

2019-2020

Number of research papers per teacher in the Journals notified on UGC website during the last five years

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2	Institution- student relationship in higher education institutions in Goa: A psychological contract perspective	Dr. K.G. Shankarnarayanan	Commerce	International Journal of Research and Analytical Reviews(IJRAR),	3
3	Occupancy Based Pattern Mining: Current Status And Future Directions	Dr. Jhimli Adhikari	Information technology	International Journal of Next-Generation Computing	4
4	Study of User's satisfaction with Library Resources and Services: A Case Study of Narayan Zantye College of Commerce Library, Goa'	Mr. Bala Mandrekar	Library	Ajanta : An International Multidisciplinary Quarterly Research Journal	5-13
5	Lifestyle Change and Its Effect on Consumer Shopping: An Empirical Study	Dr. Rajendra Kumbharjuvenkar	Commerce	Journal of Advance Research in Dynamical & Control Systems	14
6	Interlinkages Between Indian and Global Stock Market Returns : Evidence from G5 Countries	Dr. Narayan Parab	Commerce	Indian Journal of Finance	15-23
7	Influence of Subjective norm on consumers' Green product purchase behaviour	Dr. K.G. Shankarnarayanan	Commerce	International Journal of Advance and Innovative Research	24-30
8	Values as predictors of consumers' green product purchase behaviour	Dr. K.G. Shankarnarayanan	Commerce	International Journal of Green Economics	31-32
9	Information linkages between commodity and equity markets: Evidence from India	Ms. Mrunali Jambotkar	Commerce	Ajanta : An International Multidisciplinary Quarterly Research Journal	33-34



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Authors

Mr Paresh Lingadkar, Dr K G Sankaranarayanan

Keywords

Psychological Contract of Project Guide-Student In Undergraduate Colleges In Goa: IPA Approach

Abstract

The objective of the study is to examine the Psychological contract of student and their Institution in Higher Education Institutions in Goa. Using a sample of 200 final year students studying in different undergraduate colleges in Goa, the study concludes that the attributes considered most important by students in Project work and where the performance of the Project guide is low are Leadership, Understanding, Respect/Freedom and Satisfaction. The attributes considered of Low importance by students in Project work and where the performance of the Project guide is High is Admonishing. The Project guide must ensure that on this aspect, he/she must not go for possible overkill by wasting the resources and time.

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Application

Mr Paresh Lingadkar, Dr K G Sankaranarayanan

Keywords

Institution-Student Relationship In Higher Education Institutions In Goa: A Psychological Contract Perspective

Abstract

The objective of the study is to examine the Psychological contract of student and their Institution in Higher Education Institutions in Goa. Using a sample of 200 students studying in different undergraduate colleges in Goa, the study concludes that the attributes considered most important by students in Higher Education Institution are: the quality of Teaching Aspects, Undergraduate Programs. The attribute with the lowest performance was the quality of Social Service, Computer laboratory, Library and general aspects.

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OCCUPANCY BASED PATTERN MINING: CURRENT STATUS AND FUTURE DIRECTIONS

Jhinal Adhikari

Abstract

The main purpose of data mining and analytics is to find novel, potentially useful patterns that can be utilized in real-world applications to derive beneficial knowledge. In recent years, a new measure of pattern interestingness called occupancy of a pattern was introduced to ensure that each pattern found represents a large part of transactions where it appears. Main objective of this measure is to enhance the quality of a pattern. This article surveys recent studies on pattern mining and its applications based on occupancy. The goal of the paper is to provide both an introduction to occupancy based pattern mining (OPM), and a survey of recent advances and research opportunities. Moreover, main approaches and strategies to solve occupancy based pattern mining problems are also presented. The paper also presents challenges and research opportunities of using occupancy measure in other popular pattern mining problems.

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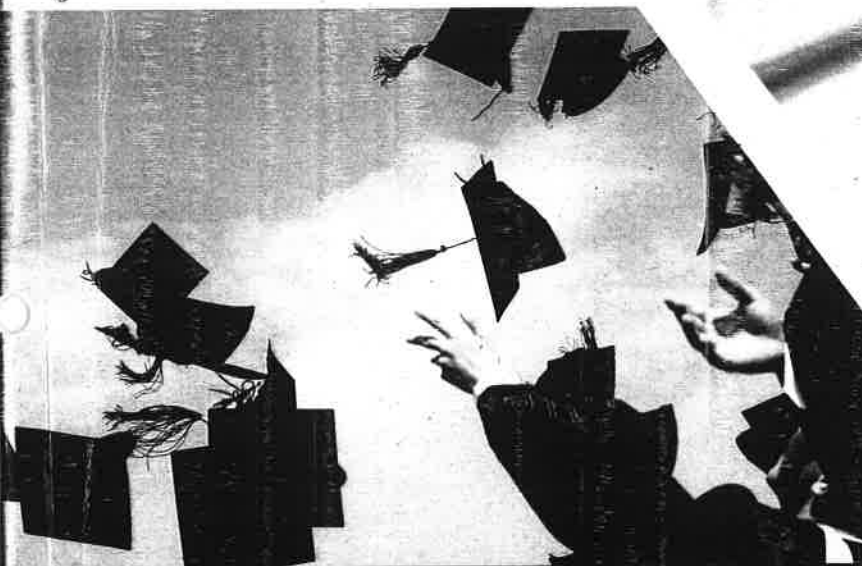


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16. Study of Users Satisfaction with Library Resources and Services: A Case Study of Narayan Zantye College of Commerce Library, Goa

Shri. Bala Mandrekar

Librarian, Narayan Zantye College of Commerce, Bicholim, Goa.

Abstract

The main aim of this study is to assess the level of user satisfaction with services and resources provided by the NZCC library. A structures questionnaire method used for the study and distributed to graduate students, post graduate students and faculties to know their opinion about the library resources and services. The aim was also to study the weaker sections of the library and to improve them. In the study it is found that certain library services need improvement and to create awareness among the students through user orientation programme.

Key words: e-Library, Resources, Library services.

Introduction

In the olden days books were kept in lock and keys because it was considered as a pride. But now the library concept has totally changes and the credit goes to Dr. S. R. Ranganathan, the father of library science movement in India who gave the concept that, the books are for use and books should not be kept idle in the cupboard but to make the best use of it. Today the libraries have moved from traditional libraries to digital libraries. The libraries have expanded from the repository of books, journals in physical format to electronic format. Today libraries are called Knowledge Resource Centres. Academic libraries accomplish the goals of institutions. Academic users are become more and more dependent on electronic resources to obtain information to their needs. Today many libraries have found the problem of acquiring and storage of printed materials due to lack of space and shrinking funds. The other factors are expensiveness and late delivery of material and climatic changes. The journals found to be more expensive to purchase regarding their price and availability and specially related to international journals that are printed outside India. So due to shrinking budgets of library, the libraries have managed with

the available little funds. Many institutions due to scarcity of funds discontinue the scholarly journals.

