Nudges in car adding value for money concept in car marketing

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Abstract: Indian car market has changed from being monopolistic to fully competitive with customers experiencing first time the choices, their habits are also evolving with the choices they had with the features. The study was done to verify, whether in the features of cars and promotion offers feel of nudge is there, do the customer perceive benefit or do they feel that the nudge features resolve some of confusions they have, do they want cars with more nudge features, to find if these nudges adds value perception in cars marketing in terms of look, feel and do good (safety), to make a new nudge framework relevant to car marketing .This study is a descriptive research based on secondary data on car marketing and field survey of 490 new car owners in 5 cities in Maharashtra.

Keywords: Nudge, Cars, automotive market in India, nudges framework.

Introduction

Nudge in simple terms means push via purposeful features to customers. Nudge are part of push strategy of consumer behaviour marketing, consumer behaviour models have studies covering presales, sales and post sales studies, study on nudge covers broader overall expect in sales covering presales, sales and post sales aspects. Nudges are strategies in subtle marketing, where positive reinforcement and indirect suggestions or cues are used to change consumer behaviour.

Nudge Theory is a concept in behavioural science, political science and economics which argues that positive reinforcement and indirect suggestions to try to achieve non forced compliance can influence the motives, incentives and decision making of groups and individuals alike at least as effective if not more effective that direct instruction, legislation or enforcement. (Richard Thaler and Cass Sunstein (2008))

Issues in Nudge

The main issue resolved by Nudge is that it makes the users feel being important, remove confusions in decision making, makes features appear beneficial and useful in perception. We humans are not perfect buyers as we have habits, ego, and temptations, get affected easily by cues or priming, follow herd mentality and we often blunder in decision making, nudges are features that assist us in decision making or make our life easier. Our thinking works on two systems as per Nobel Laureate Kahneman (2011), one being automatic and the other reflective. The focus in using nudge is not to change habit but to go with the way we behave and learn of our needs and wants from our changing habits.

Indian Car Market

Indian car market exploded post liberalisation, with almost all worlds MNC car manufacturers putting up manufacturing and shops in India in last 15 years. From only 3 car manufacturers that too being local in 1980 in India, by 2011 there are 4 local and 13 foreign manufacturers in India.

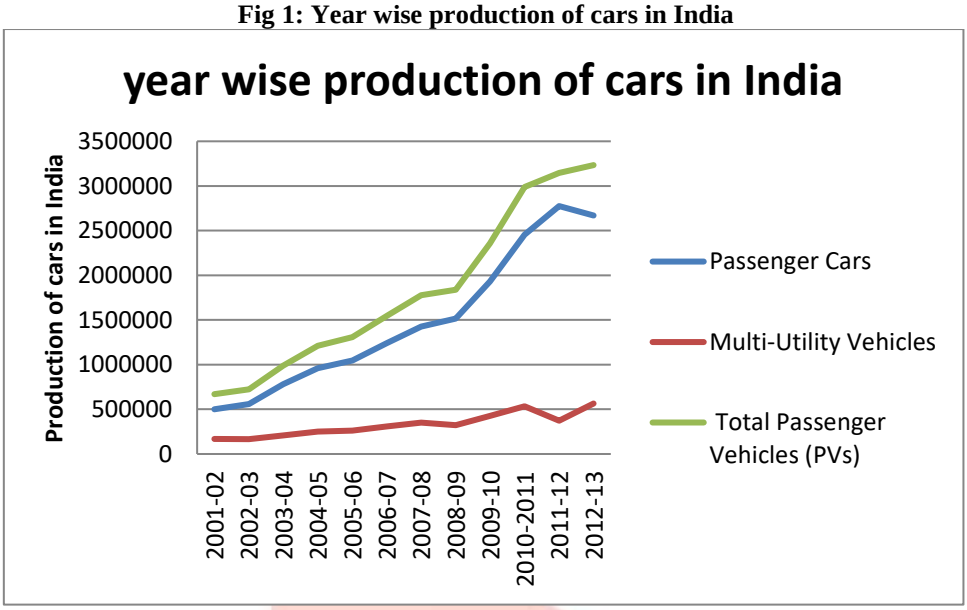
Table 1: CAR MANUFACTURERS IN INDIA, Source ACMA

			Audi BMW VW Skoda Renault	
		Mercedes Benz Ford Toyota HONDA GM Fiat Hyundai	Mercedes Benz Ford Toyota HONDA GM Fiat Hyundai	**Foreign**
	MUL	MUL	MUL	
M&M HM Premier	Tata Motors Ltd M&M HM Premier	Tata Motors Ltd M&M HM	Tata Motors Ltd M&M HM Force	**Local**
1980	**1990**	**2000**	**2011**	

Growth of Automotive Cars in India

Our Indian motor vehicle production & sales has also been rising since last 12 years from 2001-2 where production was just 6, 69,719 no., by 2012-13 same has risen to 32, 33,561 i.e. that there has been a quantum jump in production of motor vehicles in India.

