component		
	1	2	3
Income (*X*1)	.030	.090	.636
Willing to pay (*X*2)	.048	-.389	.232
Attributes (*X*3)	.067	.493	.084
Brand (*X*4)	-.028	.519	.143
Delivery (*X*5)	.436	.091	.125
Offers & Schemes (*X*6)	.388	-.019	-.058
After Sales Services (*X*7)	.405	-.058	-.098
Willingness to Resell (*X*8)	.063	-.037	-.547

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Component Scores.

Table 12. Component Score Covariance Matrix

Component	1	2	3
1	1.000	.000	.000
2	.000	1.000	.000
3	.000	.000	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Component Scores.

observed in the least mean value of coupons/ sales offer proneness as explained above of the same sample. This helps in interpreting that focusing on the variables - attributes, brands, delivery, and after sales services may increase the purchase likelihood among the purchasers.

➲ **Factor Analysis :** It is a multivariate statistical tool of data reduction in which there is no distinction between

Figure 2. Two Step Cluster: Model Summary & Cluster Quality

Algorithm	TwoStep
Inputs	3
Clusters	5

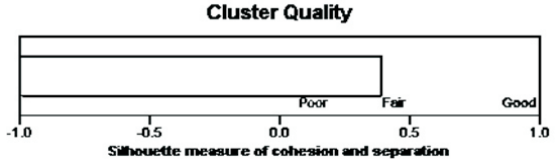
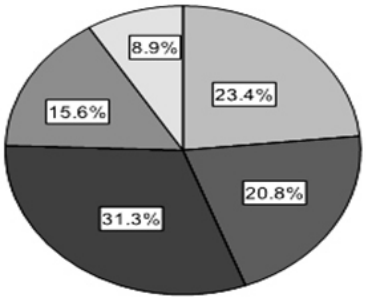


Figure 3. Cluster Sizes



Size of Smallest Cluster	17 (8.9%)
Size of Largest Cluster	60 (31.2%)
Ratio of Sizes: Largest Cluster to Smallest Cluster	3.53

Figure 4. Input Predictor Importance

Cluster	Size	Inputs		
3	31.2%	Incomex1	WillingstopayX2	Deliveryx5
1	23.4%	Incomex1	WillingstopayX2	Deliveryx5
2	20.8%	Incomex1	WillingstopayX2	Deliveryx5
4	15.6%	Incomex1	WillingstopayX2	Deliveryx5
5	8.9%	Incomex1	WillingstopayX2	Deliveryx5

dependent and independent variables. A factor is a linear combination of variables that explains most of the variations in the original data. The same eight variables were used in SPSS. The correlation matrix shows the absence of multicollinearity. The Kaiser-Meyer-Olkin (KMO) (Table 6) measure of sampling adequacy, as an index of appropriateness of factor analysis, was found to be 0.602 (between 0.5 and 1.0), confirming the appropriateness of the tool. Bartlett's Test of Sphericity test confirms that the correlation matrix is an identity matrix (Table 7). The *p*-value corresponding to chi-square is 0.000 (< significance 0.05), which indicates the rejection of the null hypothesis that the correlation matrix of the variables is insignificant. Higher communalities (Table 8) suggest the goodness of the model.

In total variance explained (Table 9 & Figure 1), three factors were formed out of eight variables, which are significant, with a cumulative variance of 58.731%. Varimax rotation was used to maximize variance of loadings within each factor output tables (Table 10, 11, and 12). Though multicollinearity was absent, still, factor analysis was carried out to reduce the dimensions. The reduced factors are as follows :

