A Framework for Behavioural Business Intelligences Based on Personality Driven Online Buying

Archana Shrivastava[1], Dr. Ujwal Lanjewar[2]

[1]Lecturer, Datta Meghe Institute of Management Studies, Nagpur, India

[2]Professor, VMV Commerce College, Nagpur, India

archanashri@yahoo.com, ualanjewar@gmail.com

Abstract: *Behavioural Business Intelligence (BBI) focuses on the people, their behaviours, the environment and constraints that influence their behaviours. The aim of BBI is to know what people do and why they do it. This phenomenon gives the decision makers power in evaluating the success of their strategic decisions. The strategic decisions could successful if the reasons which determine the success or failure of their products or services are well understood. BBI is based on data, knowledge and models about people, their characteristics, what they do, their environment and constraints.*

There is a growing popularity of Internet as a medium of information search, communication link, and online buying worldwide including India. From the online buyers' perspective, the relevant purchase behaviors is exhibited through the access to Internet, exploring the search features in the sellers' website, making the final transaction and repeat the behavior in future. Although there has been a widespread change in the mindset of consumers by way of switching over to online buying from the traditional physical shopping, the rate of diffusion and adoption of the online buying amongst consumers is still relatively low. The related researches in this area

also appear to be inadequate and scattered for taking the concrete decisions and policies by the marketers. With the Internet advancing new opportunities, it is important to understand the predominant personality characteristics of Indian consumers participating in the online buying system.

This paper is an attempt to conceptualize the online buyers' or consumers' personality traits indicative to the online buying intention in Indian context. The objective of the study is to explore the personality traits that influence the online buying decisions and develop personality based decision process model; test the model and design a framework for business intelligence. The model is tested through empirical study done on users of irctc.co.in, an online reservation system of railway tickets

Keywords: *Behavioural Business Intelligence, Personality, Online buying, Buying behavior.*

1. Introduction

Business Intelligence (BI) provides powerful and useful information for businesses that enables useful insight and understanding into the fundamental component behind business success: the people (customer). Ultimately it is the customer that drives the decisions and they need to be won over in order for a business to succeed. Understanding what people do and why they do it provides great business insight while making strategic decisions. These powerful insights into consumer behaviour and their dynamics can mean the difference between success and failure of a business strategic plan. Business Intelligence allows firms to predict the behaviour of existing and potential customers. Empowered with this information, firms are able to devise suitable strategies to better manage their respective businesses.

With the worldwide growth of internet and an emergence of e-commerce over the past two decades there has also been a revolution in the basic format of transaction from a physical store format to a non-store one. With a change in the consumers' mindset of purchase made from a physical store to online buying, the industry has witnessed the ever-increasing volumes of online transactions. The growth in online buying is mainly due to advancement in technology; consumer characteristics, both demographic

as well as psychographic; and situational influences. This calls for comprehensive understanding of the determinants of consumer personality traits as they have got a direct effect on consumers' intentions to actually adopt the online shopping system.

Although the number of Internet users has been growing steadily in India, a framework is needed to develop an in-depth understanding of consumers' personality toward Internet shopping and their intentions to shop online.

This paper is an attempt to conceptualize the online buyers' or consumers' personality traits inducive to the online buying intention in Indian context. The objective of the study is to explore the personality traits that influence the online buying decisions and develop personality based decision process model; test the model and design a framework for business intelligence. The model is tested through empirical study done on users of irctc.co.in, an online reservation system of railway tickets

2. Personality Factors in Online Buying

In the context of online buying, the buyers' relevant personality traits were identified as "expertise" (Alba and Hutchinson, 1987; Ratchford et. al., 2001), "self – efficacy" (Bandura, 1994; Marakas et. al., 1998; Eastin and LaRose, 2000), and "need for interaction" (Dabholkar, 1996; Dabholkar and Bagozzi, 2002). In order to shop on the Internet, a considerable amount of computer operational skill and the basic knowledge of computer usage are required. Since learning by doing is an important component of acquiring such skills, those who have the most experience at shopping on the Internet are likely to be the most skilled (Ratchford et. al., 2001).

Another personality characteristic that is closely related to expertise is self – efficacy, which refers to individuals' beliefs that they have the ability and the resources to successfully perform a specific task (Bandura, 1994). In the context of online buying, Marakas et. al. (1998) defined "computer self – efficacy" as an individual's judgement of efficacy across multiple computer application domains, whereas "Internet self – efficacy" is a person's judgement of his or her ability to apply Internet skills for finding any information or conducting any action with the help of Internet. Hence, the online buyers

are more likely to attempt and persist in online buying that they feel capable of performing (Eastin and LaRose, 2000).

