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Factors contributing towards the sustainability of green products purchase behaviour in the long run: Application of structural equational model (SEM)

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Abstract
Conceptual framework of Green repurchase behaviour of millennials of Jamshedpur emphasizes how individuals perceive green products and their concern towards the environment and what are the latent variables that influence their purchase decision. Liberalization, privatisation, globalisation, industrialization, urbanisation and digitization, immunity, and self-reliance are all hallmarks of the twenty-first century in India. The cloud has replaced our office space, and Bots and Robots are our co-workers. All of our technical progress to date has resulted in awful environmental damage, carbon emissions and scarcity of resources. As a result, the entire globe is transitioning from a linear to a circular economy, and customers are currently seeking for ways to recycle, reuse, and lengthen the product life cycle as much as possible. We need to develop more environmentally friendly ways to generate, consume, and dispose of waste. Green Products are a newly developed product category, however customer preference for such products is a questionable issue, as product sales numbers are not very stunning. As a result, the current research is an attempt to identify Factors contributing towards the sustainability of green products purchase behaviour in the long run.

Keywords: structure equation model, confirmative factor analysis, green repurchase behaviour

Introduction

According to a study conducted by UNESCO (2019), India has the world's biggest adolescent and youth population, and by 2020, it became world's youngest country, with an average age of 29 years and 65 percent (65%) of the population under the age of thirty-five. According to UNFPA predictions, India's population would remain among the world's youngest country until 2030. The same has been backed up by a study conducted by Deloitte's Global Millennial and Gen Z Survey (2021), Millennials and Generation Z feel the world is on the verge of a major environmental crisis and they're also calling themselves and organizations answerable to make the world more sustainable and equitable. According to the survey, nine out of 10 Indian millennials and Gen Zs are confident that the changes witnessed during the pandemic would help counteract ecological damage. Therefore, understanding the consumer behaviour of younger population of India is a must for sustainability of green products purchase behaviour in the long run as most of these millennials are in their working age bracket, have enormous purchasing power and longer influence on the product life cycle.

Media Influence plays an important role in developing concern towards the environment. Green Product Attributes are likely to impact millennials' green purchasing decisions. Similarly, Green Purchase Attitude, Post Purchase Experience of Green Product and Sceptism towards Green Product also plays an important role in determining the green repurchase behaviour. By using Structure Equation Model and Confirmative Factor Analysis we established an empirical relationship to explain the green repurchase behaviour of millennials of Jamshedpur. The finding of this study confirms the potential role of Media Influence, Green Purchase Attitude, Green Product Attribute, Post Purchase experience of Green Products, Sceptism towards Green claims in sustainability of green products purchase behaviour in the long run.

Although green marketing activities and their marketing implications have a notable presence in the literature since the mid-2000s (Prashant, 2016). Murugesan (2008) observed that "Green Marketing" is a hybrid of the "Social Marketing Concept" and the "Ecological Marketing Concept" in his study "Green-Trust and Distrust." In the literature the role Media Influence, Green Purchase Attitude, Green Product Attribute, Post Purchase experience of Green Product, Sceptism towards Green claims remained an unexplored.

Objective of the stud

In the referred literature median influence, green purchase attitude and green product attributes have been explored, along with sceptism towards green claims of green product, but contribution of post purchase experience of green product towards sustainability of green products purchase behaviour in the long run still remain unexplored in social landscape.

Therefore, the objectives of the study are classified under the following sub-headings-

1. Whether the Media Influence played an important role in the sustainability of green products purchase behaviour in the long run?
2. Whether the Green Purchase Attitude played an important role in the sustainability of green products purchase behaviour in the long run?

3. Whether the Green Product Attribute played an important role in the sustainability of green products purchase behaviour in the long?
4. Whether the Post Purchase experience of Green Product played an important role in the sustainability of green products purchase behaviour in the long run?
5. Whether the Sceptism towards Green claims played an important role in the sustainability of green products purchase behaviour in the long run?

Hypothesis of the study

The study attempts to probe into the following specific hypothesis

- Media Influence played an important role in the sustainability of green products purchase behaviour in the long run.
- Green Purchase Attitude played an important role in the sustainability of green products purchase behaviour in the long run.
- Green Product Attribute played an important role in the sustainability of green products purchase behaviour in the long.
- Post Purchase experience of Green Product played an important role in the sustainability of green products purchase behaviour in the long run.
- Sceptism towards Green claims played an important role in the sustainability of green products purchase behaviour in the long run.