Fig 1: Year wise production of cars in India



Source: SIAM data

Literature review

- Menon & Jagathyraj (May 2012) have by a structured diagram explained the factors in car purchase decision making.
- Shende (Feb 2014) in his study on the consumers behavior the complexities in car purchase.
- Sinaravelu (Dec 2011) studied the influence of source of information to buy a car which media is better, repurchase behaviors of buyers and influence of special features of cars on car sales.
- As per Kaul (2010) experimental marketing seeks to make consumer experience richer by multiple facilities and senses.
- As per Kapoor (2004) in liberalised era brand loyalty does not exists only perceived value loyalty exits. The author mentions about a new segment Look, Feel and do good.
- Thaler and Sunstein (2008) explain that humans have biases and we blunder often in making decisions, have temptations, follow sometimes herd mentality. They have given examples 0f nudges in automobile field mainly in safety area, vehicle features, and vehicle and insurance choices. The short form of NUDGE: iNcentives, Understanding mappings, Defaults Give feedback, Expect errors, structured complex choices.
- Neelamegham (2004) has done a case study on MUL.
- The speaker Eliassons (Sept 2012) has given his experiences of Sweden Stockholm where nudges were used order to solve traffic congestion in 2006.
- Camilleri & Larrick (2013) state in automobile field use of nudges in labels scales.

Importance and objective of proposed investigation

All car manufacturers are using choice architecture as USP (Unique selling proposition) on the products they are selling, the intention of the study is to search for following:

- To confirm that nudges there in cars.
- To study how nudges create values in cars.
- To study how much cost people are ready to pay for these nudges in each class of cars.

Research Methodology

The research methodology adopted for the study comprised of following:

- Descriptive research is based on secondary data on Nudge, literature reviews on the topic and on observations in car market.
- Quantitative research based on field survey via structured questionnaire on nudges in cars in 5 districts of Maharashtra Mumbai, Pune, Nashik, Aurangabad and Nagpur. The sample was chosen based random sampling on new car consumers found in showrooms. The questionnaire was administered to 490 new car consumers in urban areas of these 5 districts.
- Parametric testing using SPSS 19 software used as sample used are some to some extent random.

Car market under study

Most of the Car refresh launches are with choice architecture nudges, cars market can be segregated on basis of brands or size and usage. In the study size and usage has been used to segregate the car market into following segments:

Table 2: Segmentation by car size

micro L<3.2m	Nano.
compact car segment 3.6m<L<4m	Alto, Celerio, Swift, Santro, i10, i20, eon, Micra ,eco-sport, Indica, Indigo, Zest , Beat, Spark , Omni, Go, Polo, Punto , Figo, Dzsire etc.
Super compact 4<L<4.25m	Manza, Amaze, City, Logan, Asent, Verna, Ciaz, Optra, Sail, Altis etc.
Executive & premium 4.5m<L<4.7m	Mercedes E class/C class , Skoda Rapid, Scala, Fluence, Jetta, Passat, Vento, Sunny, Fiesta, Linea etc.
Luxury & Coupe segment	Jaguar XF, Audi A4, Range Rover, BMW X1, Bentley, Phaeton etc.
SUV, LUV & MUV segment	Bolero, Scorpio, Xylo, Safari, Storme, Eritiga, Innova, Endeavour, XUV 500, Mobilo, Duster , Aria, Pajero, Out Lander etc.

Sample size

National Education Association, (US) has prescribed a model to determine the size of sample when the population size is very large. (Krejcie & Morgan (Dec 1970)) Accordingly, the following model is used to determine the required sample size.

$s = \chi^2 NP (1-P) \div d^2 (N-1) + \chi^2 P (1-P)$

Where,

- s = required sample size
- χ^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)
- N = the population size
- P = the population proportion (assumed to be 0.50 since this would provide maximum sample size)
- d = the degree of accuracy expressed as a proportion (0.05)
- N= 165531 sum of vehicle registration in (Aurangabad region-20826, Mumbai region-54192, Nagpur region-6803, Nashik region-12477, Pune region-71233) in 2013-14. (Motor transport statistics of Maharashtra 2013-14)
- s = sample size comes out to be equal to 383no.from above calculation.

Initially a pilot survey in Pune district, to identify the appropriate sample size we should base was done. Most previous studies seen in literature review on automotive consumer studies have taken sample size of 300-400, in the study a sample size of @490 respondents with random sampling was taken i.e. for more sales/ month places like Mumbai 150 samples and Pune districts 150 samples size is chosen, for smaller cities Aurangabad 70 samples, Nashik 72 samples size was taken and for lower sales area like Nagpur samples size 48 was taken.