In today's ICT world these problems could be solved. The development of internet world wide web made rapid changes in academic libraries of higher education. The internet has now become a major force which has led to collection of e-resources such as e-journals, e-books, e-newsletters, e-publications etc. UGC INFLIBNET centre's N-LIST Programme has changed the institutional culture of college librarian by giving a fast access to 6000+ journals and 31,35,000+ e-books. Also the availability of open access resources has solved much of this issue. Open access resources are now gaining importance due to instant access, less space, easily available and free of cost. Today libraries are offering more information than before. The users are accessing thousand of e-resources at a click of mouse. Now many institutional libraries are spending more on e-resources databases from their budget.

Narayan Zantye College of Commerce Library: A View

Libraries are said to be the heart of every academic institution. Narayan Zantye college of Commerce library started with inception of college in 1994. The college library started operating with few volumes of books and periodicals. In 2013 the library got its own space admeasuring 340 sq.mts area including space for the e-library. The college library is situated in a very peaceful ambience having seating capacity of 125 users. It provides various facilities to staff and students with conducive environment. The library today has a collection of 17000+ books in the text and reference section. The library subscribes to 78 periodicals of national and international level, some of which are print and online. The has library purchases 15 local and national daily news papers. The library has Book bank facilities which offers free books to the deserving and needy students, library provides internet connectivity via wi-fi broadband to its users. The well equipped e-library with 20 terminals with internet connectivity gives access to its students and faculty members. The library subscribes UGC Inflibnet centre N-List programme, database India Stat and few subscribed Online resources. The access to these resources is given by creating individual user-id and passwords for students, faculty members and Research Scholars. The library also provides facility for M.Com. students and research scholar since the college is a Research Centre in commerce.

Objective of the Study

The main objective of this study is:

1. To find out the purpose of using the library by users
2. To know whether library users are satisfied with the present library services and resources provided by the library.
3. To which extend the library has made awareness among the users regarding the resources available in library.
4. The library services that needs improvement.

Methodology

The study was carried out to know t how far the users are satisfied with the present library services and resources provided by the library. The data collected was by using the structured questionnaire method. The users are categorised into three groups namely a) Under Graduate students b)Post graduate students 3) Faculty members. Total 540 copies of questionnaires were distributed among the users. 445 for Under graduate students, 70 for Post Graduate students and 25 for Faculty members. The total response received is 457 (84.62%). From Undergraduate students 377 response (84.71%) , Post Graduate 55 response (78.57%) and from faculty members 25 response (100%).

The Result of which is presented by using table and percentage

Table 1. Category of the users

Sr. No.	Categories	No. of Questionnaires Distributed	Questionnaires Received	% of Response
1	Undergraduate	445	377	84.71
2	Post Graduate	70	55	78.57
3	Faculty Members	25	25	100
	Total	540	457	84.62

As per the table 1, it shows that total response received is highest from faculty members (100%), followed by Undergraduate students (84.71%) and from Postgraduate Students (78.57%).

Table 2: Frequency of Visit to the Library

Frequency of Visit	No. of users (N=457)	%
Daily	207	45.29
Thrice a Week	143	31.29
Twice a Week	62	13.52
Once in a Week	35	7.65
Occasionally	10	2.18

It is observed from the table 2, that 45.29% users visits the library regularly followed by 31.29% thrice a week. The efforts should be taken to encourage the other users to visit the library regularly.

Table 3: Average Time Spent in Library

Time Spent	No. of Users	%
Half Hour	62	13.56
One Hour	114	24.94
More than one Hour	281	61.48

As the table 3 shows that, the majority of the users i.e. 61.48% are using the library for more than one hour wherein 24.94% users uses the library for one hour.

Table 4: Reading Material preferred.

Purpose	No. of users	%
Books (Text/ Reference)	309	67.61
Journals	70	15.31
Magazines/Newspapers	37	8.09
Other Readings	41	8.97

From Table 4 it has been found that the data that, the purpose of using the library vary from user to user and also that, majority of users 67.61% visits the library to prefer books from both the section text and reference. 15.31% visits the library for reading journals while 8.09% person visits library for reading newspapers and magazines.

Table5: Satisfaction with the library resources

Satisfaction	No. of users	%
Excellent	286	62.58
Good	103	22.53
Average	49	10.72

Below Average	11	2.40
poor	8	1.75

Table 5 reveals that 62.58% of users are satisfied with the resources available in the library while around 15% are not satisfied with resources available in the library.

Table 6: Access to Library material

Satisfaction	No. of users	%
Excellent	314	68.70
Good	84	18.38
Average	35	8.75
Below Average	15	3.78
Poor	9	1.96

Table 6 shows that access to library is excellent according to 68.70% users while only 1.96% users are not satisfied with the access.

Table 7: Library services

Satisfaction	No. of users	%
Excellent	227	49.67
Good	142	31.07
Average	54	11.81
Below Average	20	4.37
poor	14	3.06

Table 7 shows that, the 81% of users are satisfied with the services provided by the library while only 19% users are rated the library services average and below.

Table 8: E-Library Services

Satisfaction	No. of users	%
Excellent	295	64.55
Good	138	30.19
Average	24	5.25
Below Average	-----	----
poor	-----	----

It is observed from the table 8 that, 95% of users using the e-library facility are satisfied with the services while only 5% are dissatisfied.

Table 9: Internet Facility

Satisfaction	No. of users	%
Excellent	142	31.07
Good	121	26.47
Average	85	18.81
Below Average	61	13.34
Poor	52	11.37

The above table shows that the users are not satisfied with the Internet facility provided by the library. It needs to be improved with the high broadband capacity. The more efforts need to be taken to improve the internet facility for the students and faculty members.

Conclusion

The basic function of the academic library is to provide services to the users to meet their required information. Since the library is the place of intellectual ideas for the students, faculty members and research scholars, it is the duty of the library professional to preserve the information for further use. The two main components of library are documents and users. From the above study it is clear that, the library services and internet facilities need to be improved. The students and faculty members should be encouraged to read the articles from scholarly journals. They should be encouraged to visit the library regularly.

Recommendations

1. Internet connectivity needs to be improved with high speed broadband facility.
2. To create awareness among the users for the maximum use of available resources.

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Lifestyle Change and its Effect on Consumer Shopping- An Empirical Study

Dr. Anthony Sathish and Dr. Rajendra Kumbharjuvenkar

Abstract

The post liberalization of the markets has drastically changed the shopping behavior of buyers. There is a total transformation in the traditional methods of buying goods and services. In the past decade, consumers in developing countries have become more value conscious buyers, looking at options, engaging over Internet and do not rely only on marketer's promotions alone. They are well informed because of technology and do their own evaluation of the products and services before purchase. The present study on the topic Changing Lifestyle and its Impact on Buying Behaviour of Consumers, aims at constructing a model for classifying the consumers based on buying behaviour and their life styles and to validate the same by using CFA. Further, the study has analyzed the influence of demographic correlates of consumers on buying behaviour and the life style of consumers. The convergent validity carried out under the construct, supports that, consumers differ in their buying behaviour and lifestyle hence can be grouped into segments. The study has classified the buyers into six segments viz. Planned, Controlled, Empathetic, Active, Enthusiastic and Variety Seekers. Further, the study also confirms that the buying behaviour and lifestyle of people differ across demographics. The investigation presumes that exhaustive information on the lifestyle changes and the purchasing conduct showed by the shopper classes, is an eye opener for the marketers, to tweak their promotions and achieve high level of consumer engagement, consumer acceptance and consumer satisfaction.