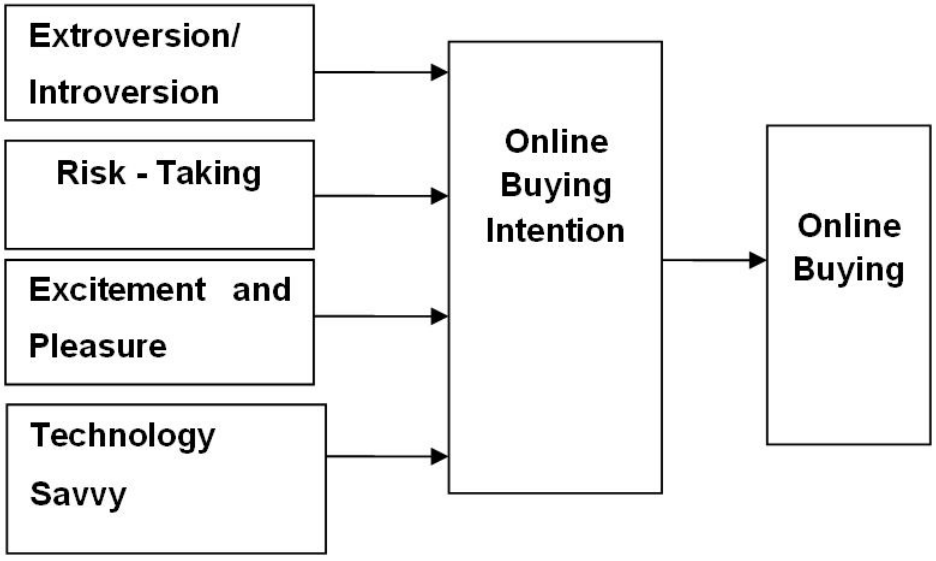
"Need for interaction" is defined as the importance of human interactions to the consumer in service encounters (Dabholkar and Bagozzi, 2002). In online shopping, the human interaction with a service employee or salesperson is replaced by help – buttons and search features. Therefore, consumers with a high "need for interaction" will avoid shopping on the Internet, whereas consumers with a low "need for interaction" would m be more inclined towards online buying (Monsuwe et. al., 2004).

Allred et. al. (2006), found that customers do not feel confident to participate in online transactions because of security fears and technological incompetence, and on the contrary frequent online shoppers are characterized by the desire to socialize, minimize inconvenience, and maximize value. Ranaweera et. al. (2008), found the buyer's personality characteristics were having significant moderating effects on online purchase intentions. Repeated online purchases reduce the risk aversion of the buyers, while technology readiness and dispositional trust increase the likelihood of online purchase. Cunningham et. al. (2005), empirically established that performance, physical, social, and financial risk are related to perceived risk at certain stages of the consumer buying process. Monsuwe et. al. (2004), stated that intention to shop online are affected by ease of use, usefulness, and enjoyment that the buyers expect from the online buying process. Chiu et. al. (2009), found that perceived ease of use, perceived usefulness, and enjoyment are significant positive predictors of customers' online purchase and repurchase intentions. Aldas-Manzano et. al. (2009), examined that online buyers' personality variables like affinity to the product, compatibility, and innovativeness have a direct and positive influence on the intention to engage in online shopping. Park and Kim (2003), stated that information quality, user interface quality, and security perceptions affect information satisfaction and relational benefit, that, in turn, are significantly related to each consumer's commitment and actual purchase behavior. Wen (2009), found that in the context of travel and tourism positive orientation of the buyers' towards the externalities affect the online buying intention of tickets and availing the related tourism services. Kuhlmeier and Knight

(2005), stated that a positive relationship between consumer usage and experience of the Internet and the likelihood of making online purchases, and further indicated that the perceived risk of buying online has a negative effect on consumers' purchase likelihood.

Based on the above previously researched and studied aspects of consumer personality in online buying, this present study identified (1) extroversion and introversion, (2) risk – taking, (3) excitement and pleasure seeking, and (4) technology savvy as the relevant factors worth exploring to analyze consumer Behaviour for online purchase intention. The following conceptual model (see Figure 1) summarizes the relation of these four consumer personality factors to the online buying intention followed by the actual online buying transaction.