Hypothesis on look /feel /do good nudges in cars, demographic factors and regression model

Following variables were studied in making hypothesis on look /feel /do good nudges in cars, demographic factors and regression model:

- For studying the factors affecting look nudge features of price, colour, and display in purchase, personality endorsement, green tag stickers, and car as a safe, faster and tireless mode of transport. Hypothesis was framed for each of these features to ascertain the most effective factors from same.
- For studying the factors affecting feel good nudge features steering(power steering, adjustable steering, AMT), keyless entry ,parking assist, driving modes, button start, LED light, multitasking (global positioning system GPS, music system , short message service SMS , tele-call, navigation etc.), follow me home headlamp, price difference between fuel prices and engine technology, resale value, EMI scheme, show room ambience, advertisement, signboard, mileage stickers, endorsement by family and friends, comparative with other cars, labels on spare parts, double air conditioner, interior space and head height. Hypothesis was framed for each of these features to ascertain the most effective factors from same.
- For studying the factors affecting do good nudge features of horn, airbags, seat belt indicator, safety child seat, braking features, taller body, extended warranty, free insurance, distance meter, tubeless tyres. Hypothesis was framed for each of these features to ascertain the most effective factors from same.

Reliability Statistics:

Table 3: Reliability Statistics

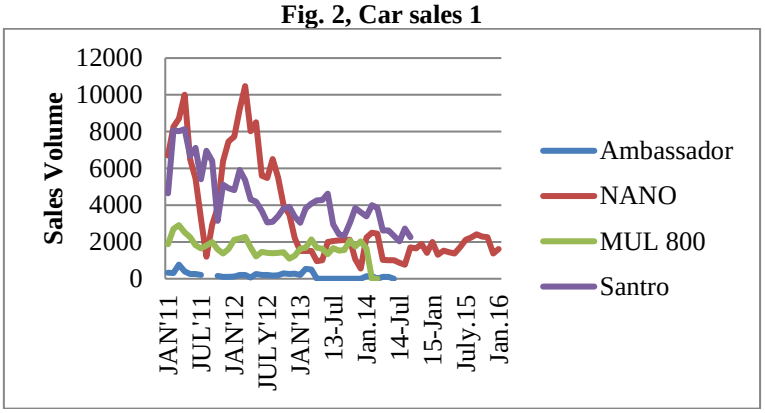
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.833	0.785	63

In the study 63 variables were studied, Cronbach's alpha value 0.833 was seen in the study, for the standardised items Cronbach's alpha 0.785 was seen for the refined scales as reliable and consistent. As Cronbach's alpha value above 0.8 is considered to be reliable for basic research, hence data collected is demonstrating highly reliability.

Nudge effect visible on car sales (Secondary data analysis)

To see the nudge effect on car we took sales data (SIAM data model wise & make wise sales)

Fig. 2, Car sales 1

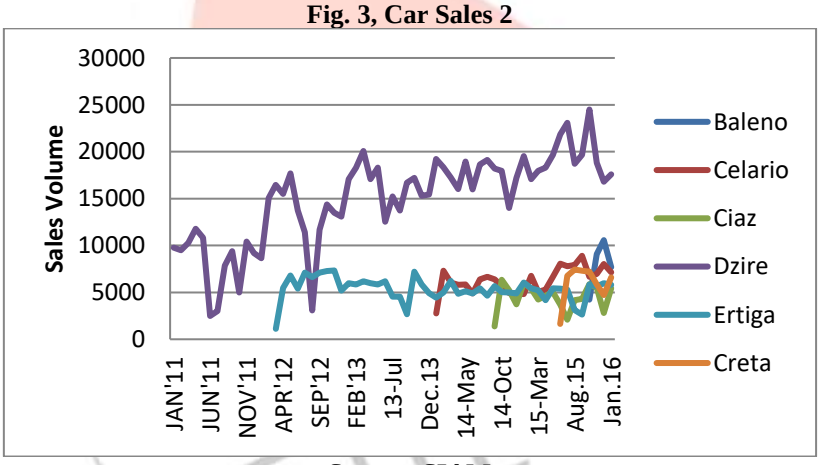


Source: SIAM

Tata Nano, launched on 23 rd. March 2009, sales in 2011-12 were @83234 cars with a few months having sales more than 10000cars/ month, sales dropped a little to @53848 cars in 2012-13. In 2011-13 the company faced several complaints on safety front (fire accidents), the company resolved all issues on safety by mid2012, the sales dropped further to @21129 cars in 2013-14 as brand name got hit on do good nudge, the car sales dropped drastically in middle of 2013 to lowest @700 cars in August 2014, in January 2014 the company launched Nano with power steering and a few innovative features and sales started to show signs of improvement to going up from September 2014 to 1712 cars, October 2014-1643 cars, November 2014-2088 cars by March 2015 reaching @3188 cars . The company further worked up innovations in feel good nudges like AMT (Automatic /Manual transmission) in April 2015 and sales of the car has stabilised to being @2000 cars/ month now and by May 2015 new hatch was launched sales increased to @2500cars/month. The new nudge features causing jump in sales.(Tata Nano upgrades (2015))