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Interlinkages Between Indian and Global Stock Market Returns : Evidence from G5 Countries

* Sushma Gawade
** Narayan P. V. Reddy
*** Y. V. Reddy

Abstract

Globalization has brought the world nations together with respect to trade and strategic alliances. The present study focused on investigating interlinkages between Indian and global stock markets. For this purpose, a group of five budding countries of the 21st century was selected, that is, Brazil, China, India, Mexico, and South Africa, also known as G5. Considering a data from 2001 to 2017, the study attempted to examine the relationship, causality, and impact between Indian and global stock market returns. The results indicated a strong positive relationship between Indian and global stock market returns, and such relation was found to be highest with the Shanghai Composite Index returns (China). The study also evidenced bidirectional causality between Indian and global stock market returns. Also, a significant positive impact of global stock market returns was noticed. The results will be helpful for investors belonging to G5 countries to frame short term and long-term investment strategies.

Keywords : G5 countries, stock returns, Bai-Perron test

JEL Classification : G1, F32, F36

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Linkage of global markets has chief implications for worldwide diversification and for home economies. Frail market linkage provides prospective gains from worldwide diversifications, while intense linkage decreases the lagging of home market from several global shocks. Overall in the world, stock markets have become more integrated, in particular, in the post globalization phase.

At present, transversely in the world, stock markets are in occurrence of associated price plus volume trends because of globalization, monetary sector reforms, superior bilateral trade, intelligibility and technical progressions in stock trade. Rising interlinkages have been evident, mostly through overseas portfolio investments, along with overseas catalogue of MNCs. It is frequently monitored that stock value is likely to vary along with financial news broadcasts. Whatever on earth takes place, it has an effect on every stock market in the world. The intent of the present study is to scrutinize the interlinkages among worldwide stock markets by taking G-5 countries and examining how these interlinkages between countries influence the level of their stock market comovements. G-5 is basically made up of five budding economies of the 21st century : Brazil, India, Mexico

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Table 2. Stationarity Results of Global Stock Market Returns

	ADF Test Statistics	p-value
Shanghai Composite Returns	-41.8662	0.0000***
Inmex Returns	-50.7121	0.0001***
FTSE Returns	-56.7822	0.0000***
Nifty 50 Returns	-41.6657	0.0000***
India Returns	-42.6148	0.0001***

Table 3. Results Showing the Relationship Between Indian and Global Stock Market Returns

	Pearson's Correlation	Sig (2-tailed)
Shanghai Composite Returns	0.271	0.000***
Inmex Returns	0.417	0.000***
FTSE Returns	0.324	0.000***
Nifty 50 Returns	0.231	0.000***

Table 2, we reject the null hypothesis. Thus, there exists no unit root for the series, and as such, the data is stationary.

Correlation Analysis: The Table 3 shows the relationship between Nifty 50 with four global indices, that is, Shanghai Composite Index, Inmex index, and FTSE index. The current study observes that there is a positive relationship between Nifty 50 and Shanghai Composite Index followed by Nifty 50 and Inmex, Nifty 50 and FTSE, and finally between Nifty 50 and FTSE, and such a relationship is observed to be significant. The correlation was also evidenced by Patel (2017).

Causality Analysis: The current study intends to examine the causality between the Indian and global stock market returns as reflected in the Table 4. To carry out this analysis, Granger causality test has been utilized. The results show the causal indication of Ibovespa returns Granger cause Nifty 50 returns at the 1% level of significance. The test also recognizes that Shanghai Composite returns Granger cause Nifty 50 returns at the 5% level; whereas, Nifty 50 Returns Granger cause Shanghai Composite Index returns at the 1% level of significance. Also, the results depict that Inmex returns do Granger cause Nifty 50 returns as the p -value is 0.00, which is less than 0.01 at the 1% level of significance; thus, we reject H_0 . Also, the FTSE returns do Granger cause Nifty 50 returns at the 1% significance level. Thus, the study notices bidirectional causality between Indian and global stock market returns.

Table 4. Results Showing Causation Effect Between Indian and Global Stock Market Returns

	Causality from Global Stock Market Returns to Indian Stock Market Returns		Causality from Indian Stock Market Returns to Global Stock Market Returns	
	F-Statistic	Prob.	F-Statistic	Prob.
Shanghai Composite Returns	25.4482	0.0000***	7.83883	0.0004***
Inmex Returns	3.07097	0.0465**	8.3267	0.0002***
FTSE Returns	76.877	0.0000***	3.12945	0.0439**
Nifty 50 Returns	14.6621	0.0000***	4.19804	0.0151**

***1% level of significance, **5% level of significance

structural breaks and examines the impact of global stock indices on the Indian stock market. In addition, the study uses CUSUM test to evaluate the stability of the model.

The following equations are developed for the purpose of the study :

$$\text{Nifty 50 Index Returns} = \alpha_1 + \beta_1 \text{Ibovespa Returns} + \epsilon_1 \quad (1)$$

$$\text{Nifty 50 Index Returns} = \alpha_2 + \beta_2 \text{Shanghai Composite Returns} + \epsilon_2 \quad (2)$$

$$\text{Nifty 50 Index Returns} = \alpha_3 + \beta_3 \text{Inmex Returns} + \epsilon_3 \quad (3)$$

$$\text{Nifty 50 Index Returns} = \alpha_4 + \beta_4 \text{FTSE Returns} + \epsilon_4 \quad (4)$$

etc.

$\alpha_1, \alpha_2, \alpha_3$, and α_4 are intercept terms,

$\beta_1, \beta_2, \beta_3$, and β_4 are slope coefficients,

$\epsilon_1, \epsilon_2, \epsilon_3$, and ϵ_4 are disturbance terms,

Nifty 50 Index Returns is dependent variable,

Ibovespa Returns, Shanghai Composite Returns, Inmex Returns, and FTSE Returns are regressors.

Analysis and Results

Graphical Analysis : From the Figure 1, it can be clearly seen that the prices of stocks of all the selected G5 countries increased tremendously from 2001 to 2007. This is due to the global financial crisis in 2008 wherein there was a sudden fall in the prices of stocks as a result of excessive borrowing and unsound financial modelling also illustrated by Singh and Shrivastav (2018). Similarly, again in 2012, there was a drop in prices due to the global economic crisis. The study finds many fluctuations till 2012, but then it started showing a rising trend. In case of Ibovespa (Brazil), after the fall in 2008, the graph shows an upper trend, followed by many fluctuations thereafter. In case of the Shanghai Composite Index, the graph shows a remarkable ascend from 2006 - 2007 and subsequently shows a descend till 2014. While in case of Inmex (Mexico), the graph shows a rising movement throughout till 2017 except the fall in prices in the year 2007-08 as a result of the crisis. Lastly, in the case of FTSE (South Africa), the graph shows an upward trend except the fall in the prices in the year 2008. As a whole, the figure 1 shows the impact in price movement due to the global financial crisis in the year 2008 and the global economic crisis in the year 2012.