Methodology of the study

The study has been done on the basis of primary data collected from respondents of Jamshedpur on the basis of random sampling with the help of a close-ended structured questionnaire. The survey questionnaire was designed to understand the role of Media, Attitude, product attributes, post purchase experience and trust/distrust of green claims to predict the sustainability of green products purchase behaviour in the long run. A total of 19 indicators across different dimensions (Awareness, Attitude, Pricing, Packaging, Influence of Media, and trust/distrust towards green claims by companies) were used to understand the green purchase behaviour of consumers of Jamshedpur. By using Structure Equation Model and Confirmative Factor Analysis we established an empirical relationship to explain the impact of media, attitude, product attribute, post purchase experience and green claim trust/distrust factors on sustainability of green products purchase behaviour in the long run. Statistical software, JASP 4.1 version have been used for data analysis in the present study.

Model Development

Various factors, such as degree of environmental concern, green product knowledge, role of media in creating awareness for prevailing environmental conditions, green purchase attitude, quality of green product, product price, green packaging, green manufacturing processes, product performance, and attitude toward green claims by the organisation, to name a few, all have contributed to the long-term sustainability of green product purchase behaviour.

Structural equation modelling (SEM) is a multivariate methodology that uses a mixture of two statistical methods: confirmatory factor analysis and path analysis to test and assess multivariate causal links in scientific research. According to the study of Tian et al. (2013), to examined the potential contributions of land use, demographic and economic changes on urban expansion (i.e., green spaces) in the city of Shenzhen, China, he treated land cover change (LCC), population, and economy as three latent variables, each characterized with five observable variables. In the investigation of psychological traits, Galton (1888), Confirmatory factor analysis, was used to estimate the latent psychological traits, such as attitude and satisfaction. Wright (1918), in his study of biometrics path analysis was used to find the causal relationship among variables by creating a path diagram. We couldn't directly assess the Green Repurchase Behaviour parameters (latent variables) in our study because the respondents couldn't express a coherent answer that would completely and precisely indicate green buying behaviour, but we may identify the same in conceptual terms. Therefore, to determine the number of latent variables in our study we used domain knowledge and insights gathered from the literature review, and the identified latent variables are Green Purchase Attitude, Media Influence, Green Product Attribute, Post Purchase Experience of Green Products and Scepticism towards Green Claims. We chose a set of five latent variables to assess the sustainability of green products purchase behaviour in long run (Y). We used the first order Confirmatory Factor Analysis method and the second order Confirmatory Factor Analysis method in this study to construct the mathematical measurement for each latent variable with each observed parameter, as well as the impact of each latent variable on overall sustainability of green products purchase behaviour in long run.

The First Order Confirmatory Factor Analysis

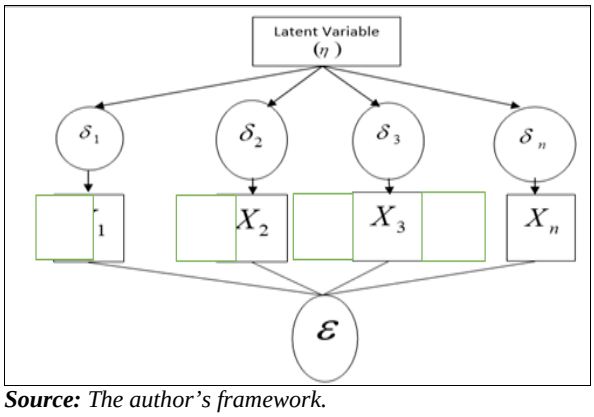
A latent variable is examined in First-Order CFA based on various factors that may be observed directly in our survey. The parameters are determined by applying theoretical domain knowledge and the outcomes of the literature study.

The first order CFA model is stated as follows using standard notations (Hair et al., 1998):

$$h = d1\,X1 + d2\,X\,2 + ... + dn\,X\,n + e$$

Where h is represent the latent variable and d represent the coefficient of observed variable to measure the influence of the latent variable with an error term e.

The below is a conceptualization of the linkage between the latent variable and the observed variables



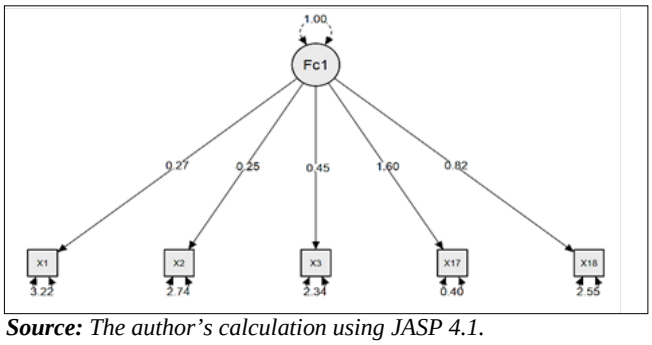
Source: *The author's framework.*

Fig 1: First-order Confirmatory Factor Analysis Model

The Latent Variables Media Influence

Role of TV channels in enhancing the knowledge about green products, Role of Newspapers and Magazines as a source of propagating environment issues, Role of social media in propagating knowledge about environmental issues, Role of media in creating awareness about Eco-Labels and the environment consciousness that has been created by the media lately are five uni-dimensional indicators that are identified in the present research for Media Influence.