Cars which did not do much of putting nudges in their product or were very –very late in putting nudge features in cars and promotions lost the Indian market like Premier Padmini, HM Ambassador , Maruti 800 (by January 2014) and manufacturer had to stop the sales of same.

Fig. 3, Car Sales 2



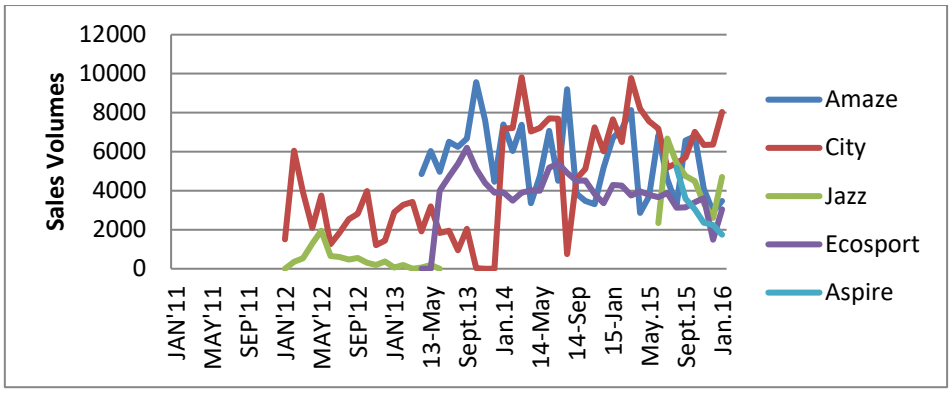
Source: SIAM

In the cars which are having good number of nudge features like Swift Dzire, Ertiga, Ciaz, Celario, Creta the sales figure (SIAM data model wise & make wise sales) are good in numbers.

Swift Dzire from 2011- 2016 has had several upgrades in nudge features in the cars and sales figures are also seen climbing from 2011 @10000/ month to in 2016 @17000/ month. In mid 2015 it did touch >25000/ month for a short time.

In Feb 2012 first upgrade in swift Dzire was done when sales were down and then sales started climbing , then in October 2014 more facelift was done and features added then also when sales had started falling Maruti upgraded the car and sales started improving, in January 2016 AMT added in swift, further showing improvement in sales. (Suzuki swift.(2016))

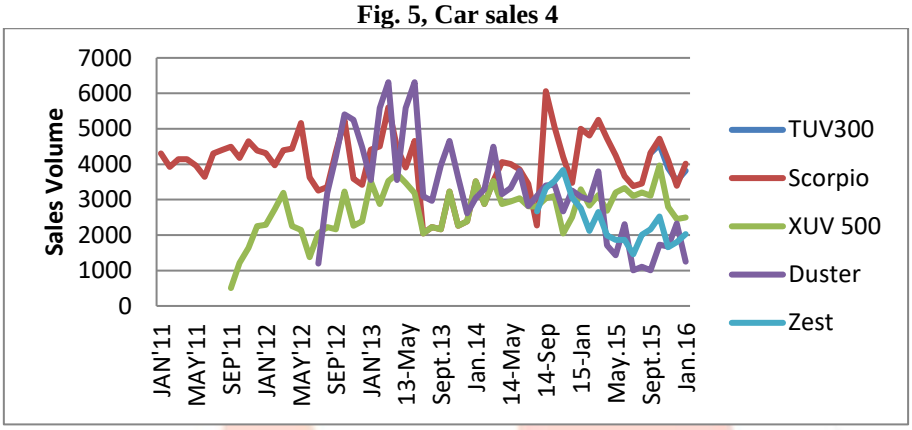
Fig. 4, Car sales 3



Source: SIAM

In mid size executive popular cars having nudge features like Honda Amaze, Honda City, Jazz, Eco sport, Aspire the sales numbers (SIAM data model wise & make wise sales) seen from January 2012 to January 2016 shows good numbers in sales but fluctuations are seen in cars, In Honda City where refresh addition with AMT, cruze control, ABS with new Amaze engine was launched in January 2014 the sales jumped from low 2000/month to 8500-9000/ month in a years time. (Honda City (2015)).