Summary Statistics : The Table 1 demonstrates the mean, standard deviation, skewness, and kurtosis for the stock market returns pertaining to G5 countries' stock indices. Mean measures the performance. For the chosen global stock indices, the mean value of Nifty 50 returns is the highest, that is, 0.064898 followed by returns of Inmex, FTSE, Ibovespa, and Shanghai Composite Index (0.06154, 0.055419, 0.046128, and 0.015047, respectively). Standard deviation quantifies the deviation in the data. Lower deviation is treated as favourable. From the Table 1, we can notice that FTSE returns have lower standard deviation among all. Skewness determines the association between mean, median, and mode. In the Table 1, the β of all the variables is negatively skewed. Kurtosis measures whether the data is heavy tailed or light tailed. We can clearly notice that the β of Nifty 50 returns, Ibovespa returns, Shanghai Composite Index returns, Inmex returns, and FTSE returns is greater than 3, which is considered as leptokurtic.

Unit Root Test : Unit root test examines whether a time series variable is stationary, that is, it does not possess a unit root. As the computed p - values are lower than the required level of significance for all the indices returns as

... V, β and σ^2 using Pearson's correlation test. The study observes bi-directional causality between stock market returns.

Implications, Limitations of the Study, and Scope for Further

Investors must be attentive about the market news as whatever happens in one country has an impact on the Indian stock market. If there is crisis in any of the G-5 countries, it will definitely have a negative impact on the Indian stock market. The investor must have an eye on day today's trends in the market to make a rational investment. As the market is highly volatile, the investor must decide when to buy and when to sell or take short position after doing proper analysis. The present study faces some limitations as it only considers G-5 countries and ignores other major countries of the world. The study can be extended by including the analysis for various other economic groups of countries. The results will be more convincing if G-5 countries to frame short-term and long-term investment strategies.

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Figure 1. Trends In Stock Markets of G5 Countries

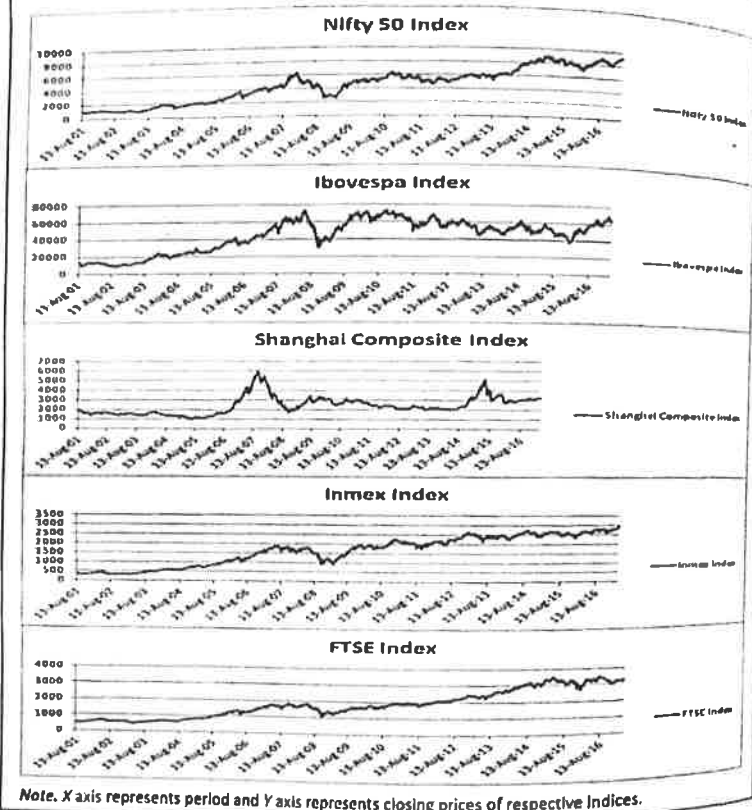


Table 1. Summary Statistic Results of Global Stock Market Returns

	Mean	Standard Deviation	Skewness	Kurtosis
Nifty 50 Returns	0.064898	1.589873	-0.304329	1.6
Ibovespa Returns	0.046128	2.029921	-0.388609	1.1
Shanghai Composite Returns	0.015047	1.794841	-0.428208	8.4
Inmex Returns	0.06154	1.4616	-0.378422	1.7
FTSE Returns	0.055419	1.275328	-0.379898	10.1

Table 5. Results Showing the Impact of Global Stock Market Returns on Indian Stock Market Returns

	Variable	Coefficient	Standard Error	t-Statistic	p-Value
Ibovespa Returns	8/13/2001 - 9/12/2008	0.149736	0.01866	8.024627	0.0000
	9/17/2008 - 3/22/2012	0.441218	0.022877	19.28654	0.0000
	3/23/2012 - 3/31/2017	0.018421	0.027396	0.672418	0.5014
Shanghai Composite Returns	8/13/2001 - 7/30/2007	0.051474	0.025679	2.004535	0.0457
	7/31/2007 - 11/28/2011	0.383382	0.023735	16.15271	0.0000
	11/29/2011 - 3/31/2017	0.137124	0.027722	4.946378	0.0000
Inmex Returns	8/13/2001 - 7/30/2007	0.051474	0.025679	2.004535	0.0457
	7/31/2007 - 11/28/2011	0.383382	0.023735	16.15271	0.0000
	11/29/2011 - 3/31/2017	0.137124	0.027722	4.946378	0.0000
FTSE Returns	8/13/2001 - 3/28/2006	0.359343	0.041444	8.670597	0.0000
	3/29/2006 - 5/10/2010	0.703851	0.029457	23.89394	0.0000
	5/11/2010 - 3/31/2017	0.385778	0.0333245	11.57629	0.0000

Note. **5% Level of significance, ***1% level of significance

global stock market returns. The results are in line with the findings obtained by Sharma, Mahendru, and Sr (2013).

(6) Bai - Perron Test: The structural breaks were categorized via Bai - Perron test and presented in the Table 5. The test has identified assorted structural breaks across indices. The sampling faults in the data have been revealed standard error. As can be seen in the Table 5, the standard error for all the selected global indices is close to zero and therefore, it is favourable. The Bai - Perron test is basically used to identify the structural breaks. To investigate whether there is an impact of global stock markets on the Indian stock market. As per the above results it can be seen that Ibovespa returns have an impact on Nifty 50 Index as the p -value is less than 0.01 for structural breaks. While in the second case, the Shanghai Composite Index has a significant impact on the Indian stock index followed by Inmex Index and FTSE index returns. Overall, the test demonstrates the strong impact of global stock indices on the Indian stock market and such impact is found to be positive as indicated by the coefficients. The study finds the models to be stable using CUSUM test. The results of CUSUM test are presented in the Appendix.