The following is the outcome of the First Order Confirmatory Factor Analysis for this latent variable.



Source: *The author's calculation using JASP 4.1.*

Fig 2: Confirmatory Factor Analysis of Variable Media Influence

The z-value of each loading factor coefficient, as shown in Table 1, is used to evaluate whether each item contributes substantially to the latent variable towards sustainability of green products purchase behaviour in the long run.

Table 1: Loading Factor for latent variable of Media Influence

Factor loadings								
Factor (F1)	**Indicator**	**Symbol**	**Estimate**	**Std. Error**	**z-value**	**p**	**Lower**	**Upper**
Media Influence	X1	λ1	0.269	0.103	2.601	0.009	0.066	0.472
	X2	λ2	0.255	0.096	2.663	0.008	-0.443	-0.067
	X3	λ3	0.452	0.101	4.468	< .001	-0.651	-0.254
	X17	λ18	1.600	0.223	7.187	< .001	-2.037	-1.164
	X18	λ18	0.818	0.139	5.868	< .001	-1.091	-0.545

Source: The author's calculation using JASP 4.1.

Table 1 illustrates the loading factor for all components with a positive coefficient value and a lower P-value for z statistics, indicating that they are significant. The findings achieved the fit model based on the CFA analysis using the First Order Confirmatory Factor Analysis, as shown in table 2 below, whereby RMSEA = 0.195 with the P-value = 0.0001. This indicates that this model is appropriate and feasible for estimating the latent variable of Media Influence towards the sustainability of green products purchase behaviour in the long run.

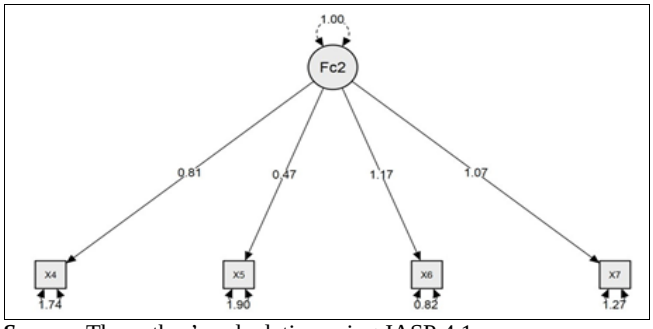
Table 2: Goodness of Fit Item of all items of Media Influence

Metric	Value
Root mean square error of approximation (RMSEA)	0.195
RMSEA 90% CI lower bound	0.158
RMSEA 90% CI upper bound	0.234
RMSEA p-value	2.216e -10
Standardized root mean square residual (SRMR)	0.103
Hoelter's critical N (α = .05)	55.397
Hoelter's critical N (α = .01)	75.129
Goodness of fit index (GFI)	0.932
McDonald fit index (MFI)	0.909
Expected cross validation index (ECVI)	0.255

Source: The author's calculation using JASP 4.1.

The Latent Variable of Green Purchase Attitude

The latent variable of Green Purchase Attitude of Millennials is measured using four uni- dimensional predictors observed in our investigation such as Environmental concern, perceived environmental knowledge, perceived green product knowledge and level of awareness about green product and environmental issues. Figure 3 summarises the findings of the CFA analysis of the Green Purchase Attitude latent variable using the First Order Confirmatory Factor Analysis.



Source: The author's calculation using JASP 4.1.

Fig 3: Confirmatory Factor Analysis of Green Purchase Attitude

The z-value of each loading factor coefficient, as shown in table 3, is used to evaluate whether each item contributes substantially to the latent variable towards sustainability of green products purchase behaviour in the long run.

Table 3: *Loading Factor for Green Purchase Attitude*

Factor loadings									
Factor 2		**Indicator**	**Symbol**	**Estimate**	**Std. Error**	**z- value**	**p**	**Lower**	**Upper**
Green Attitude	*Purchase*	X4	λ4	0.814	0.086	9.441	< .001	0.645	0.983
		X5	λ5	0.475	0.084	5.668	< .001	0.311	0.639
		X6	λ6	1.173	0.086	13.577	< .001	1.004	1.343
		X7	λ7	1.074	0.089	12.122	< .001	0.901	1.248

Source: *The author's calculation using JASP 4.1.*

Table 3 shows the loading factor of all items that have a positive coefficient value and each item has lower P-value of z statistics, so that it is concluded to be significant. Based on the CFA analysis using the First Order Confirmatory Factor Analysis, the results obtained the fit model because RMSEA = 0.030, P-value = 0.0001, as shown in table 4 below.

This means that this model is suitable and feasible to be used to measure the latent variable of green purchase attitude towards the sustainability of green products purchase behaviour in the long run.

