# "Materialism in consumer behavior and inclination towards environmental consciousness in Pakistan"



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# ABSTRACT

As we go further towards the mid of 21$^{st}$ century, need of sustainability in each aspect of life is increasing. Current trend shows that we can't carry on business as usual, therefore a great need of change is required, particularly is in the way we consume. This study focuses on the environmental concern in consumers and how it is effecting the consumers' behavior in contrast to the materialism in Pakistan.This research is based on behavior of individuals therefore quantitative mode of research was employed.Data from consumers was collected and analyzedusing measurement scales for materialism, environmental concern and behavior. It was comprehended that there exists a significant connection between environmental concern and behavior but the materialism doesn't have a significant effect on both although it affects consumers' decisions regardless of their environmental concern. Results implicates that there isn't much scope of marketing green products in Pakistan unless there are some materialistic benefits for consumers.

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# 1 INTRODUCTION

Our lifestyle today is very different from the lifestyle of our elders a few decades ago. They were much more connected to and dependent on nature. Whereas today's generation is more dependent on processed goods and oblivious towards natural eco system. We are living in an age of consumerism where emphasis is on making our near future better while being aloof about distant future.

On one hand consumerism provides an easy way of life to billions of people, on the other hand it is also causing a significant damage to our earth's ecosystem. Today, consumer goods are mass produced using earth's resources most of which aren't sustainable and are packaged in toxic plastic packages, just to keep the cost minimum for consumers. With the invention of cheap and disposable materials, industrialists are yet successful to keep the costs minimum. But in the foreseeable future we can anticipate a big problem of living in a hazardous environment.

In most of the developed counties, governments and citizens are very conscious about environmental damages and are taking aggressive actions to prevent any further damages. Whereas, Pakistan, still being on the way towards development, is less much concerned about environmental issue,although Pakistan is in the top ten countries which are at highest risk from climate related threats.

From marketing perspective, environmental friendly products are usually expensive than their unsustainable counterparts, therefore they are not easy to sell to materialistic consumers. Still there can be a window of opportunity for green products in Pakistan only if consumers are concerned about alarming situation of environment. It will be easier with support of marketing to spread the word and create a space for sustainable market. If marketing is done in such a way that consumers are informed about the current environmental issues of Pakistan and that they can help by using greener products.

**Purpose of this research is to investigate how materialism and environmental concern is affecting consumer behavior in Pakistan and how consumers make decisionswhile weighing the materialistic benefits they will get against the environmental damages caused by the products or services they buy.**

## 1.1 Background of study

Consumerism has caused a shift in global culture from a producer-oriented society to a "consumerist" society within last millennium.With the global modernization, consumerism has also played its part in Pakistan. The life of an average Pakistani citizen has changed tremendously during last 2 decades. An important stimulus for this change was cultivation effect from western countries.

### 1.1.1 Root of materialism

Materialism, besides consumerism, is a part of human nature. We tend to own things which we desire. Gold became desirable as jewelry because it had no utility as a weapon or tool. That is materialism at its root core. Materialism has been characterized in various implications in different studies. The term materialism is characterized by (Rassuli and Hollander, 1986) as an expression of "a mind-set, an interest in getting and spending" and (Belk 1984) characterizes it as "the substance a consumer attaches to worldly possessions."

It is often criticized that consumerism ends up with giving the birth of materialism and overlooks the future need, durability, product origin and environmental consequences. Not only this but also consumerism provokes social maladies, such as extravagance, wasteful expenditure, no attention to the needy, barriers to national sustainable development, and so forth.

### 1.1.2 Bending the curve

We live on a human-overwhelmed planet, putting exceptional weight on the frameworks of Earth. This is anunpleasant news, it's alsosomewhatstirring news since we're the first generation - on account of science - to be educated that we might undermine the sustainability and the capacity of planet Earth to strengthen human advancement as we probably are aware of it. It's also important to know, on the grounds that the planetary dangers we're confronting are large to the point, that the business as usual is impossible. Truth be told, we're in a stage where transformative change is vital, which opens the window for development, for new thoughts and new standards. This is a scientific adventure on which difficulties are confronting mankind in the worldwide period of supportability.