Figure 5. Predictive Importance

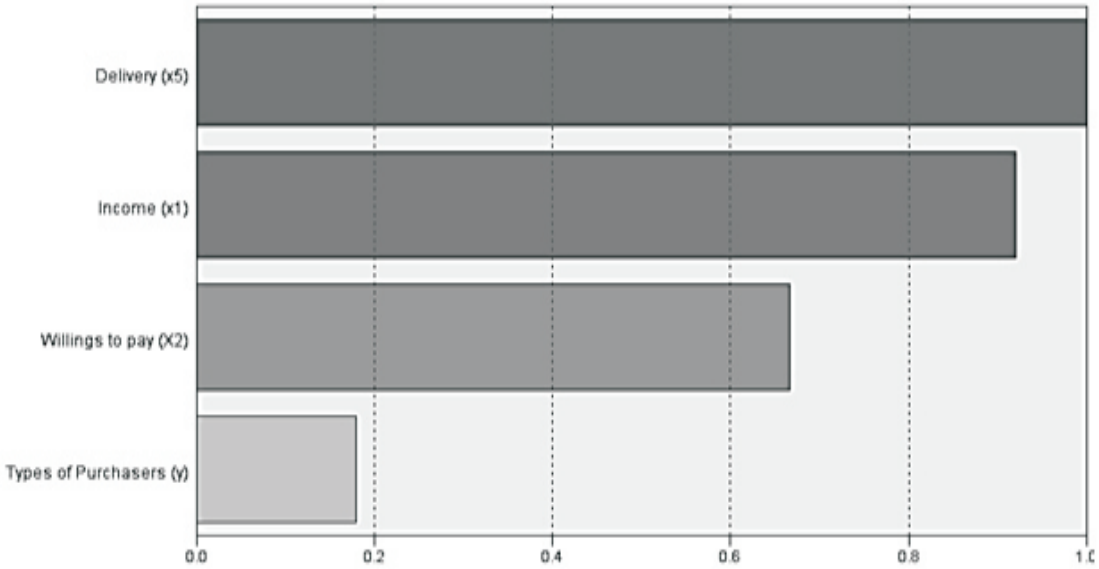


Figure 6. Transposed Clusters and Inputs

Cluster	3	1	2	4	5
Label					
Description					
Size	31.2% (60)	23.4% (45)	20.8% (40)	15.6% (30)	8.9% (17)
Inputs	Delivery (x5) 1.85	Delivery (x5) 2.49	Delivery (x5) 1.00	Delivery (x5) 1.07	Delivery (x5) 3.71
	Income (x1) 3.50	Income (x1) 1.53	Income (x1) 1.52	Income (x1) 2.90	Income (x1) 3.29
	Willings to pay (X2) 1.72	Willings to pay (X2) 1.76	Willings to pay (X2) 1.48	Willings to pay (X2) 3.43	Willings to pay (X2) 3.29

Figure 7. Inputs by Overall Importance

Cluster	Label	Description	Size	Inputs		
3			31.2% (60)	Delivery (x5) 1.85	Income (x1) 3.50	Willings to pay (X2) 1.72
1			23.4% (45)	Delivery (x5) 2.49	Income (x1) 1.53	Willings to pay (X2) 1.76
2			20.8% (40)	Delivery (x5) 1.00	Income (x1) 1.52	Willings to pay (X2) 1.48
4			15.6% (30)	Delivery (x5) 1.07	Income (x1) 2.90	Willings to pay (X2) 3.43
5			8.9% (17)	Delivery (x5) 3.71	Income (x1) 3.29	Willings to pay (X2) 3.29

Figure 8. Inputs by With-in Cluster Importance

Cluster	Label	Description	Size	Inputs		
3			31.2% (60)	Income (x1) 3.50	Willings to pay (X2) 1.72	Delivery (x5) 1.85
1			23.4% (45)	Income (x1) 1.53	Delivery (x5) 2.49	Willings to pay (X2) 1.76
2			20.8% (40)	Income (x1) 1.52	Willings to pay (X2) 1.48	Delivery (x5) 1.00
4			15.6% (30)	Delivery (x5) 1.07	Willings to pay (X2) 3.43	Income (x1) 2.90
5			8.9% (17)	Delivery (x5) 3.71	Income (x1) 3.29	Willings to pay (X2) 3.29