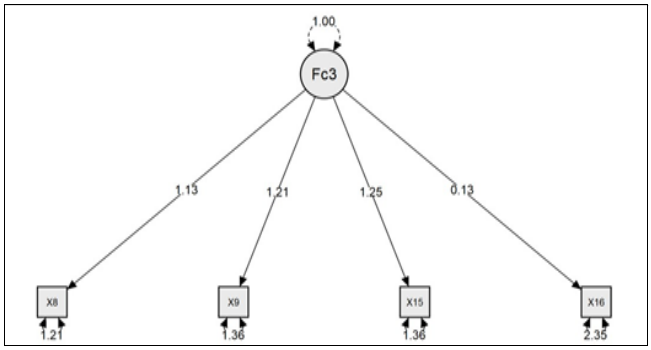
Table 4: Goodness of Fit Item Green Purchase Attitude

Metric	Value
Root mean square error of approximation (RMSEA)	0.030
RMSEA 90% CI lower bound	0.013
RMSEA 90% CI upper bound	0.113
RMSEA p-value	2.989e -7
Standardized root mean square residual (SRMR)	0.077
Hoelter's critical N (α = .05)	54.835
Hoelter's critical N (α = .01)	83.758
Goodness of fit index (GFI)	0.948
McDonald fit index (MFI)	0.948
Expected cross validation index (ECVI)	0.153

Source: *The author's calculation using JASP 4.1.*

The Latent Variable of Green Product Attribute

The latent variable of Green Product Attribute is measured on the basis of four uni-dimensional indicators such as Green Product Quality, Availability of Green Products, Price Sensitivity and Green Packaging which are observed in our research. CFA analysis results of Green Product Attribute latent variable by using the First Order Confirmatory Factor Analysis is shown in figure 4 below.



Source: *The author's calculation using JASP 4.1.*

Fig 4: Confirmatory Factor Analysis of Green Product Attribute Variable

The z-value of each loading factor coefficient, as shown in table 5, is used to evaluate whether each item contributes substantially to the latent variable towards sustainability of green products purchase behaviour in the long run.

Table 5: Loading Factor for Green Product Attribute Items

Factor loadings								
Factor	**Indicator**	**Symbo**	**l Estimate**	**Std. Erro**	**r z-value**	**p**	**Lower**	**Upper**
Green Product Attribute	X8	λ8	1.13	0.083	13.584	< .001	0.963	1.288
	X9	λ9	1.21	0.089	13.706	< .001	1.040	1.387
	X15	λ15	1.25	0.090	13.859	< .001	1.071	1.424
	X16	λ16	0.13	0.089	1.446	0.148	-0.046	0.304

Source: The author's calculation using JASP 4.1

Table 5 shows the loading factor of all items that have a positive coefficient value and each item has lower P-value of z statistics, so that it is concluded to be significant. Based on the CFA analysis using the First Order Confirmatory Factor Analysis, the results obtained the fit model because RMSEA = 0.050, P-value = 0.001, as shown in table 4 below. This means that this model is suitable and feasible to be used to measure the latent variable of green purchase attributes towards the sustainability of green products purchase behaviour in the long run.

Table 6: Goodness of Fit Item Green Product Attribute

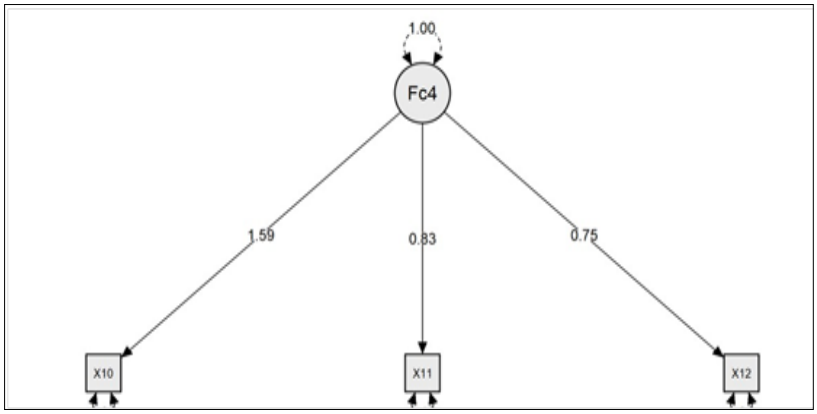
Other fit measures	
Metric	**Value**
Root mean square error of approximation (RMSEA)	0.050
RMSEA 90% CI lower bound	0.000
RMSEA 90% CI upper bound	0.124
Other fit measures	
Metric	**Value**
RMSEA p-value	0.001
Standardized root mean square residual (SRMR)	0.022
Hoelter's critical N (α = .05)	586.602