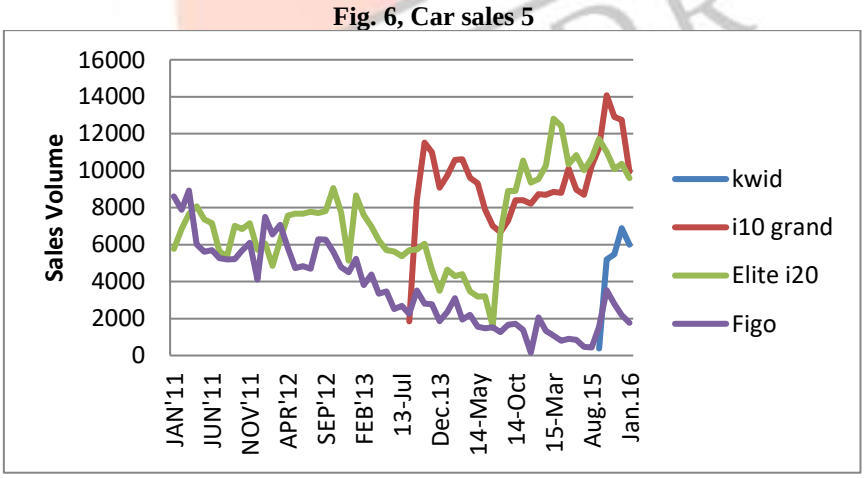
Fig. 5, Car sales 4



Source: SIAM

In the sports utility vehicle and multi utility vehicle like TUV 300, XUV 500, Scorpio, Duster, even in midsize cars like Tata Zest, where all the cars and vehicles have good number (SIAM data model wise & make wise sales) of Nudge features like ABS, micro hybrid, Cruise control, GPS, AMT, 4/6 airbags, Zest with drive modes with above features show good number in sales. (Mahindra Scorpio (2015)), (Renault Duster (2015)), (Tata Zest (2015)).

Fig. 6, Car sales 5

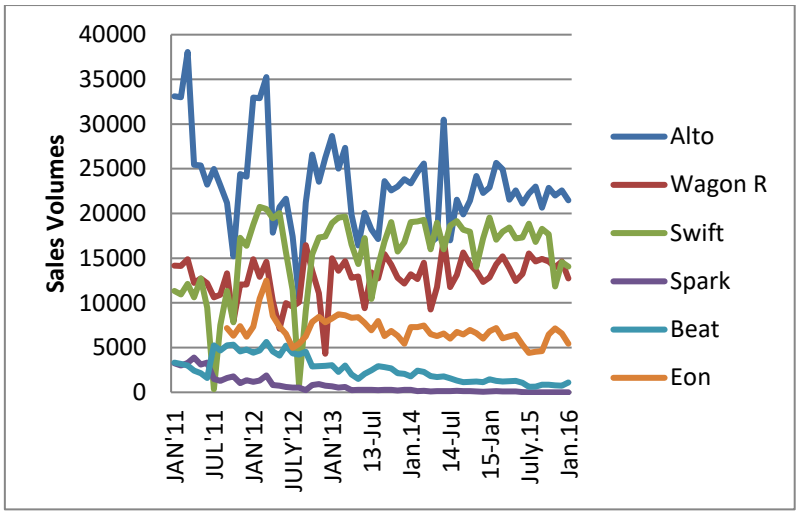


Source: SIAM

In compact small cars like Kwid, i10 grande, Elite i20 & Ford figo also have all the nudge features, the sales figure from January 2011 to January 2016 do show that in the initial year the sales are better , as competitors catch up sales do fall but they are still good in numbers.Ford Figo had upgrade in October 2012 in form of steering columns and head lamp ant tail lamps and sales went up , next upgrade in Figo was in Feburary 2014 in wi-fi entertainment system, where sales went up marginaly only for short time.(Ford figo. (2016).)

In Hyundai i20 upgrade came first in March 2012 with head lamp changes, in Aug 2014 further upgrades in form of ABS, reverse parking sensors, head lamp escorts, seat belt pre-tentioner aand sales which had dipped and sales started to show improvement with each upgrade launch. (Hyundai i20(2015))

Fig. 7, Car sales 6



Source: SIAM

In entry level cars like Alto, Wagon R, Swift, Spark, Beat & Eon, all having nudges more in promotions and a few basic nudge features, the sales (SIAM data model wise & make wise sales) from January 2011 to January 2016 shows that the sales are good in a few cars like Alto, Wagon R, Swift where MUL brand name is strong and company has good promotional nudges and basic car nudge features like power steering, Power assisted brakes, AMT in 2015 for new car users (Suzuki Alto. (2015)). In cars like Eon and Spark the sales had been good in the initial period but has tapered down to very low numbers in 2016 as newer car launches hit there sales and these cars have not put any new nudge features on these cars.