Figure 1: Personality Driven Online Buying Process



3. Empirical Study

3.1 Objective

The study has been conducted with the objective of exploring the consumers' personality patterns that affect his / her online buying intention; with the ultimate objective of identifying those personality factors and the befitting design characteristics of online buying that can attract the existing as well as potential consumers more towards online purchasing. The objectives may be summarized as follows:

(1) To establish the impact of extroversion / introversion of individual personality on online purchase intention

(2) To establish the impact of risk taking orientation of individual personality on online purchase intention

(3) To establish the impact of excitement and pleasure seeking aspect of individual personality on online purchase intention

(4) To establish the impact of technology savvy personality of individuals on online purchase intention.

3.2 Methodology:

The study undertaken is descriptive, diagnostic, and causal in nature. It is aimed at identifying the critical personality parameters of users / buyers in online booking of railway tickets in India through using the registered railway website of Indian Railway Catering and Tourism Corporation (www.irctc.com). A pilot study was conducted on a total of 100 sample respondents. The statistical method used in these scales was principal component factor analysis. The sample size recommended for this statistical method is at least 50 responses. The guideline used was a factor loading of 0.5 or above (Hair et al. 1995). The recommended guidelines for principal component factor analysis are at least 50 responses, and a ratio of 5

responses for every variable in each scale being measured (Hair et. al., 1995). This sample size met both the criteria. The following Table (see Table 1) illustrate the results of the pre – test in detail.

Reliability concerns the extent to which a measurement of a phenomenon provides stable and consistent result. In assessing measurement reliability, Fornell and Larcker (1981), stress the importance of the reliability of each measure (individual item), and the internal consistency or composite reliability of each construct (Cronbach, 1951). The reliability score and factorial loading of each item were found to be well above the acceptable criterion of 0.50 (see Table 1). The results of the pilot study established the reliability of a total of 14 items, which were grouped under 4 factors / components viz., Extrovert and Introvert Personality; Risk -Taking Personality; Excitement and Pleasure Seeking Personality; and Technology Savvy Personality. The reliability score and factorial loading of each item were found to be well above the acceptable criterion of 0.50. (see Table 1).

Table 1: Analysis of Factorial Validity and Construct Reliability

Constructs	Measured Items	Factor Loadings (λ)	Composite Reliability (α)
Extroversion and Introversion of Personality (EIP)	EIP1	0.783	0.6600
	EIP2	0.540	
	EIP3	0.535	
	EIP4	0.705	
	EIP5	0.530	
Risk -Taking Personality (RTP)	RTP1	0.595	0.6123
	RTP2	0.538	
Excitement and Pleasure Seeking Personality (EPSP)	EPSP1	0.778	0.8157
	EPSP2	0.692	
	EPSP3	0.640	
	EPSP4	0.611	
Technology Savvy Personality (TSP)	TSP1	0.802	0.7242
	TSP2	0.600	
	TSP3	0.669	

[Note: Acceptable factor loadings and reliabilities (guidelines used $\lambda > 0.5$ and reliability > 0.5 respectively.]

The designed questionnaire for the final study comprised two parts; the first part comprised questions on basic demographic information about the user (age group, gender, income level, educational qualification, regional location, frequency of online ticket booking, etc.); the second part measured the users' personality traits that are critical to induce them to reserve the railway tickets online in India. The study was thus aimed at identifying the consumers' / users' prominent personality traits as a necessary prerequisite to online buying of railway tickets and thereby established the causality between the individual user's personality pattern and their online buying intention of railway tickets through official railway website in Indian context.

3.3 Research Hypotheses

The following hypotheses were developed from the objectives of the study mentioned above. A series of multiple regressions was conducted to test each of the hypotheses in the subsequent section of this study.

Hypothesis 1: Extroversion and introversion of individual personality significantly influence the users' intention of online reservation of railway tickets in India.

Hypothesis 2: Individuals with high risk taking personality are more favourably disposed towards the online reservation of railway tickets in India.

Hypothesis 3: Individuals who seek more excitement and pleasure are more favourably disposed towards the online reservation of railway tickets in India.

Hypothesis 4: Technology savvy individuals are more favourably disposed towards the online reservation of railway tickets in India.

3.4 Data Collection

The final questionnaire that was developed to capture quantitative data was administered to a cross-section of respondents. The sample was heterogeneous consisting of a total number of 327 respondents and

represented educated middle and upper class people, who had used the registered Indian railway website (IRCTC) to reserve their travel tickets online at various points of time. These 327 questionnaires were found to be complete and valid for analysis.