Hoelter's critical N (α = .01)	901.213
Goodness of fit index (GFI)	0.995
McDonald fit index (MFI)	0.997
Expected cross validation index (ECVI)	0.052

Source: *The author's calculation using JASP 4.1.*

The Latent Variable of Post Purchase Experience of Green Products

The latent variable of post purchase experience of green product is measured on the basis of three uni-dimensional indicators such as Green Product Experience, Green Consumer Experience and Ease of using green products which are observed in our research. CFA analysis results of Post Purchase Experience of Green Products latent variable by using the First Order Confirmatory Factor Analysis is shown in figure 5 below



Source: The author's calculation using JASP 4.1

Fig 5: Confirmatory Factor Analysis of Post Purchase Experience of Green Products

The z-value of each loading factor coefficient, as shown in table 7, is used to evaluate whether each item contributes substantially to the latent variable towards sustainability of green products purchase behaviour in the long run.

Table 7: Loading Factor for Post Purchase Experience of Green Products Items

Factor loadings								
Factor	**Indicator**	**Symbol**	**Estimate**	**Std. Error**	**z-value**	**p**	**Lower**	**Upper**
Post Purchase Experience	X10	λ10	1.592	0.158	10.082	< .001	1.282	1.901
	X11	λ11	0.829	0.113	7.307	< .001	0.607	1.051
	X12	λ12	0.750	0.101	7.454	< .001	0.553	0.948

Source: *The author's calculation using JASP 4.1.*

Table 7 shows the loading factor of all items that have a positive coefficient value and each item has lower P-value of z statistics, so that it is concluded to be significant. Based on the CFA analysis using the First Order Confirmatory Factor Analysis, the results obtained the fit model because RMSEA = 0.078, P-value = 0.0001, as shown in table 8 below. This means that this model is suitable and feasible to be used to measure the latent variable of post purchase experience towards the sustainability of green products purchase behaviour in the long run.

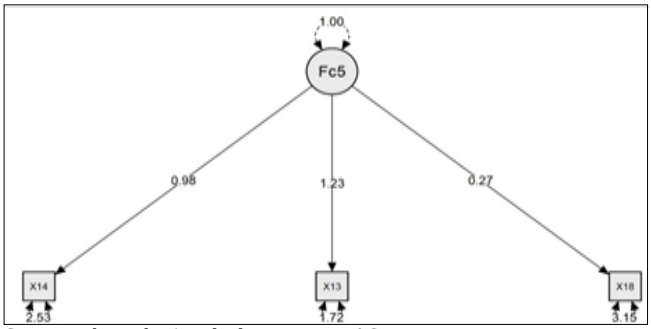
Table 8: Goodness of Fit Item Post Purchase Experience of Green Products

Other fit measures	
Metric	**Value**
Root mean square error of approximation (RMSEA)	0.078
RMSEA 90% CI lower bound	0.045
RMSEA 90% CI upper bound	0.098
RMSEA p-value	0.001
Standardized root mean square residual (SRMR)	1.990e -8
Hoelter's critical N (α = .05)	1.000
Hoelter's critical N (α = .01)	1.000
Goodness of fit index (GFI)	1.000
McDonald fit index (MFI)	1.000
Expected cross validation index (ECVI)	0.031

Source: The author's calculation using JASP 4.1.

The Latent Variable of Scepticism towards Green Claims

The latent variable of Scepticism towards Green Claims is measured on the basis of three uni- dimensional indicators such as environmental claims made on packaging labels or in advertising are true, most environmental claims on packaging labels or in advertising are intended to misled rather than to inform consumers, trust on environmental claims made on packaging labels or in advertising. Observed in our research for measuring Scepticism towards Green Claims. CFA analysis results of Scepticism towards Green Claims latent variable by using the First Order Confirmatory Factor Analysis is shown in figure 9 below.



Source: The author's calculation using JASP 4.1.

Fig 6: Confirmatory Factor Analysis of Scepticism towards Green Claims

Table 9: Loading Factor for Scepticism towards Green Claims Items

Factor loadings								
Factor	**Indicator**	**Symbol**	**Estimate**	**Std. Error**	**z- value**	**p**	**Lower**	**Upper**
Scepticism towards Green Claims	X14	λ14	0.976	0.334	2.919	0.004	0.321	1.632
	X13	λ13	1.235	0.416	2.970	0.003	0.420	2.050
	X18	λ18	0.269	0.127	2.113	0.035	0.019	0.518

Source: The author's calculation using JASP 4.1.

Table 9 shows the loading factor of all items that have a positive coefficient value and each item has lower P-value of z statistics, so that it is concluded to be significant. Based on the CFA analysis using the First Order Confirmatory Factor Analysis, the results obtained the fit model because RMSEA = 0.020, P-value = 0.001, as shown in table 10 below. This means that this model is suitable and feasible to be used to measure the latent variable of scepticism towards Green Claims towards the sustainability of green products purchase behaviour in the long run.