Figure 9. Cells Showing Absolute Distribution

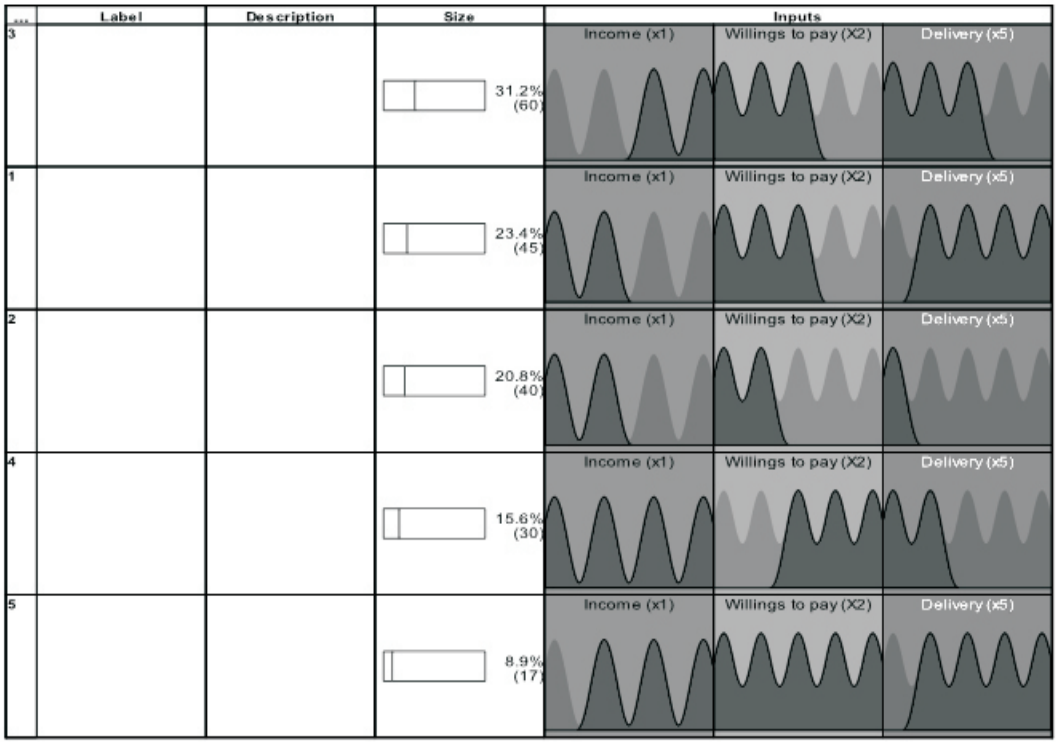


Figure 10. Cells Showing Relative Distribution

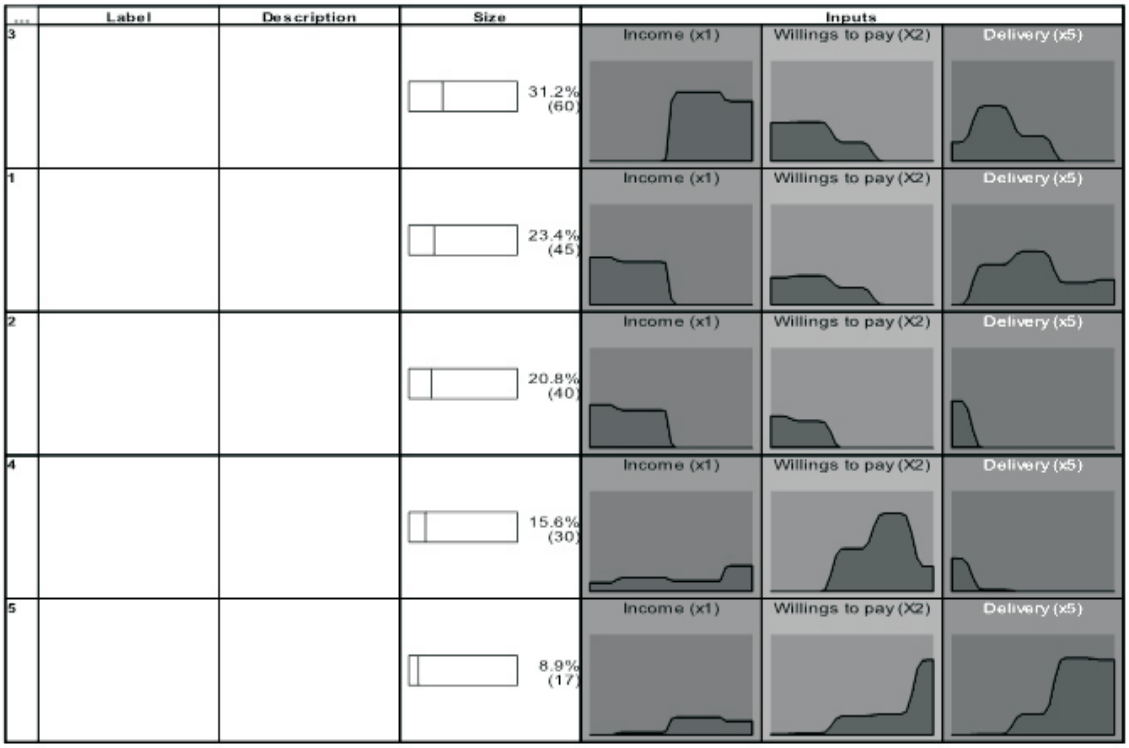


Table 13. Proxscal (Case Processing Summary)

Cases		5
Sources		1
Objects		5
Proximities	Total Proximities	10[a]
	Missing Proximities	0
	Active Proximities[b]	10

[a.] Sum of all strictly upper-triangular proximities.
[b.] Active proximities include all non-missing proximities.