3.5 Analysis of Data

The responses were subjected to various empirical analyses through using 10.0 version of SPSS. The findings were finally presented with a set of conclusions and recommendations. The statistical analyses were descriptive as well as causal, and included multivariate statistical techniques for testing of the hypotheses to arrive at the research findings.

The factor analysis had grouped the items into 4 personality traits with 14 items (see Table 1). For analytical purposes, descriptive statistics were used through measures of central tendency and dispersion (see Table 2). The users of railway website were asked to rate the parameter based statements on a scale of 1 to 5, based on their level of agreement or disagreement to each statement. The sum total produced a consolidated score. The means and standard deviations were calculated construct wise. The mean scores for various constructs ranged between 3.2200 and 3.4546, with 'Risk -Taking Personality' traits having the least score and 'Technology Savvy Personality' traits have the highest score. This clearly indicates that in India, people feel hesitant and concerned for sharing the private information with the railway website for online reservation of railway tickets. Whereas the growing usage of information technology among all the age groups in India poses as the major indicator of consumers' / users' increasing preference for online booking transaction of long distance railway tickets in Indian context (see Table 2).

Table 2: Descriptive Statistics for Personality Factors on Online Buying Behaviour

Constructs	No. of Items	Mean	Std. Deviation	N
1. Extroversion and Introversion of Personality (EIP)	5	3.2336	.7727	327
2. Risk -Taking Personality (RTP)	2	3.2200	1.11	327
3. Excitement and Pleasure Seeking Personality (EPSP)	4	3.4067	0.9995	327
4. Technology Savvy Personality (TSP)	3	3.4546	0.9395	327

Having calculated the descriptive statistics, the linear relationships were established among the various constructs using correlation analysis so as to measure the strength and direction of linear relationship between them. Each construct was correlated with its individual measuring items to establish the linear relation between them. Also, the various constructs were correlated with each other to establish the strength of association between them (see Tables 3 to 7).

Table 3: Correlation Analysis of Personality Factors on Online Buying Behaviour

Constructs	Extroversion and Introversion of Personality (EIP)	Risk - Taking Personality (RTP)	Excitement and Pleasure Seeking Personality (EPSP)	Technology Savvy Personality (TSP)
Extroversion and Introversion of Personality (EIP)	1.00			
Risk -Taking Personality (RTP)	.491**	1.00		
Excitement and Pleasure Seeking Personality (EPSP)	.747**	.412**	1.00	
Technology Savvy Personality (TSP)	.624**	.485**	.690**	1.00

A series of multiple regressions was conducted to test the hypotheses in order to assess the causal relationships between the various personality traits of consumer / user groups and their impact on the online reservation of railway tickets in India. The procedure used for these analyses involved a study of the p value, which indicated whether or not the regression model explained a significant portion of the variance of the dependent variable and the independent variable.

3.6 Hypotheses Testing

Hypothesis 1: Extroversion and introversion of individual personality significantly influence the users' intention of online reservation of railway tickets in India.

Regression analysis was performed with the extroversion and introversion personality traits of individuals as the dependent variable, and lack of physical interaction with others; grown habit of buying railway tickets online; preference for privacy and confidentiality; persuading others to go for online booking; and the open mindedness to explore the online buying of railway tickets as independent variables. On entering the variables in a single block, it was found that 41.1% of the variance in personality traits based on extroversion and introversion is explained by all the other constructs (R^2 = .411, F Value = 28.694, $p < 0.01$). All the five dimensions offered significant contributions with their respective t values and the associated level of significance (see Table 4).

Table 4: Model Summary for Extroversion and Introversion Personality on Online Buying Behaviour

Model	R	R Square	F	Sig.
1	.452	.411	28.694	.000
Items Measuring Extroversion and Introversion Personality (EIP)	Standardized Coefficients (Beta)		t	Sig.
Constant			.000	1.000
I do not need any interaction with others while buying ticket online. (EIP1)	.316		10.067	.000
I always prefer making a purchase a ticket from Internet to railway counter because I am habituated. (EIP2)	.323		12.904	.000
My introvert ness generally leads me to buy tickets online. (EIP3)	.282		11.896	.000
I say positive things about buying online ticket to the other people. (EIP4)	.308		10.010	.000
My open mindedness leads me to buy online ticket. (EIP5)	.304		13.672	.000

a Predictors: (Constant), EIP1, EIP2, EIP3, EIP4, EIP5

b Dependent Variable: Extroversion and Introversion Personality (EIP)

The hypothesis failed to get rejected. The extrovert as well as introvert traits of individual personality significantly influence the minds of existing and potential users intending to reserve railway tickets online that makes them going for online transaction or reservation of long distance railway tickets. Hence, the relevant traits of extrovert and introvert personality have to be considered adequately in order to convert the existing consumers to or create new consumers for the online reservation of railway tickets. This would help the railway authority to successfully implement their e-strategy as part of customer development initiatives in India.