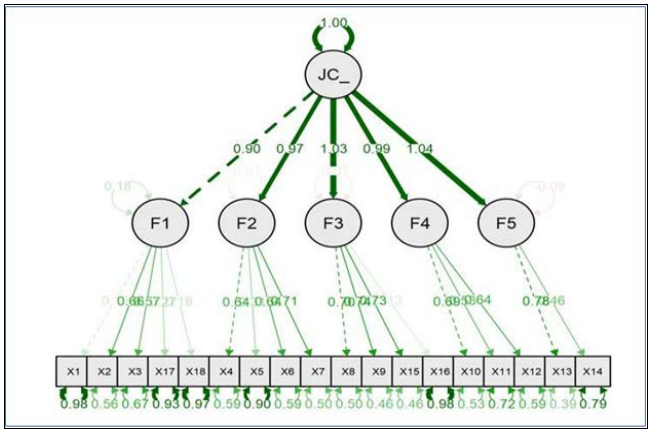
Table 10: Goodness of Fit Item Scepticism towards Green Claims of Green Products:-

Other fit measures	
Metric	**Value**
Root mean square error of approximation (RMSEA)	0.020
Other fit measures	
Metric	Value
RMSEA 90% CI lower bound	0.012
RMSEA 90% CI upper bound	0.042
RMSEA p-value	0.001
Standardized root mean square residual (SRMR)	6.198e -9
Hoelter's critical N (α = .05)	0.98
Hoelter's critical N (α = .01)	0.95
Goodness of fit index (GFI)	1.000
McDonald fit index (MFI)	1.000
Expected cross validation index (ECVI)	0.031

Source: *The author's calculation using JASP 4.1.*

Second-order Confirmatory Factor Analysis Model

Based on the items obtained in each dimension in the first order analysis, the second order analysis of CFA was done. The use of Second-order confirmatory factor analysis in this study was to examine the mathematical creativity variable domain consisting of three indicators, fluency, flexibility, and originality. The results of the second-order confirmatory factor analysis of mathematical creativity variables are shown in figure 7.



Source: *The author's calculation using JASP 4.1.*

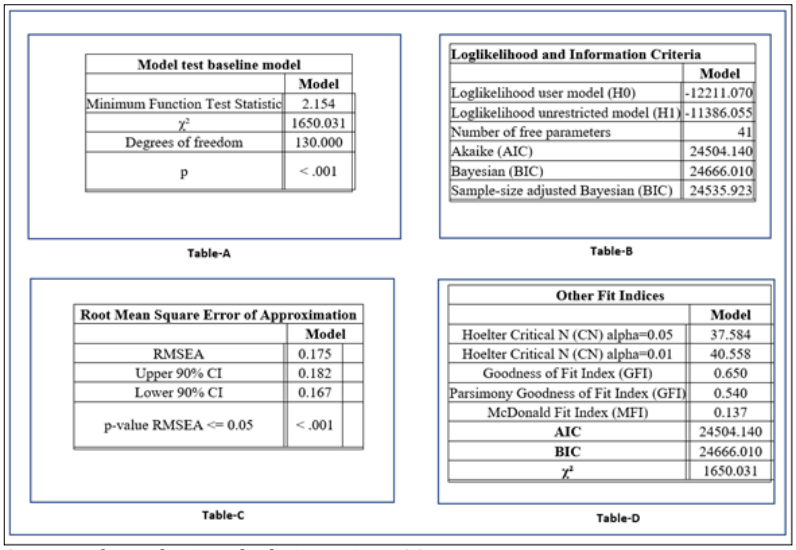
Fig 7: Second Order Confirmatory Factor Analysis of all latent Variable