Table 14. Input Data (Proximities)

	OLX	Quikr	eBay	Backpage	Domesticsale
OLX	.				
Quikr	1.000	.			
eBay	2.000	5.000	.		
Backpage	3.000	6.000	8.000	.	
Domesticsale	4.000	7.000	9.000	10.000	.

(1) First Factor: The important variables are delivery, after sales services, and offers & schemes. Hence, the first factor is named as Perceived Value of Services.

(2) Second Factor: The important variables are brand, attributes, and willingness to pay (where willingness to pay is negatively correlated with purchase likelihood). Hence, the second factor is named as Value for Money.

(3) Third Factor : The important variables are income and willingness to resell (where willingness to resell is negatively correlated with purchase likelihood). Hence, the third factor is named as Spending Likelihood.

➲ **Cluster Analysis :** A multivariate procedure which is suited to segmentation application in marketing research was used as the emerging groups were homogeneous in their composition and heterogeneous as compared to other groups. To identify the segmentation in the market, two-step cluster analysis (Figure 2) was used through SPSS due to its advantage of being compatible with both continuous and categorical data. Categorical variables are multinomial in nature, while continuous variables are normally distributed. Income, willingness to pay, and delivery were summed up under continuous variables to know the basis of the cluster. To understand how clusters differed across the types of purchasers, the types of purchase variables were selected under the evaluation fields in the output tab.

The model summary shows that three inputs had been used, that is, income, willingness to pay, and delivery to identify five clusters. The silhouette measure of cohesion and separation shows that the cluster quality is *Fair*. The largest cluster size (Figure 3) obtained is 31.2%, and the remaining clusters constitute 23.4%, 20.8%, 15.6%, and 8.9%. Predictive importance (Figure 5) shows the predictor that is important for analysis (Figure 4).

The most important criterion is delivery in creating these clusters, which has the predictive importance 1 (Figure 5). The second important criterion is income, with predictive importance being 0.92 (Figure 5). The least important criterion is the willingness to pay, that has 0.67 as predictive importance. If the inputs are sorted within the cluster importance (Figures 6, 7, and 8), the findings suggest that the largest cluster pays more importance to income followed by willingness to pay, and delivery was given the least importance. The second cluster focuses on the same, that is, income, but the second most important criterion is delivery, followed by willingness to pay. The third cluster follows the trend of the first cluster. The fourth cluster has delivery as the most important criterion, followed by willingness to pay, and then income. The last cluster focuses on delivery followed by income, and

Table 15. Goodness of Fit

Table 15(a). Iteration History

Iteration	Normalized Raw Stress	Improvement
0	.03461[a]	
1	.00080	.03381
2	.00038	.00042
3	.00023	.00015
4	.00015	.00008[b]

[a.] Stress of initial configuration: Torgerson start.

[b.] The iteration process has stopped because Improvement has

Table 15 (b). Stress and Fit Measures

Normalized Raw Stress	.00015
Stress-I	.01210[a]
Stress-II	.03083[a]
S-Stress	.00025[b]
Dispersion Accounted For (D.A.F.)	.99985
Tucker's Coefficient of Congruence	.99993

PROXSCAL minimizes Normalized Raw Stress.

[a.] Optimal scaling factor = 1.000.

[b.] Optimal scaling factor = 1.000.