Conclusion

The stock market of one country has consequences on the stock markets of numerous countries. In the present study, an attempt has been made to uncover the interlinkages between global stock markets considering the Indian stock market. The study considers data from 2001 to 2017. The impact of global stock markets on the Indian stock market is scrutinized using Bai - Perron test, where Ibovespa returns, Shanghai Composite Index returns, Inmex returns, and FTSE returns are presumed to be regressors and Nifty 50 returns are the dependent variable. The test demonstrates significant impact of global stock indices on the Indian stock market. The models are found to be stable using CUSUM test. To test the stationarity of the data concerning the Nifty 50 returns, Ibovespa returns, Shanghai Composite Index returns, Inmex returns, and FTSE returns across the chosen indices, the Augmented Dickey-Fuller test is utilized, and the data are found to be stationary. The study observes that there is a positive relationship between Nifty 50 and Shanghai Composite Index followed by Nifty 50 and Inmex, Nifty 50 and FTSE.

China, and South Africa. The linkages among stock markets are pretty composite. There are bounteous prospective channels for linkage. Thus, trade linkages among countries are competent to function as one of the channels regards to which shocks may be passing on from market-to-market.

Review of Literature

A deep insight of existing literature pertaining to studies concerning interlinkages between global stock markets is presented in the current section. Liu, Pan, and Shieh (1998) elaborated the formation of worldwide transmission in each day returns of six chosen nationwide stock markets via the VAR model. Their results pointed out that (a) the scale of interdependence between nationwide stock markets had enhanced considerably subsequent to the stock market hurtle in 1987, (b) the U.S. market performed the dominant task of persuading the Pacific Basin market, and (c) Japan along with Singapore jointly had a considerable constant collision with the other Asian markets.

Chiang and Zheng (2010) observed herding behaviour in international markets by considering daily data of 18 countries commencing from May 25, 1988 till April 24, 2009 and found the proof of herding in highly developed stock markets (apart from the U.S. market) including the Asian markets. They disclosed that there was absence of herding into Latin American markets and furthermore stated that except in U.S. and Latin America, herding was there equally in upward and downward markets. Also, they uncovered the fact that herding was greater in Asian markets at the time of intensifying markets. Facts also implied that crisis generates herding actions in the crisis country and that creates contamination effect which, in turn, broadens the crisis to the next door countries. Bali and Cakici (2010) conducted a study for finding various methods for projecting measures of risk, diverse investment horizons along with subsequent scheming for the aggregate bonus yield of countries, inflation threat, switch rate uncertainties, aggregate instability risk, etc. The key outcome indicated the insensitivity to the option of single factor v/s numerous models employed to predict systematic plus idiosyncratic measures of risk.

Syllignakis and Kouretas (2011) used the DCC multi-variant GARCH model. The key verdict of this scrutiny was that there was presence of statistically noteworthy boost in provisional correlations among U.S. as well as the German stocks along with CEE stock returns, mainly through the 2007 - 2009 monetary crisis, entailing that these budding markets rendered exterior shocks with a considerable rule shift in provisional association. Finally, they verified that domestic along with overseas monetary variables plus exchange rate movements had a noteworthy collision on the corresponding provisional associations.

Li (2012) used 4*4 asymmetric GARCH - BEKK techniques along with a series of likelihood ratio tests to find out China's provincial and universal linkages among 1992 and 2010 for the duration of three sub - phases denoting the stages of the Chinese transformation. The outcome showed that China's market was tied up with foreign country markets and the alteration allowed spillovers from China's market to these markets. The consequent regression study of the time changeable correlations, in the existence of rising economic incorporation, exchange rate threat, and financial unrest further pointed out that interdependence between both China and the local markets boosted due to the execution of liberalization guidelines. In a similar study, we also noticed application of GARCH - BEKK technique by Kumar and Khanna (2018) and examination of spillovers between global stock markets by Singh and Kaur (2015). Graham, Kiviahio, Nikkinen, and Omran (2013) examined co-movement of stock markets in the midst of U.S. stock market plus the provincial co-movement along with these markets from the period of June 2002 till June 2010. The researchers applied the scrutiny of wavelet quadrangle coherency along with stimulated assurance bounds. It enables the concurrent assessment of small and lengthy term in co-movement of stock market and sense alterations in market connections over time. Evidence put forward an unpretentious degree of stock returns' co-movements among stock markets at superior frequencies that entailed improved undersized diversification gains.

international financial catastrophe in a multivariate fractionally integrated asymmetric power AR (FIAPARCH) plus DCC structure throughout the era of 1997 - 2012. They focused on mainly the five budding equity markets, specifically BRICS, along with USA through diverse stages of the crisis. experimental proof did not verify a contagion consequence for BRICS in the early phases of the crisis, representing signs of segregation and found that correlation among all BRICS and USA were raised from 2009 onwards, implying that their reliance was superior in bullish than in bearish markets. Li (2014) applied test to discover if asymmetric comovements were in existence in universal stock markets. They disclosed result that asymmetric co-movements were present among the stock markets of U.S. and Canada, France; Germany along with U.K., however, the data was incapable to refuse illogical proposition pertaining to symmetric co-movements among the U.S. plus stock markets of Japan.

Sclip, Dreassi, Miani, and Paltrinieri (2016) made an attempt to examine the instability behaviour and the movements among *sukuk* and global stock indices. They used multi-variant GARCH models in the comparison, DCC, which were predicted under student - t distribution. They presented the proof of elevated correlation between *sukuk* and U.S. & EU stock markets, devoid of finding the recognized flight to superiority behaviour disturbing Islamic bonds. They also found that the volatility association among *sukuk* and local market index was highest at the time of financial crisis. Co-movement and integration among 14 stock markets was examined by Patel (2017) and causality investigation was examined by Sharma et al. (2013).

The review of literature shows substantial contribution in linkages between international stock markets. The current study infringes this gap and inspects the impact of global stock markets on India's stock market and relationship between Indian and preferred global stock markets. The alliance has been analyzed by picking group of five budding countries, that is, Brazil, China, India, Mexico, and South Africa. The present study examines four selected stock indices of each country and their impact on the Indian stock market, that is, the Nifty 50 Index. The present study is also unique as it utilizes the Bai - Perron approach to examine the impact which takes into consideration the presence of structural breaks. The following hypothesis is framed for the purpose of the study:

❖ H0: There exists no significant impact of global stock markets on the Indian stock market.

Research Design

The present study aims to examine the association between the Indian stock market with the selected global stock markets, analyze the impact of global stock indices on the Indian stock market, and determine the causation effect between the global stock indices and the Indian stock market. The data engaged in this study are daily closing prices of five selected stock market indices, including India (Nifty 50 Index), Brazil (Ibovespa Index), China (Shanghai Composite Index), Mexico (Inmex Index), and South Africa (FTSE Index). The data were retrieved from the official website of investing.com. Daily rates of return were calculated by taking the natural logarithm of the stock index returns. The period that has been chosen for the current study is from April 1, 2001 to March 31, 2017, that is, 16 years.