Table 11: Parameter Estimates of Second-order confirmatory factor analysis

Parameter Estimates														
			label		**est**	**se**	**z**	**p**	**CI (lower)**	**CI (upper)**	**std (lv)**	**std (all)**	**std (nox)**	**group**
F1	=~	X1			1.000	0.000			1.000	1.000	0.272	0.150	0.150	
F1	=~	X2			4.055	1.539	2.634	0.008	1.037	7.072	1.104	0.662	0.662	
F1	=~	X3			3.362	1.287	2.613	0.009	0.841	5.884	0.916	0.575	0.575	
F1	=~	X17			1.725	0.731	2.359	0.018	0.292	3.158	0.470	0.273	0.273	
F1	=~	X18			1.210	0.582	2.079	0.038	0.069	2.350	0.330	0.184	0.184	
F2	=~	X4			1.000	0.000			1.000	1.000	0.998	0.644	0.644	
F2	=~	X5			0.457	0.081	5.640	< .001	0.298	0.616	0.456	0.312	0.312	
F2	=~	X6			0.946	0.088	10.774	< .001	0.774	1.119	0.945	0.638	0.638	
F2	=~	X7			1.107	0.094	11.756	< .001	0.922	1.292	1.105	0.710	0.710	
F3	=~	X8			1.000	0.000			1.000	1.000	1.106	0.704	0.704	
F3	=~	X9			1.116	0.080	13.917	< .001	0.959	1.273	1.234	0.736	0.736	
F3	=~	X15			1.128	0.081	13.861	< .001	0.969	1.288	1.247	0.733	0.733	
F3	=~	X16			0.181	0.073	2.487	0.013	0.038	0.324	0.200	0.131	0.131	
F4	=~	X10			1.000	0.000			1.000	1.000	1.164	0.686	0.686	
F4	=~	X11			0.798	0.083	9.633	< .001	0.636	0.960	0.928	0.527	0.527	
F4	=~	X12			0.852	0.074	11.587	< .001	0.708	0.996	0.992	0.640	0.640	
F5	=~	X13			1.000	0.000			1.000	1.000	1.412	0.782	0.782	
F5	=~	X14			0.608	0.065	9.289	< .001	0.480	0.736	0.858	0.460	0.460	
Y	=~	F1			0.900	0.529	1.731		1.000	1.000	0.903	0.903	0.903	
Y	=~	F2			0.970	0.369	2.625	0.009	0.993	6.850	0.967	0.967	0.967	
Y	=~	F3			1.030	0.39	2.641	0.008	1.198	8.092	1.034	1.034	1.034	
Y	=~	F4			0.990	0.375	2.636	0.008	1.202	8.178	0.992	0.992	0.992	
Y	=~	F5			1.040	0.392	2.653	0.008	1.562	10.400	1.043	1.043	1.043	
X1	~~	X1			3.221	0.234	13.764	< .001	2.762	3.679	3.221	0.977	0.977	
X2	~~	X2			1.560	0.155	10.056	< .001	1.256	1.864	1.560	0.561	0.561	
X3	~~	X3			1.698	0.144	11.762	< .001	1.415	1.981	1.698	0.669	0.669	

X17	~~	X17			2.747	0.202	13.572	< .001	2.350	3.143	2.747	0.926	0.926		
X18	~~	X18			3.097	0.226	13.725	< .001	2.655	3.540	3.097	0.966	0.966		
X4	~~	X4			1.409	0.114	12.312	< .001	1.185	1.634	1.409	0.586	0.586		
X5	~~	X5			1.922	0.141	13.646	< .001	1.646	2.198	1.922	0.902	0.902		
X6	~~	X6			1.300	0.105	12.366	< .001	1.094	1.506	1.300	0.593	0.593		
X7	~~	X7			1.200	0.105	11.431	< .001	0.994	1.406	1.200	0.496	0.496		
X8	~~	X8			1.241	0.099	12.575	< .001	1.048	1.434	1.241	0.504	0.504		
X9	~~	X9			1.291	0.106	12.213	< .001	1.084	1.499	1.291	0.459	0.459		
X15	~~	X15			1.344	0.110	12.253	< .001	1.129	1.559	1.344	0.463	0.463		
Parameter Estimates															
			label		est	se	z	p	CI (lower)	CI (upper)	std (lv)	std (all)	std (nox)	group	
X16	~~	X16			2.311	0.167	13.825	< .001	1.984	2.639	2.311	0.983	0.983		
X10	~~	X10			1.519	0.133	11.452	< .001	1.259	1.779	1.519	0.529	0.529		
X11	~~	X11			2.244	0.171	13.091	< .001	1.908	2.580	2.244	0.722	0.722		
X12	~~	X12			1.416	0.116	12.162	< .001	1.188	1.644	1.416	0.590	0.590		
X13	~~	X13			1.265	0.184	6.894	< .001	0.906	1.625	1.265	0.388	0.388		
X14	~~	X14			2.746	0.207	13.267	< .001	2.340	3.152	2.746	0.788	0.788		
F1	~~	F1			0.014	0.012	1.160	0.246	-0.009	0.037	0.184	0.184	0.184		
F2	~~	F2			0.065	0.046	1.433	0.152	-0.024	0.155	0.066	0.066	0.066		
F3	~~	F3			- 0.084	0.040	-2.094	0.036	-0.162	-0.005	- 0.068	- 0.068	-0.068		
F4	~~	F4			0.022	0.072	0.305	0.760	-0.120	0.164	0.016	0.016	0.016		
F5	~~	F5			- 0.173	0.161	-1.080	0.280	-0.488	0.141	- 0.087	- 0.087	-0.087		
Y	~~	Y			0.061	0.046	1.327	0.184	-0.029	0.150	1.000	1.000	1.000		

Table 12: Goodness of Fit test statistics of Second-order confirmatory factor analysis