Hypothesis 2: Individuals with high risk taking personality are more favourably disposed towards the online reservation of railway tickets in India.

Regression analysis was performed with the risk taking personality of the user as the dependent variable, and individual comfort to disclose private information; sharing credit / debit card number for e-payment option as independent variables. On entering the variables in a single block, it was found that 52% of the variance in personality based on online transaction security is explained by all the other constructs (R^2 = .520, F Value = 85.050, $p < 0.01$). Both the dimensions offered significant contributions with their respective t values and the associated level of significance (see Table 5).

Table 5: Model Summary for Risk – Taking Personality on Online Buying Behaviour

Model	R	R Square	F	Sig.
1	.974	.948	1979.404	.000
Items Measuring Excitement and Pleasure Seeking Personality (EPSP)	Standardized Coefficients (Beta)		t	Sig.
Constant			.000	1.000
Online ticket buying removes the hassle of travel and of standing and waiting in the queue and hassle of parking car etc. (EPSP1)	.343		23.397	.000
I do not want to travel to buy ticket from station. (EPSP2)	.314		21.895	.000
Buying tickets online is pleasurable and enjoyable to me. (EPSP3)	.293		26.816	.000
I generally buy online tickets because of my daily hectic schedule. (EPSP4)	.295		5.006	.000

a Predictors: (Constant), RTP1, RTP2
b Dependent Variable: Risk – Taking Personality (RTP)

The hypothesis failed to get rejected. Consumers / users with high risk taking personality go more for online reservation of railway tickets in Indian context. Hence, the exhibited risk taking personality traits of consumers /

users offer a significant lead in terms of identifying the buyers' orientation towards the online railway reservation system.

Hypothesis 3: Individuals who seek more excitement and pleasure are more favourably disposed towards the online reservation of railway tickets in India.

Regression analysis was performed with the excitement and pleasure seeking personality of customers / users as the dependent variable, and avoidance of physical hassles; avoidance of traveling; excitement of online booking; and relief in the hectic schedule as independent variables. On entering the variables in a single block, it was found that 94.8% of the variance in personality based on online transaction security is explained by all the other constructs (R^2 = .948, F Value = 1979.40, $p < 0.01$). All the four dimensions offered significant contributions with their respective t values and the associated level of significance (see Table 6).

Table 6: Model Summary for Excitement and Pleasure Seeking Personality on Online Buying Behaviour

a Predictors: (Constant), EPSP1, EPSP2, EPSP3, EPSP4
b Dependent Variable: Excitement and Pleasure Seeking Personality (EPSP)

The hypothesis failed to get rejected. The excitement and pleasure seeking aspects of customers' / users' personality is an important constituent element that creates individual preferences to go for online reservation of railway tickets in Indian context. Hence, the stated personality traits have to be considered properly to understand the implications of buyers' personality pattern imperative to buying railway tickets online in India.

Hypothesis 4: Technology savvy individuals are more favourably disposed towards the online reservation of railway tickets in India.

Regression analysis was performed with technology savvy personality of customers / users as the dependent variable, and convenience of online form filling; higher education and training; and adequate computer knowledge as independent variables. On entering the variables in a single block, it was

found that 67.3% of the variance in personality based on online transaction security is explained by all the other constructs (R^2 = .673, F Value =95.515, $p < 0.01$). All the three dimensions offered significant contributions with their respective t values and the associated level of significance (see Table 7).

Table 7: Model Summary for Technology Savvy Personality on Online Buying Behaviour

Model	R	R Square	F	Sig.
1	.687	.673	95.515	.000
Items Measuring Technology Savvy Personality (TSP)	Standardized Coefficients (Beta)		t	Sig.
Constant			.000	1.000
It is easy to fill up online reservation form for ticket. (TSP1)	.437		21.784	.000
Higher education motivated me to buy ticket online. (TSP2)	.402		27.896	.000
Proficient Computer Knowledge encourages me to buy ticket online. (TSP3)	.405		36.020	.000

a Predictors: (Constant), TSP1, TSP2, TSP3
b Dependent Variable: Technology Savvy Personality (TSP)

The hypothesis failed to get rejected. Techno savvy aspect of customer / user personality influences them to go for online reservation of railway tickets in Indian context. With the growing level of education and training in computer proficiency, the customers / users prefer online booking to the counter booking. Hence, this aspect of buyer personality has to be understood to earn more online consumers / buyers as part of e-ticketing drive or initiative taken by the Indian railway.