Data Analysis: t Test –Hypothesis testing

Table 4: One-Sample Test

	Test Value = 3						Remark (H0: μ=3; H1: μ>3)
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
					Lower	Upper	
There are Nudges in cars	39.158	489	.000	1.19184	1.1320	1.2516	P value=0.00 is less than α= 0.05, t value 39.15 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Nudges features are Benifitical	37.048	489	.000	1.06939	1.0127	1.1261	P value=0.00 is less than α= 0.05, t value 37.04 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Nudges Features removes bottleneck	24.473	489	.000	.93673	.8615	1.0119	P value=0.00 is less than α= 0.05, t value 24.47 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Nudges features makes life/work easier	28.637	489	.000	.99796	.9295	1.0664	P value=0.00 is less than α= 0.05, t value28.63 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Nudge features increase the Value of car in terms of look good	33.133	489	.000	1.10000	1.0348	1.1652	P value=0.00 is less than α= 0.05, t value 33.13 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Nudge features increases the Value of car in terms of feel good	39.607	489	.000	1.17143	1.1133	1.2295	P value=0.00 is less than α= 0.05, t value 39.60 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Nudges features increases the Value of car in terms of do	36.057	489	.000	1.17755	1.1134	1.2417	P value=0.00 is less than α= 0.05, t value 36.05 very high than table value 1.96, Hence null Hypothesis H0 is rejected.

good							

t distribution approaches Z distribution with large sample size, compared value of t will be same as Z value, p value in all above is found to be 0.00 (two tailed) which is less than 0.05, t test values also be very high , we can conclude from above to reject null hypothesis,(Null hypothesis being **H0: μ=3**; alternate hypothesis **H1: μ>3) ,** making alternate hypothesis to be true, hence we can say that nudges are there is cars, people find nudges to be benifitical in cars , the nudges remove fears and confusions in cars, nudges makes life easier for car drivers, nudge features increases the value of cars in perceptions of look good, feel good and do good (safety).

Table 5: t test

One-Sample Test							
	Test Value = 4						Remark (H0: μ=4; H1: μ<4)
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
					Lower	Upper	
Importance of a look good feature like Price in purchase of car	-45.970	489	.000	-1.92245	-2.0046	-1.8403	P value=0.00 is less than α= 0.05, t value 45.97 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a look good feature like Colour in purchase of car	-31.427	489	.000	-1.30204	-1.3834	-1.2206	P value=0.00 is less than α= 0.05, t value 31.42 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a look good feature like display in purchase of car	-10.239	489	.000	-.54286	-.6470	-.4387	P value=0.00 is less than α= 0.05, t value 10.23 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a look good feature like personality endorsement in purchase of car	-6.477	489	.000	-.41224	-.5373	-.2872	P value=0.00 is less than α= 0.05, t value 6.477 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a look good feature like green tag/sticker in purchase of car	-14.004	489	.000	-.75510	-.8610	-.6492	P value=0.00 is less than α= 0.05, t value 14.00 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a look good feature like car as a safe mode of transport in purchase of car	-44.227	489	.000	-2.00000	-2.0889	-1.9111	P value=0.00 is less than α= 0.05, t value 44.22 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like steering features in purchase of car	-51.929	489	.000	-2.08980	-2.1689	-2.0107	P value=0.00 is less than α= 0.05, t value 51.92 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like parking assist features in purchase of car	-33.336	489	.000	-1.60204	-1.6965	-1.5076	P value=0.00 is less than α= 0.05, t value 33.33 very high, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like	-24.354	489	.000	-1.31633	-1.4225	-1.2101	P value=0.00 is less than α= 0.05, t value 24.35 very high, Hence null Hypothesis H0 is

keyless entry features in purchase of car							rejected.
Importance of a feel good feature like driving modes features in purchase of car	-19.293	489	.000	-1.11837	-1.2323	-1.0045	P value=0.00 is less than α= 0.05, t value 19.29 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like button start features in purchase of car	-18.539	489	.000	-1.13265	-1.2527	-1.0126	P value=0.00 is less than α= 0.05, t value 18.53 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like LED light features in purchase of car	-20.682	489	.000	-1.19592	-1.3095	-1.0823	P value=0.00 is less than α= 0.05, t value 20.68 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like multitasking features in purchase of car	-38.355	489	.000	-1.84898	-1.9437	-1.7543	P value=0.00 is less than α= 0.05, t value 38.35 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like follow me home head lamp features in purchase of car	-27.749	489	.000	-1.28163	-1.3724	-1.1909	P value=0.00 is less than α= 0.05, t value 27.74 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like fuel price difference(Petrol/diesel/cng) features in purchase of car	-48.159	489	.000	-1.87551	-1.9520	-1.7990	P value=0.00 is less than α= 0.05, t value 48.15 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like resale value features in purchase of car	-45.095	489	.000	-1.85918	-1.9402	-1.7782	P value=0.00 is less than α= 0.05, t value 45.09 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like EMI features in purchase of car	-32.714	489	.000	-1.64082	-1.7394	-1.5423	P value=0.00 is less than α= 0.05, t value 32.71 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like showroom ambience features in purchase of car	-20.328	489	.000	-1.00612	-1.1034	-.9089	P value=0.00 is less than α= 0.05, t value 20.32 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like	-22.147	489	.000	-1.06122	-1.1554	-.9671	P value=0.00 is less than α= 0.05, t value 22.14 very high than table value 1.96, Hence