The required analysis has been performed using E-Views, SPSS, and MS - Excel. To analyze the data, statistical methods have been used such as graphical analysis, summary statistics (i.e., mean, standard deviation, skewness, and kurtosis), and unit root test is used to check the stationarity in a time series. To assess the linear relationship between the selected variables, Pearson's correlation test has been used. Also, an attempt has been made in the current study to examine the causal effect between the Indian stock market and global stock market by using the Granger causality test. Bai - Perron assessment has been performed for the purpose of identifying

return breaks and examines the impact of global stock indices on the Indian stock market. In addition, the study uses CUSUM test to evaluate the stability of the model.

The following equations are developed for the purpose of the study :

$$\text{Nifty 50 Index Returns} = \alpha_1 + \beta_1 \text{Ibovespa Returns} + \epsilon_1 \quad (1)$$

$$\text{Nifty 50 Index Returns} = \alpha_2 + \beta_2 \text{Shanghai Composite Returns} + \epsilon_2 \quad (2)$$

$$\text{Nifty 50 Index Returns} = \alpha_3 + \beta_3 \text{Inmex Returns} + \epsilon_3 \quad (3)$$

$$\text{Nifty 50 Index Returns} = \alpha_4 + \beta_4 \text{FTSE Returns} + \epsilon_4 \quad (4)$$

etc.

$\alpha_1, \alpha_2, \alpha_3$ and α_4 are intercept terms,

$\beta_1, \beta_2, \beta_3$ and β_4 are slope coefficients,

$\epsilon_1, \epsilon_2, \epsilon_3$ and ϵ_4 are disturbance terms,

Nifty 50 Index Returns is dependent variable,

Ibovespa Returns, Shanghai Composite Returns, Inmex Returns, and FTSE Returns are regressors.

Analysis and Results

Graphical Analysis : From the Figure 1, it can be clearly seen that the prices of stocks of all the selected G5 countries increased tremendously from 2001 to 2007. This is due to the global financial crisis in 2008 wherein there was a sudden fall in the prices of stocks as a result of excessive borrowing and unsound financial modelling also illustrated by Singh and Shrivastav (2018). Similarly, again in 2012, there was a drop in prices due to the global economic crisis. The study finds many fluctuations till 2012, but then it started showing a rising trend. In case of Ibovespa (Brazil), after the fall in 2008, the graph shows an upper trend, followed by many fluctuations thereafter. In case of the Shanghai Composite Index, the graph shows a remarkable ascend from 2006 - 2007 and subsequently shows a descend till 2014. While in case of Inmex (Mexico), the graph shows a rising movement throughout till 2017 except the fall in prices in the year 2007-08 as a result of the crisis. Lastly, in the case of FTSE (South Africa), the graph shows an upward trend except the fall in the prices in the year 2008. As a whole, the figure 1 shows the impact in price movement due to the global financial crisis in the year 2008 and the global economic crisis in the year 2012.

Summary Statistics : The Table 1 demonstrates the mean, standard deviation, skewness, and kurtosis for the stock market returns pertaining to G5 countries' stock indices. Mean measures the performance. For the chosen global stock indices, the mean value of Nifty 50 returns is the highest, that is, 0.064898 followed by returns of Inmex, FTSE, Ibovespa, and Shanghai Composite Index (0.06154, 0.055419, 0.046128, and 0.015047, respectively). Standard deviation quantifies the deviation in the data. Lower deviation is treated as favourable. From the Table 1, we can notice that FTSE returns have lower standard deviation among all. Skewness determines the association between mean, median, and mode. In the Table 1, the β of all the variables is negatively skewed. Kurtosis measures whether the data is heavy tailed or light tailed. We can clearly notice that the β of Nifty 50 returns, Ibovespa returns, Shanghai Composite Index returns, Inmex returns, and FTSE returns is greater than 3, which is considered as leptokurtic.

Unit Root Test : Unit root test examines whether a time series variable is stationary, that is, it does not possess a unit root. As the computed p - values are lower than the required level of significance for all the indices returns as

3.3.2

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INFLUENCE OF SUBJECTIVE NORM ON CONSUMERS' GREEN PRODUCT PURCHASE BEHAVIOUR

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ABSTRACT

Influence of Subjective Norm on Consumers' Green Product Purchase behaviour, Consumers are key actors in promoting environment-friendly consumption behaviours. As consumers become aware of their consumption related environmental problems, they seek to purchase green products. The study examines the influence of subjective norm on Consumers' Green Product Purchase behaviour. The research model derived is tested via structural equation modelling on a sample of 1150 consumers. The findings indicate that normative belief and moral obligation has a significant positive influence on the subjective norm. Subjective norm has a significant positive influence on green product purchase intention and green product purchase behaviour. The findings confirm the mediating effect of green product purchase intention in the relationship between subjective norm and green product purchase behaviour. The paper also discusses the implications of the findings for marketers and policymakers.

Keywords: normative belief, moral obligation, subjective norm, green product, purchase intention, purchase behaviour

INTRODUCTION

Consumers are key actors in promoting environment-friendly consumption behaviours. The options that individuals make, to behave in certain ways and to consume certain products have direct and indirect consequences on the environment (Paço, Alves, Shiel, & Filho, 2013). The increased awareness and interest in sustainable consumption are expected to influence consumer purchase behaviour (De Moura et al., 2012). As consumers become aware of their consumption-related environmental problems, they seek to purchase green products or environmentally friendly products (Kilbourne et al., 2009; Laroche et al., 2001). Green products are defined as those that contain recycled materials, reduce waste, conserve energy or water, use less packaging, and emit less toxic substances. These products are less harmful to humans and the environment compared to traditional products in use and are more socially, economically and, environmentally viable in the long run (Nimse, Vijayan, Kumar, & Varadarajan, 2007). In order to promote the purchase of green products, it is necessary to study the factors influencing green product purchase behaviour.

OBJECTIVES OF THE STUDY

Against the foregoing background, this study aims to examine (1) The influence of normative belief and moral obligation on subjective norm (3) The influence of subjective norm on green product purchase intention and green product purchase behaviour (4) To examine the mediating effect of green product purchase intention in the relationship between subjective norm and green product purchase behaviour.

LITERATURE REVIEW

Green Product Purchase Intention (GPPI)

According to The Theory of Reasoned Action proposed by Fishbein & Ajzen (1975), an individual's behaviour is influenced by his behavioural intention. Fishbein & Ajzen (1975) defined behavioural intention as one's willingness to perform a specific behaviour and propounded it to be the main determinant of actual behaviour. In this study behavioural intention refers to the intention to purchase green products and is termed as Green Product Purchase Intention (GPPI). GPPI is conceptualised as the probability and willingness of a person to give preference to green products over non-green products in their purchase considerations.

Behavioural intention is, in turn, a function of the individual's attitude toward the behaviour and the subjective norm towards that behaviour (Fishbein & Ajzen, 1975). The subjective norm stands for perceived social pressure by significant others or different reference groups to perform or not to perform a specific behaviour (Ajzen, 1991). Studies conducted by Maichum, Parichatnon, & Peng (2016), Moons & Pelsmacker (2015), Muzaffar (2015), Wu & Chen (2014) have revealed the significant positive influence of subjective norm on GPPI.