Table 15 (c). Decomposition of Normalized Raw Stress

		Source	Mean
		SRC_1	
Object	OLX	.0001	.0001
	Quikr	.0002	.0002
	eBay	.0002	.0002
	Backpage	.0002	.0002
	Domesticsale	.0000	.0000
Mean		.0001	.0001

Table 16. Common Space Final Coordinates

	Dimension	
	1	2
OLX	.040	-.031
Quikr	-.022	-.011
eBay	-.255	.737
Backpage	-.606	-.535
Domesticsale	.843	-.160

Figure 11

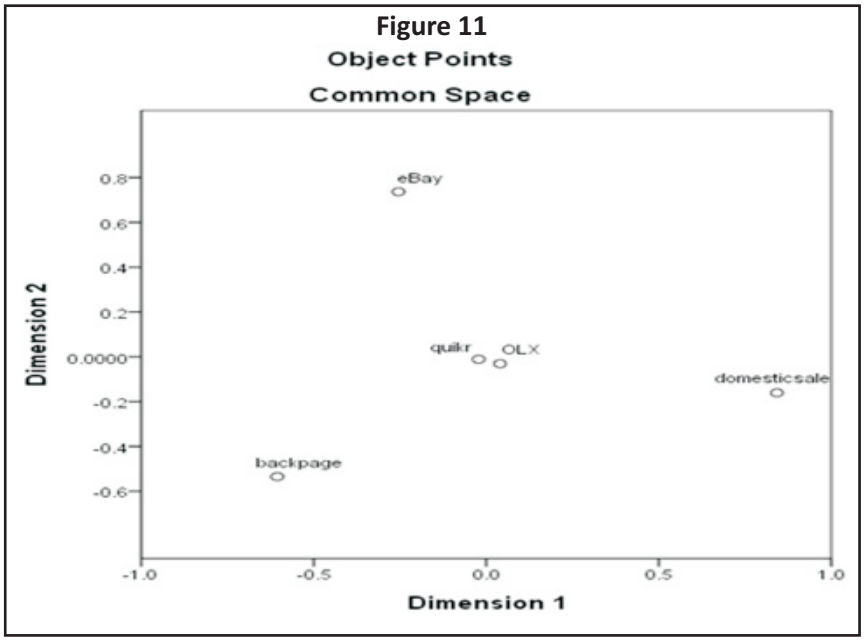


Table 17. Distances

	OLX	Quikr	eBay	Backpage	Domesticsale
OLX	.000				
Quikr	.065	.000			
eBay	.822	.783	.000		
Backpage	.819	.784	1.319	.000	
Domesticsale	.813	.878	1.418	1.496	.000

willingness to pay. If the inputs are sorted by overall importance, it was found that delivery is of prime importance followed by income, and the least important is the criterion willingness to pay. Willingness to pay is negatively related to the type of purchasers. Thus, a good delivery process can enhance marketability of the proposed business concept. The Figures 9 and 10 show this importance in terms of absolute and relative distribution.

➲ **Multidimensional Scaling :** MDS is an attribute-free test and essentially plots visually, the perceptions and the preferences of individuals singly as a group. The comparison can be made on either defined dimensions or perceived dimensions, and the comparison could be done in terms of similarities/ dissimilarities or preferences. It helps to understand the perception of individuals through a map and is used for positioning in marketing research. In this study, PROXSCAL MDS (Table 13) had been used, since it is more optimal than ALSCAL MDS. The dataset obtained from the survey are on how similar (proximity) is one of the online portals to the other (Table 14). Using these non-metric proximities and independent variables, the important variables were found, which guide people to view these portals and their position accordingly. Maximum dimensions to be taken can be one less than the number of variables. A dimension of 2 X 2 is considered satisfying, and restrictions are not considered.

In total, five cases were considered, that is, OLX, Quikr, eBay, Backpage, and Domesticsale. Total proximities show the number of pairs judged, which is 10 in this case. In goodness of fit, the minimum the stress score, (<0.15)(Table 15), the higher is the goodness of the model. Stress score measures the discrepancy between the actual and the derived distance. The 'Dispersion Accounted For' (DAF) (Table 15(b)) provides a measure of the variance accounted for and is (1- normalized raw stress). The DAF and Tucker coefficients of congruence are derived from the normalized raw stress (Table 15(c)). Tucker's coefficients of congruence vary between -1 to 1. Values close to 1 for DAF and Tucker's coefficient of congruence indicates a good fit model. In the output, DAF is .99985, and Tucker's coefficient of congruence is .99993. Initial stress was 0.03381, but after five iterations, stress is 0.0008 that depicts the goodness of fit of the model (Table 15(a)). Even the 45 degree line residual plot (Figure11) shows goodness of fit. Stress I and Stress II are variances. In the common space (Table 16),Quikr and OLX are closer, which implies that they are dissimilar in nature, since a test of dissimilarity was conducted. However, eBay has a distinct position in dimension 2 and Domesticsale has a distinct position in dimension 1 compared to Backpage (Tables 16 & 17, Figure 11). Thus, dimension 1 can be named as "awareness of the sites" as both eBay and Backpage are similar in that periphery. The dimension 2 can be named as "variety of effective classifieds". Thus, positioning of the proposed new entrant can be based on awareness and variety of classified scales.