4. A BBI Framework for Online Buying Based on Personality

In the proposed BI framework a Knowledge Management (KM) approach is used for effective decision support system.

4.1 Link between Business Intelligence (BI), Knowledge Management (KM) and Data Mining (DM)

There is a link between BI, KM and Data Mining (DM). BI is a broad category of applications and technologies of gathering, accessing, and analyzing a large amount of data for the organization to make effective business decisions (Cook and Cook, 2000; Williams and Williams, 2006). Typical BI technologies include business rule modelling, data profiling, data warehousing and online analytical processing, and DM (Loshin, 2003). The central theme of BI is to fully utilize massive data to help organizations gain competitive advantages.

Knowledge Management (KM) is a set of practices of the creation, development, and application of knowledge to enhance performance of the organization (Wiig, 1999; Buckman, 2004; Feng and Chen, 2007; Lee and Change, 2007; Smoliar, 2007; Wu et al., 2007; Paiva and Goncalo, 2008; Ramachandran et al., 2008). Similar to BI, KM improves the use of information and knowledge available to the organization (Sun and Chen, 2008). However, KM is distinct from BI in many aspects. Generally, KM is concerned with human subjective knowledge, not data or objective information (Davenport and Seely, 2006). The majority of models used in the KM field, such as the tacit and explicit knowledge framework for a dynamic human process of justifying personal belief toward the truth (Nonaka, 1994; Nonaka and Takeuchi, 1995), are typically non-technology oriented. Although KM has not evolved out of a set of formal methodologies, KM competently deal with unstructured information and tacit knowledge which BI fails to address (Marwick, 2001).

DM (sometimes called Knowledge Discovery in Databases process or KDD) is the process of discovering new patterns from large structured data sets as well as unstructured dataset. DM is a computer-assisted process of digging through and analyzing enormous sets of data and then extracting the meaning of the data. Data mining tools predict behaviors and future trends, allowing businesses to make proactive, knowledge-driven decisions. Data mining tools can answer business questions that traditionally were too time consuming to resolve. They scour databases for hidden patterns, finding

predictive information that experts may miss because it lies outside their expectations.

4.2 Integrating Personality Driven Decision Process Model and Data Mining

DM is considered to be useful for business decision making, especially when the problem is well defined. Because of this, DM often gives people an illusion that one can acquire knowledge from computers through pushing buttons. The danger of this misperception lies in the over-emphasis on "knowledge discovery" in the DM field and de-emphasis on the role of user interaction with DM technologies in developing knowledge through learning. There is a lack of attention on theories and models of DM for knowledge development in business. Conventional theories and models in this area ought to be re-examined and developed in such a way that a distinction is made between two important variables: DM centered information and business centered knowledge.

The primary limitation in traditional data mining theory is its limited real world application in two aspects. First, people often find that "knowledge" gained from DM does not always lead to an action in all situations, particularly when the piece of "knowledge" is hard to apply. It fails to recognize the roles of business insiders in developing their knowledge for coordination of actions for business.

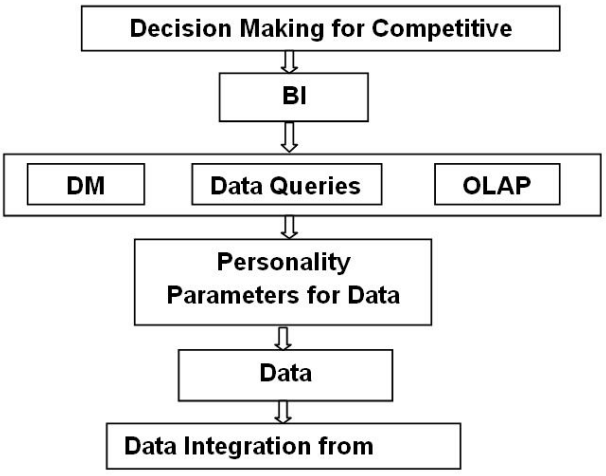
The proposed "Personality Driven Decision Process Model for Online Buying" is an attempt to fill the limitation of traditional data mining. The model is empirically tested and gives useful insights for checking out the influence of personality of buyer in online buying. DM can be done based on the personality parameters suggested and decision makers can use the information for competitive advantage. The integration of personality driven decision process model for online buying with data exploration and query makes data mining relevant to BBI. The knowledge work done by personality parameters can be generally described in the perspective of unstructured decision making. To be ready for action, a decision maker searches appropriate information, evaluates alternative actions pertinent to this information, and choose the action that is best supported by the information. In the DM context, DM results

can be a set of information for the decision maker in making unstructured decisions.