advertisement features in purchase of car							null Hypothesis H0 is rejected.
Importance of a feel good feature like signboard features in purchase of car	-15.589	489	.000	-.74490	-.8388	-.6510	P value=0.00 is less than α= 0.05, t value 15.58 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like mileage sticker features in purchase of car	-24.187	489	.000	-1.19796	-1.2953	-1.1006	P value=0.00 is less than α= 0.05, t value 24.18 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like endorsement by family/friends in purchase of car	-33.167	489	.000	-1.53878	-1.6299	-1.4476	P value=0.00 is less than α= 0.05, t value 33.16 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like comparative with other cars features in purchase of car	-43.929	489	.000	-1.63061	-1.7035	-1.5577	P value=0.00 is less than α= 0.05, t value 43.92 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like labels on spares as features in purchase of car	-24.323	489	.000	-1.18367	-1.2793	-1.0881	P value=0.00 is less than α= 0.05, t value 24.32 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like double a.c. features in purchase of car	-16.960	489	.000	-.85714	-.9564	-.7578	P value=0.00 is less than α= 0.05, t value 16.96 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a feel good feature like space and head height features in purchase of car	-47.451	489	.000	-1.85306	-1.9298	-1.7763	P value=0.00 is less than α= 0.05, t value 47.45 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like horn features in purchase of car	-47.475	489	.000	-2.08367	-2.1699	-1.9974	P value=0.00 is less than α= 0.05, t value 47.47 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like airbag features in purchase of car	-55.139	489	.000	-2.17143	-2.2488	-2.0941	P value=0.00 is less than α= 0.05, t value 55.13 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like seat belt indicator features in purchase	-51.904	489	.000	-2.11020	-2.1901	-2.0303	P value=0.00 is less than α= 0.05, t value 51.9 very high than table value 1.96, Hence null Hypothesis H0 is rejected.

Importance of a do good feature like safety child seat features in purchase of car	-38.409	489	.000	-1.86531	-1.9607	-1.7699	P value=0.00 is less than α= 0.05, t value 38.40 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like safe braking features in purchase of car	-56.599	489	.000	-2.24082	-2.3186	-2.1630	P value=0.00 is less than α= 0.05, t value 56.59 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like taller body features in purchase of car	-34.493	489	.000	-1.66122	-1.7559	-1.5666	P value=0.00 is less than α= 0.05, t value 34.49 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like warranty/ extended warranty features in purchase of car	-51.051	489	.000	-1.99796	-2.0749	-1.9211	P value=0.00 is less than α= 0.05, t value 51.05 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like free insurance features in purchase of car	-43.309	489	.000	-1.67347	-1.7494	-1.5975	P value=0.00 is less than α= 0.05, t value 43.3 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like distance meter feature features in purchase of car	-54.850	489	.000	-1.91224	-1.9807	-1.8437	P value=0.00 is less than α= 0.05, t value 54.85 very high than table value 1.96, Hence null Hypothesis H0 is rejected.
Importance of a do good feature like tubeless tire features in purchase of car	-56.126	489	.000	-2.12245	-2.1968	-2.0481	P value=0.00 is less than α= 0.05, t value 56.12 very high than table value 1.96, Hence null Hypothesis H0 is rejected.

p value in all above is found to be 0.00 (two tailed) which is less than 0.05, t test values also be very high , we can conclude from above to reject null hypothesis,(Null hypothesis being **H0: μ=4**; alternate hypothesis **H1: μ<4) ,** making alternate hypothesis to be true. In look good features in cars price, colour of car, display of cars, personality endorsement, green tag/ stickers and car as safer mode of transport are important. In feel good features like steering(power steering, adjustable steering, AMT), keyless entry, parking assist, driving modes ,button start, LED light, multitasking (GPS, music system , s.m.s , tele-call ,navigation etc.), follow me home headlamp, price difference between fuel prices and engine technology, resale value, EMI scheme, show room ambience, advertisement, signboard, mileage stickers, endorsement by family and friends, comparative with other cars, labels on spare parts, double air conditioner., interior space and head lamp are important features. In do good features(safety) like horn, airbags, seatbelt indicator, safety child seat, braking features, taller body, warranty, free insurance, distance meter, tubeless tires are important features.