H1: Subjective Norm has a significant positive influence on GPPI

H2: Subjective Norm has a significant positive influence on GPPIB

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Subjective Norm (SN)

According to Ajzen (2002), the subjective norm is influenced by normative belief and moral obligation. Normative belief is one's perception of to what degree one should yield to social pressure (Fishbein & Ajzen, 1975). Normative beliefs deal with what one feels as to how people who matter, like the individual's immediate relatives, close friends and colleagues, mentors and those on whom he is dependent professionally would want him to act (Ajzen, 1991).

Kujala (2001) considered the moral obligation to be the code of conduct regulating one's behaviour. The moral obligation arises out of considerations of right and wrong. It is an obligation arising from the ethical rationale or conscientious duty.

Information provided by specific reference groups, such as peers, friends, and family, had a positive effect on whether the individual would choose socially and environmentally friendly products or not (Gupta & Ogden, 2009; Lee, 2010; Moons & Pelsmacker, 2015). According to Kim, Lee, & Hur (2012), social norms had a significant influence on GPPI. According to Wu & Chen (2014), normative belief and moral obligation are significantly positively related to the subjective norm.

H3: Normative Belief has a significant positive influence on subjective norm

H4: Moral Obligation has a significant positive influence on subjective norm

Green Product Purchase Behaviour (GPPB)

GPPB refers to the purchase of environmentally friendly products and avoiding products that harm the environment (Chan, 2001). GPPI is a significant predictor of GPPB (Chan, 2001; Chen, 2013; Follows & Jobber, 2000; Muzaffar, 2015; Vazifehdoust et al., 2013; Wu & Chen, 2014). In this study, GPPB is used with reference to the purchase behaviour of final consumers, individuals and households who purchase goods and services for personal consumption. In the study, GPPB refers to the purchase of Green Electrical Household Appliances.

H5: GPPI has a significant influence on GPPB

H6: GPPI has a mediating effect in the relationship between subjective norm and GPPB

Based on above hypotheses a research model has been proposed. Figure 1 shows the hypothesised research model.

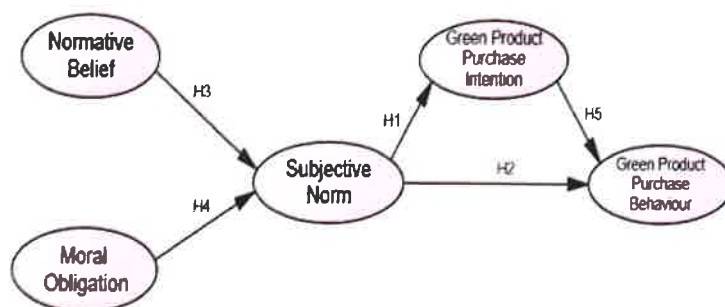


Figure-1: Hypothesised Research Model

RESEARCH METHODOLOGY

The data was collected by contacting consumers over 20 years of age in the state of Goa, India. In structural equation modelling (SEM) larger samples produce more stable results (Malhotra & Dash, 2011). Hence a sample of 1150 respondents was considered.

A questionnaire was developed to measure the constructs proposed in the model and demographics. The scale items were borrowed from previous studies but modified to suit the present study. All measures were subjected to Principal Component Analysis with the varimax rotation procedure. Five underlying factors were identified based on Eigenvalues greater than one. The five factors explained 54% of the variance. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.825. The Bartlett's test of sphericity with approx. Chi-square value of 5263.970, df 210 and "p" value .000 indicate that the data are suitable to identify factor dimensions.

Scale reliability was measured using Cronbach's alpha. Nunnally (1978) suggest that Cronbach's alpha that exceeds 0.7 is evidence of the reliability of the measures. The Cronbach's alpha coefficients for the scale was 0.785 and for the constructs above 0.7 suggesting reliability of the scale.

Two-stage procedure to perform SEM analysis through SPSS AMOS 24.0 was followed as specified by Anderson & Gerbing (1988). In the first stage, quality and adequacy of measurement were established through the Confirmatory Factor Analysis (CFA), followed by SEM to test causal relationships among latent variables.

To test measurement model, CFA was performed. Construct validity was assessed through convergent validity and discriminant validity (Hair et al., 2015). For convergent validity Hair, et al. (2015) recommends Construct Reliability (CR) to be above 0.7 and Average Variance Extracted (AVE) values to be above 0.5.

Discriminant validity was established as suggested by Fornell & Larcker (1981) by comparing square root of AVE for each construct with correlations between constructs. The estimates of the square root of AVE should be greater than the correlation estimate (Fornell & Larcker, 1981).

The model fit indices as suggested by Hair et al. (2015) were examined to analyse the measurement and structural model fit. Table 1 shows the fit indices of the measurement model and the structural model.

Table-1: Fit Indices of the Measurement Model and the Structural Model

Fit Index	CMIN	DF	CMIN/ DF	GFI	AGFI	CFI	TLI	RMSEA	RMR
Acceptable values			< 5	> 0.9	> 0.9	> 0.9	> 0.9	< 0.08	< 0.08
Measurement Model	540.114	179	3.017	0.957	0.945	0.929	0.917	0.045	0.042
Structural Model	655.199	183	3.580	0.946	0.932	0.907	0.900	0.06	0.047

Source: Primary Data

STRUCTURAL MODEL ANALYSIS AND HYPOTHESES TESTING

Since the model fit of the measurement model was within acceptable limits, the structural model was developed to test the hypotheses. The fit indices of the structural model were within the acceptable limit. The fit indices of the structural model are shown in Table 1.

The results from AMOS output are used to test the hypotheses on the basis of the Standardized Regression weights (β), Critical Ratio (t-value) and Probability Value (p). Critical Ratio (t-value) should be greater than or equal to 1.96 (≥ 1.96), and the Probability Value (p) at 1% and 5% level of significance should be $p < 0.01$, and $p < 0.05$ respectively. Hypotheses testing results are shown in Table 2.

Table-2: SEM Results and Hypotheses Testing

Hypotheses	Path	Coefficients(β)	t-value	Direct Effect	Indirect Effect	p-value	Hypotheses Results
H1	SN $\rightarrow$ GPPI	.39	8.673	.392		.000	Supported
H2	SN $\rightarrow$ GPPB	.16	3.473	.159		.000	Supported
H3	NB $\rightarrow$ SN	.27	5.506	.272		.000	Supported
H4	MO $\rightarrow$ SN	.31	5.993	.307		.000	Supported
H5	GPPI $\rightarrow$ GPPB	.19	4.123	.187		.000	Supported
H6	SN $\rightarrow$ GPPB	.23	5.451	.231	-	.000	Supported
	SN $\rightarrow$ GPPI $\rightarrow$ GPPB	.16	3.473	.159	.074	.000	

Source: Primary Data

The empirical results show that (1) Subjective norm has a significant positive influence on GPPI (2) Subjective norm has significant positive influence on GPPB (3) Normative Belief has significant positive influence on subjective norm (4) Moral Obligation has significant positive influence on subjective norm (5) GPPI has significant positive influence on GPPB (6) GPPI partially mediates the relationship between subjective norm and GPPB. Thus H1, H2, H3, H4, H5, and H6 are supported. Table 2 gives details of hypotheses testing.