4.3 A BBI Framework for Online Buying Behaviour Based on Personality of Buyer

The technical view of BI usually centers on the process of or applications and technologies for gathering, storing, analyzing and providing access to data to help make better business decisions. BBI software (figure 2) queries and analyzes, information from data warehouse using techniques such as data mining (DM), data query and online analytical processing (OLAP) based on personality parameters. Data ware house integrates and transforms data pulled from multiple sources such as operational data base, customer database, market research database, legacy system, customer relationship management (CRM), enterprise resource planning (ERP), online transaction data processing (OLTP), web server, mail server, call logs, emails, surveys, consumer forums, consumer feedback etc.

Figure 2: A BBI Framework for Online Buying Behaviour Based on Personality



5. Conclusion:

Although the number of individuals buying products and services online continues to increase in India, managing the dynamics of this behavior has often been a research question. What leads a buyer to shop online is a matter that has evoked a lot of interest although the findings from research are loose, fragmented and disintegrated. Similarly present BI models do not give attention on theories and models of DM for knowledge development in business. Online transactions are characterized by anonymity, lack of physical interaction, lack of control, great deal of uncertainty and potential opportunism. Personality of buyers plays a key role in creating satisfied and expected outcomes in online transactions. This paper is an attempt to conceptualize 'personality' as a concept paramount for online buying. The paper starts with the concept of personality, thereafter; the personality factors of online buyer have been conceptualized and tested. Finally a framework for BBI based on personality factors of online buyers – (1) extroversion and introversion, (2) risk – taking, (3) excitement and pleasure seeking, and (4) technology savvy is proposed. Online retailers need to understand the basic issues related to personality of online buyers and how it influences the online buying process.

A critical analysis of existing as well as potential online buyers' personality traits helps the marketer / service provider to design and execute the appropriate e-marketing strategies. Buyers' personality factors play a key role in evoking the buyers' intention and making a decision to participate in online transactions. This paper is an attempt to conceptualize 'consumer personality', as a concept against the backdrop of 'online buying'. The initial flow of discussion delineates on what are the individual personality traits or orientations that prompt the consumers to buy online; thereafter with the help of the identified consumer psychographics, a conceptual model of consumer personality is presented related to the online buying, tested through empirical study in order to connect the linkage between the conceptualized consumer personality variables and the intention of online buying. Finally a BBI framework is presented driven by the personality based online buying decision making process. With a behavioral orientation of business intelligence, online marketers can formulate their e-marketing strategies

pursuant to the buying intention of the potential customers in the online buying system.

References

1. Alba, J.W. and Hutchinson, J.W. (1987), Dimensions of consumer expertise, *Journal of consumer Research*, Vol.13, No.4, pp. 411 – 54.
2. Aldas-Manzano, J., Ruiz-Mafe, C. and Sanz-Blas, S. (2009), Exploring individual personality factors as drivers of M-shopping acceptance, *Industrial Management and Data Systems*, Vol.109, No.6, pp. 739 – 57.
3. Allred, C.R., Smith, S.M. and Swinyard, W.R. (2006), E-shopping lovers and fearful conservatives: a market segmentation analysis, *International Journal of Retail and Distribution Management*, Vol.34, No.4/5, pp. 308-33.
4. Bandura, A. (1994), *Self-efficacy: The exercise of Control*, W.H. Freeman, New York, NY.
5. Buckman, R.H. (2004), Building a Knowledge-Driven Organizations, McGraw Hill, New York, NY.
6. Chen, L., Gillenson, M.L. and Sherrell, D.L. (2002), Enticing online consumers: an extended technology acceptance perspective, *Information & Management*, Vol.39, No.8, pp. 705-19.
7. Chen, S.Y. and Liu, X. (2005), "Data mining from 1994 to 2004: an application-oriented review", International Journal of Business Intelligence and Data Mining, Vol. 1 No. 1, pp. 4-11.
8. Chiu, C.M., Chang, C.C., Cheng, H.L. and Fang, Y.H. (2009), Determinants of customer repurchase intention in online shopping, *Online Information Review*, Vol. 33, No.4, pp. 761 – 84.
9. Cook, C. and Cook, M. (2000), The Convergence of Knowledge Management and Business Intelligence, Auerbach Publications, New York, NY.