Rank Order Analysis

Table 6: Summarized rank

Factor	Summarized rank order	Ranked by customer
Look good	1297	3
Feel Good	969	2
Do good	674	1

Rank order analysis shows that people rank 1st do good features i.e. safety features in a car, then 2nd feel features and lastly on the looks features.

Cost Analysis:

To study what people will be ready to pay for the look, feel and do good features for the various categories of car by car size (micro, compact, super compact, executive, luxury & coupe, SUV/MUV) data was collected from responses to question.The average amount people are ready to pay above base price of a class is as bellow:

Table 7: Car Class and readiness to pay for nudges in look, feel and do good

Cars class	Look nudge	Feel nudge	Do good nudge	Total Rs.
Micro cars	24737	26250	42810	93797
Compact car	19265	34290	47460	101015
Super Compact car	23632	36130	60540	120302
Executive car	30147	46690	66544	143381
Luxury & coupe	57954	73860	77270	209084
SUV/MUV	29720	45830	54440	129990

Value and Retention focused frame work of Nudge in Look, feel and do good

Nudges are being used to increase value perception in frame work of look, feel and do good, as all people want is to look good, feel good and to use products in which they are safer, car nudges can be put in look, feel and do good frame work as follows:

Table 8: Nudges can be put in look, feel and do good frame work

Sr. no.	Look	Feel	Do good
1	Low price of car	Power steering, adjustable steering, AMT(Automatic manual transmission)	Horn
2	Colour of cars	Key less entry in cars	Seat belt indicator via light or noise signal
3	Dashing display lights on vehicle in car showrooms	Remote starting of car	Safety seat for child
4	Personality endorsement	Parking assist cameras on cars	ABS(Anti-lock braking), ESP(Electronic stability program)
5	Green tag stickers on car (look green in society)	Driving Modes like economic, city and sport	Eco-pedal
6	Car as a safer, faster and tireless mode of transport	Start Stop, button starting car	Global navigational system assisted lo-jack security product
7		LED lights and Intelligent light system	Auto emergency braking, smart Cruise control
8		Multitasking like playing music, GPS navigation, attending tele call, sms etc.	Congestion tax
9		Follow me home feature of headlamp	Lottery of car drivers who do not over speed.
10		Near Field Communication(NFC) &Radio frequency identification(RFID)	Direction indicators
11		Price difference between fuel coupled with engines technology	Taller body of car
12		Resale value fixing at time of buying a car, 3years/5 years after its use	Certified driving schools for removing fear of driving and promoting car sales
13		Car purchase scheme: upfront advance & lower EMI	Warranty period
14		Pleasant ambience at car show room by displays and soft music	Free insurance and lower EMI schemes in December every year
15		Advertisement highlighting features	Tie up with car finance companies
16		Signboards at Car showrooms	Tubeless tyres as standard tyres
17		Mileage stickers on cars giving saving per year(US EPA stickers)	Distance meter after vehicle touches reserve fuel
18		Incentives benefits & usefulness of car is focused by sales person	Drivers biometrics : blood alcohol, BP, glucose level, fatigue
19		Endorsement by family and close friends	
20		Comparative with other cars	
21		Smaller hatchbacks cars act as nudge for larger sedan cars	
22		Company show rooms and company service	

		stations	
23		Availability of car at showroom nearby	
24		Scratch free car delivery	
25		Labels on spare parts	
26		Trained dealer sales staff in after service handling	

Conclusions

In respect to urban cities of Maharashtra following conclusions can be drawn:

- Car sales can be improved by putting nudges in features and promotions of cars in the urban areas.
- Nudges in cars increase the value perception in look feel and do good (safety).
- People in urban areas of Maharashtra value do good (safety) nudge, then the feel nudges and lastly the look nudges in cars.
- Study on Nudge shows that with focus on nudges, older tools like USP(unique selling proposition), customers need and wants study are very much relevant, product differentiation in market happens on the lines of value in looks, feel and do good nudges for high feature technology product like cars.
- There are a few cars in market who have all the nudges but are still not successful in getting customers, as customers have a mind frame on how much they are ready to spend above base car for the nudges, if the value of the car is above the class they are ready to pay, they don't value same as value for money and don't go for the car .i.e. there is a value for money concept for cars.
- Micro and small compact cars maximum people are ready to spend from @Rs94000 to 1.2 lacs above base car price, for executive and luxury cars it from @ Rs.1.4 lacs to 2.1 lacs above base price, for SUV/MUV it is @Rs1.3 lacs.
- Above shows that people are very much conservative in urban Maharashtra when looking for features in cars and their promotions and like to go for value for money in cars.

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