Model test baseline model	
	Model
Minimum Function Test Statistic	2.154
χ^2	1650.031
Degrees of freedom	130.000
p	< .001

Table-A

Loglikelihood and Information Criteria	
	Model
Loglikelihood user model (H0)	-12211.070
Loglikelihood unrestricted model (H1)	-11386.055
Number of free parameters	41
Akaike (AIC)	24504.140
Bayesian (BIC)	24666.010
Sample-size adjusted Bayesian (BIC)	24535.923

Table-B

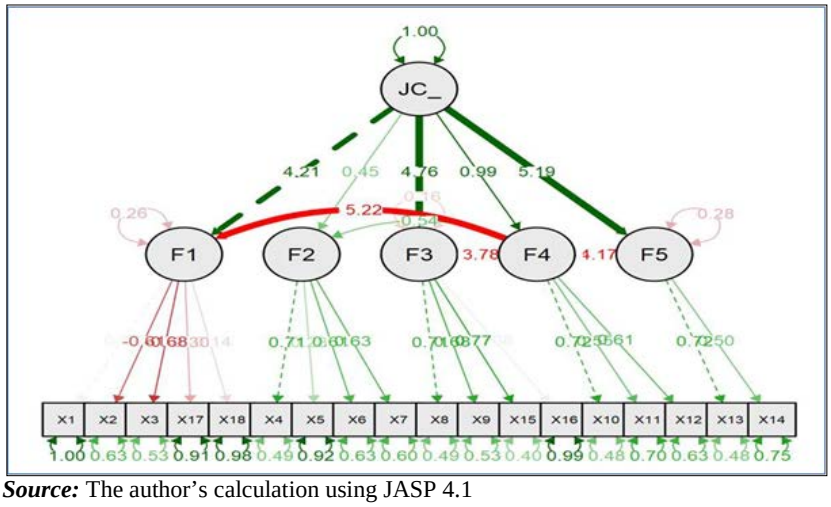
Root Mean Square Error of Approximation	
	Model
RMSEA	0.175
Upper 90% CI	0.182
Lower 90% CI	0.167
p-value RMSEA <= 0.05	< .001

Table-C

Other Fit Indices	
	Model
Hoelter Critical N (CN) alpha=0.05	37.584
Hoelter Critical N (CN) alpha=0.01	40.558
Goodness of Fit Index (GFI)	0.650
Parsimony Goodness of Fit Index (GFI)	0.540
McDonald Fit Index (MFI)	0.137
AIC	24504.140
BIC	24666.010
χ^2	1650.031

Table-D

Source: *The author's calculation using JASP 4.1*



Source: The author's calculation using JASP 4.1

Fig 8: Second Order Confirmatory Factor Analysis for inter relation among latent Variables

Result and Discussion

Based on the test results conducted with second-order confirmatory factor analysis on 18 items yielding RMSEA = 0.175 (p <0.001). Based on the data and test statistics value

form table 12, p-value and RMSEA can be fulfilled so that it can be concluded that this model fit for second order CFA with a complex path diagram in the structural equation model. In other words, it is uni-dimensional; all 18 items are valid indicators for measuring constructs of Sustainability of Green Products Purchase Behaviour by using five latent variables.

Based on Table 11, it can be explained that each item has a positive loading factor and each p value of z test is lower than 0.05, hence it is said to be significant. This means that all items are suitable for measuring mathematical creativity because the overall z-value is greater than 1.96. The significance value of factor five (F5) gives the largest contribution as much as 104%, followed by factor three (F3) with 103% and factor four (F4) with 99%, factor two (F2) with 97% and factor one (F1) 90%.

By using the structure equation model we can estimate the Sustainability of green products purchase behaviour is a function of all five latent variables with the predicted model as follows:

$$Y = 0.90F_1 + 0.97F_2 + 1.03F_3 + 0.99F_4 + 1.04F_5$$

Hence in order to achieve the sustainable repurchasing of green product in long run, all the latent variables are highly significant and are relevant in determining green products purchase behaviours of millennials of Jamshedpur.

Concussion

The current study examined the sustainability of green products purchase behaviour in long run by evaluating the role of Media Influence, Green Purchase Attitude, Green Product Attribute, Post Purchase experience of Green Products, Sceptism towards Green claims. Furthermore, an effort is made to comprehend and scientifically analyse the primary antecedents of green behaviour of millennials of Jamshedpur. From the SEM model we can conclude that the individual effect of media influence is significantly low and jence, green marketers must promote various events through the media, identifying the relevant green consumer segments and encourage environmentally conscious consumers to engage in green behaviour.

Nonetheless, because this study focused on generic green products, future research may focus on a specific sort of green product, such as energy efficient appliances, organic food products, green apparels and green building to further explore the green buying behaviour of individuals.

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