10. Cronbach, L. J., (1951), Coefficient alpha and the internal structure of tests, *Psychometrika*, Vol.16, No.3, pp. 297-335.

11. Cunningham, L.F., Gerlach, J.H., Harper, M.D. and Young, C.F. (2005), Perceived risk and the consumer buying process: Internet airline reservations, *International Journal of Service Industry Management*, Vol.16, No.4, pp. 357-72.

12. Dabholkar, P.A. (1996), Consumer evaluations of new technology based self-service options, *International Journal of Research in Marketing*, Vol.13, No.1, pp. 29-51.

13. Dabholkar, P.A. and Bagozzi, R.P. (2002), An attitudinal model of technology-based self-service: moderating effects of consumer traits and situational factors, *Journal of the Academy of Marketing Science*, Vol.30, No.3, pp. 184 -201.

14. Davenport, T.H. and Seely, C.P. (2006), "KM meets business intelligence: merging knowledge and information at Intel", Knowledge Management Review, January/February, pp. 10-15.

15. Eastin, M.S. and LaRose, R. (2000), Internet self-efficacy and the psychology of the digital divide, *Journal of Computer-Mediated communication*, Vol.6, No.1, pp. 12–21.

16. Feng, D. and Chen, E.T. (2007), "Firm performance effects in relations to the implementation and use of knowledge management systems", International Journal of Innovation and Learning, Vol. 4 No. 2, pp. 172-85.

17. Fornell, C., and Larcker, D., (1981), Structural equation models with unobservable variables and measurement error, *Journal of Marketing Research,* Vol.18, No.1, pp. 39-50.

18. Hair, J F.; Anderson, R.E.; Tatham, R.L.; Black, W.C., (1995), Multivariate Data Analysis, 4th ed., Englewood cliffs, NJ, Prentice-Hall.

19. Hai Wang, Shouhong Wang, (2010), "A knowledge management approach to data mining process for business intelligence", *Industrial Management & Data Systems*, Vol. 108 No. 5, 2008pp. 622-634

20. Kuhlmeier, D. and Knight, G. (2005), Antecedents to Internet-based purchasing: a multinational study, *International Marketing Review*, Vol.22, No.4, pp. 460 – 73.

21. Marakas, G.M., Yi, M.Y. and Johnson, R.D. (1998), The multilevel and multifaceted character of computer self-efficacy: toward clarification of the construct and an integrative framework for research, *Information systems Resarch*, Vol.9, No.2, pp. 126-63.

22. Monsuwe, T.P., Dellaert, B.G.C. and Ruyter, Ko de (2004), What drives consumers to shop online? A literature review, *International Journal of Service Industry Management*, Vol.15, No.1, pp. 102-121.

23. Park, C.H. and Kim, Y.G. (2003), Identifying key factors affecting consumer purchase behavior in an online shopping context, *International Journal of Retail and Distribution Management*, Vol. 31, No.1, pp. 19-26.

24. Ranaweera, C., Bansal, H. and McDougall, G. (2008), Web site satisfaction and purchase intentions: Impact of personality characteristics during initial web site visit, *Managing Service Quality*, Vol.18, No.4, pp. 329-48.

25. Ratchford. B.T., Talukdar, D. and Lee, M.S. (2001), a model of consumer choice of the Internet as an information source, *International Journal of Electronic commerce*, Vol.5, No.3, pp. 7-21.

26. Wen, I. (2009), Factors affecting the online travel buying decision: a review, *International Journal of Contemporary Hospitality Management*, Vol.21, No.6, pp. 752 – 65.

27. Wiig, K.M. (1999), "What future knowledge management users may expect", Journal of Knowledge Management, Vol. 3 No. 2, pp. 155-65.

28. Williams, S. and Williams, N. (2006), The Profit Impact of Business Intelligence, Morgan Kaufmann, San Francisco, CA.

29. Wu, X., Yu, P. and Piatesky-Shapiro, G. (2000), "Data mining: how research meets practical development?", Knowledge and Information Systems, Vol. 5 No. 2, pp. 248-61.

* * * * *