FINDINGS AND DISCUSSION

Normative belief and moral obligation have a significant and positive influence on the subjective norm. However, the effect of moral obligation is higher than normative belief. The findings are in line with Wu & Chen (2014) who found normative belief and moral obligation are significantly positively related to the subjective norm. The findings suggest that norms help individuals in managing their behaviour in accordance with society's set practices and values. It helps them in aligning their behaviour according to what would be considered as appropriate and acceptable in social context. Hence if people consider purchasing green products is appropriate then the purchasing green product will become more pervasive. Moral obligation can help an individual to make rational, responsible and consistent decisions such as the purchase of green products. Total

24% of the variance in subjective norm is explained by normative belief and moral obligation, which indicates social influence, can play an important role in promoting GPPB of the consumers.

The subjective norm is found to have a significant influence on GPPI. Total variance explained by subjective norm on GPPI is 15%. The subjective norm also has a significant influence on GPPB. The beta value indicates that the influence of subjective norm on GPPI is significantly higher than GPPB. This shows that social pressure does play an important role in influencing consumers' green product purchase behaviour.

Partial mediation occurs when the independent variable's influence on the dependent variable is reduced after the mediator is introduced (Baron & Kenny, 1986). The direct effect of subjective norm on GPPB without mediator was 0.231, and it was significant. The direct effect of subjective norm on GPPB reduced to 0.159 when the mediator was introduced however it was significant. The indirect effect of subjective norm on GPPB was also significant thereby indicating GPPI partially mediates the relationship between subjective norm and GPPB.

To conclude, this study confirmed the efficacy of the research model for explaining consumers' GPPB and validates the claim that subjective norm can play an important role in influencing consumers' purchase of green electrical household appliances.

MANAGERIAL IMPLICATIONS

The study reveals that normative belief is important determinants of subjective norm. To take advantage of the influence of such reference groups like a family, friends, environmental activists, etc. green marketers should feature relevant reference group appeals in their advertisements. The impact of moral obligation is found to be much higher than normative belief. Thus appeals based on fulfilling of responsibility towards the environment can be used to promote the purchase of green products. Green marketing efforts should convey the message that "each of us is responsible for saving our earth".

The study demonstrates the significant influence of subjective norm on GPPB both direct and indirect. Subjective norm plays an important role in being vocal about environmental issues. The role of the subjective norm that is the role of "significant others" is critical to translate environmental concerns into social norms. Policymakers should develop interventions highlighting do's, and don'ts to create awareness and develop campaigns that dramatize the detrimental impact of certain routine behaviours using "opinion leaders" like celebrities, sports stars etc. in a sequential manner and more important to realize the long term impact, to develop favourable social pressure to stimulate the purchase of green products.

The study reveals a significant influence of subjective norm on GPPB. However, the mediating effect of GPPI weakens the relationship between subjective norm and GPPB. Thus Marketers should organise different workshops and seminars to educate its internal and external public on environmental protection. Various exhibitions and fairs should be organised in close collaboration with non-governmental organisations to educate people on the different green products that are presently available in the market and the underlying benefits associated with purchasing of green products, so that purchase of green products becomes a social norm. Firms should encourage consumer participation in environmental movement via consumers internet and social communication network with compelling, informative, interesting and entertaining information about green products.

Given that India is still a developing country with its green movement in an embryonic stage, it seems very difficult to resolve all environmental and green marketing issues overnight. Nonetheless, these issues should call for continued strategic efforts from both the policymakers and green marketers if they really wish to advance a more sustainable consumption pattern across the country.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

First, this study considers green electrical household appliances; findings may be different – i.e. intensity of each path in the model if different green products are considered. Future research should test this proposed model in different green product settings, such as recycled/ recyclable products, organic food products, green fast moving consumer goods etc. Secondly, the study used a convenience sample, and the data were collected from one state and one country. The findings of the study cannot be widely generalised. Future studies may use a probability sampling method and data collected from multiple states or countries to increase external validity and generalisability of results.

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Values as predictors of consumers' green product purchase behaviour

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Abstract: Consumers are key actors in promoting environment-friendly consumption behaviours. Throughout times, consumers are becoming apprehensive of the environmental problems caused by their day-to-day consumption of goods and services, and as a result, they prefer to purchase green products. The study examines the influence of values such as environmental concern, self-transcendence and self-enhancement on attitude towards green product purchase. The research model developed is verified, applying structural equation modelling technique with a sample of 1150 consumers from the state of Goa, India. The findings suggest that environmental concern and self-transcendence has a significant positive, whereas self-enhancement has a significant negative influence on attitude towards green product purchase. There is an indicative positive influence of attitude towards green product purchase on green product purchase intention and green product purchase behaviour. The findings do not support the mediating role of green product purchase intention in the relationship between attitude towards green product purchase and green product purchase behaviour. The managerial implications of the findings are also outlined in the paper.

Keywords: green product; attitude; intention; purchase behaviour; self-transcendence; self-enhancement; environmental concern.

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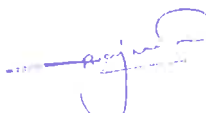
1 Introduction

In recent years, the association between consumption and its detrimental impact on the environment has become an important cause of concern (Koller et al., 2011). While fulfilling personal requirements are one of the basic objectives of consumer behaviour, the protection and preservation of the environment have also become prime consideration for the consumers (De Moura et al., 2012). Throughout times, consumers are becoming apprehensive of the environmental problems caused by their day to day consumption of goods and services, and as a result, they prefer to purchase green products or environmentally friendly products (Kilbourne et al., 2009; Laroche et al., 2001). The increased awareness of the consumers about environmental threats and heightened interest in sustainable consumption is expected to determine consumer purchase behaviour (De Moura et al., 2012).

As put forward by the Norwegian Ministry for the Environment (1994), the expression "sustainable consumption" means the use of goods and services that fulfils the basic needs of an individual and contribute to improved quality of life, while reducing the usage of natural resources, of toxic materials and release of waste and pollutants over the lifecycle, so as to protect the environment to meet the demands of future generations (De Moura et al., 2012). Thus, sustainable consumption, to a greater extent, can be achieved by encouraging green consumption. Green consumption refers to the practice of purchasing, using, and disposing of various products or services that are environment-friendly and which cause minimum harm to the eco-system (Moisander, 2007). Thus, green consumption can be ensured by the purchase and use of green products.

The outcome of the various consumer surveys suggests that consumers give more importance to the tangible attributes of green products, particularly those that may have pertinence for the protection of the environment and personal health (Durif et al., 2010). Hence, from the consumers' point of view and for the purpose of this study "green products refer to products that reduce generation of waste and releases of pollutants; products that can be reused or recycled and made from recycled materials; products that use less packaging; products using alternatives to hazardous or toxic chemicals, radioactive materials and bio-hazardous agents; products that emit less toxic substances; products and services that conserve energy and water, use energy from renewable resources such as bio-based fuels, solar and wind power; thus these products provide


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