Findings

Product attributes, brands, delivery, and after sales services may increase the purchase likelihood among management students as target purchasers. Major factors governing such purchases are perceived value of services, value for money, and spending likelihood, with a decreasing order of importance. The most important criteria is *delivery of the purchased goods*, having the highest predictive importance. Thus, a good delivery process can enhance the marketability of the business concept. Since most of the respondents focused on value, it should be the prime objective of the proposed company so as to broaden its customer base. Positioning of the new entrant can be based on awareness and variety of classified scales. Awareness of the site and variety of classifieds are two major dimensions.

Managerial Implications

Purchase of durables is often backed and guided by a complex buying behavior of consumers. Thus, for an online portal which attempts to sell used durables (in the present case, laptops), it becomes even more complicated. Consumers of used durables mostly exhibit complex buying behavior or dissonance reducing buying behavior. The psychographic perspectives of consumers come into play here. It is observed that two sets of buying behaviors

prevail, one that considers a *brand* as a major differentiator, and the other which *does not*.

Irrespective of marketing challenges, there is a serious business prospect in such a venture (an online portal selling second hand laptops). Due to an overwhelming number of management colleges in India, the number of students, and thereby, the number of laptops being purchased have shot up. This has further multiplied the difficulty in servicing and maintenance of such gadgets/ equipments. Furthermore, the downstream solutions offered by companies have not been sufficient enough to tackle the menace of planned obsolescence and sustainable disposal. The existing demand for used laptops gives a unique opportunity to such a venture, as discussed in the present paper, within a less competitive space. A concentrated marketing approach with service based customization can help meet the target customers' needs when brand is not central to a purchase decision. However, for used branded laptops of Apple, Sony, HP or Dell, customers' queries on durability and reliability are simple and manageable to a great extent.

Any venture of such nature has to offer maximum product information on technical specifications, physical conditions, functionalities, color, upgradability, and so forth on its portal for a lively feel of the creatively featured product. Image differentiation plays an important role too, where offering 'more for less' can act as a unique value proposition. With passive audience on Internet- based transactions, interactive features can help in easy and early procurement, suggestion selling, and faster delivery as found from the present research. A proper service recovery mechanism on faulty shipment, non-receipt of timely service, faulty products, order cancellation, refunds, and so forth can be optimally designed. Various add-ons, for example, antivirus packages, latest applications, and so forth can work as product differentiators. Consumer psychographic studies can help the proposed venture maintain consistency across all customer touch points. Social media marketing would be a primary promotional means in the present times.

Conclusion

Students, as any other general consumer of electronic items/ consumer durables, value attributes of a product, which are basically drawn from attribute and benefit-based positioning of the brand. Quality of the product has basically two dimensions, that is, performance and conformance. 'Brand' in such category of products with established players in the market becomes more equitable. After sales services in case of a technical product of such nature (laptop) plays a pivotal role in relation to the service attribute of the product. The above benefits are invariably true for new and first time purchases and so also for purchase of used ones. Thus, delivery and post-sale care reduce consumer dissonance. Through such conscious initiatives by the marketer, an aware consumer, like a management student, exhibits more likelihood to purchase. The target consumers see a value for money in exchange, as the perceived risk appears low due to higher predictive importance of delivery, and awareness of the start-up brand due to its source credibility.

Limitations of the Study and Scope for Further Research

The major limitation of the study is that respondents' bias cannot be judged, as interpretation was made on the basis of data obtained online. The analysis only uses primary data. The explanatory and/ or descriptive studies can further be ascertained through higher statistical tools such as confirmatory factor analysis and structural equation modeling (SEM). The proposed venture needs to comply with the legal stipulations as well.

The present paper is completely focused on only one used durable product, that is, a laptop. However, a similar study can be undertaken for other student-centric consumer durable products in similar settings. The present study can be extended to the area of downstream value chain design, green technology, green marketing, planned obsolescence, and marketing ethics. In a broad-scale, the present study can be emulated in a larger context for an entire range of electronic products and concerned buying behaviors of the netizens.

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