The problem is we're squeezing very hard our planet, a four time more pressure than it can actually bear, which, as its first crush, is the populace development. Presently, this is not just about numbers; this is not just about the way that we're seven billion individuals focused on

nine billion individuals. Most of the unnatural environmental changes on the planet have been brought about by the rich minority, the 20 percent that hopped onto the modern fleeting trend in the mid-eighteenth century. Most of the planet, yearning for advancement, having the privilege for improvement, are in extensive trying for an unsustainable way of life, a groundbreaking weight.

### 1.1.3 Environmental Concerns for Pakistan

Various serious environmental problems are inherent in Pakistan, which have incredible ecological importance regarding to Pakistan's sustainable economic future. These include erosion of fertile land, abuse of pesticides, mismanagement of solid wastes, deforestation, industrial pollution, water logging and saltiness, freshwater contamination by chemicals and marine water contamination. These are only few examples.

Perhaps the major contributor to this problem is the drastic population growth, which is very high and growing further very rapidly as compared to the limited natural resources which are accessible to the common population. Moreover, major reason of these limitations is the unsustainable utilization and unfair administration and management of these resources. Around 200 million people live in Pakistan, which makes it sixth most crowded country on the planet.

The rate of population growth is one of the quickest and as indicated by estimates it would twofold in only 25 years. What is evident from this is, if the population keeps on growing in light of present conditions, it would take a serious toll in the environment. Shockingly Pakistan is not invested with assets required to manage such an enormous population.

Despite the fact that it is fundamentally an agrarian nation, the landscape is mainly arid. Water, as of now a rare item in many parts of the Pakistan, is currently confronting further deficiencies.

Pakistan needs an agreeable compliance from the industrial facilities. The Federation of Pakistan Chamber of Commerce and Industry (FPCCI) ought to take a lead in such manner. Presently, there's a great deal of weight on industries from law of the land that must be adhered to since purchasers are not purchasing from the companies who are not meeting environmental standards. After the execution of WTO, we need to meet the environmental criteria and unless we do that we can't trade our products abroad.

### 1.1.4 Current Outlook: Businesses as Usual

There is a lot of literature showing what will happen if we continue our lives and business as they are now. World tend to collapse according to such trends. Firstly, considering our future, we have to understand where are stand on our way if everything remains the same as it is now. We have learned that global population is increasing and Pakistan is among the leading one in rate of increase of population. We have also learned that population of high-income countries is aging while youth dominate in Pakistan and other low income countries. We have learned that wealth inequalities exist in the world whereas GDP continues to increase. Demand of food, energy and recourses is increasing which means competition for resources will increase inducing more selfish behaviors among people. According to UNFAO there will be 50 percent increase in demand for food by 2030. (UNEP modeling green investment scenario). According to UNEP, if we carry on with business as usual, then consequently increased burden on natural resources will result in a global demand for resources that would require at least two earths by 2050 (Hite, K. A., & Seitz, J. L. (2015). Global issues: an introduction).

Secondly, considering our future, we have to understand where we are standing on our way if everything remains the same as it is now. We have learned that global population is increasing and Pakistan is among the leading one in rate of increase of population. We have also learned that population of high-income countries is aging while youth dominate in Pakistan and other low income countries. We saw that inequalities of wealth exist in the world and GDP continue to increase. We also saw that consumption of food is increasing globally which means scope of agricultural resources will also have to be increased which will demand more water and land space.

The sustainable future look like to be the one that both rich and poor states alike should struggle for, since the unsustainable consumption of resources will fundamentally lead to increased poverty and political instability. In language of economics, unsustainable consumption uses up the earth's natural capital – clean air, water, fertile soil, healthy climate and so on – for a short term profit. And a basic principle of economics is that if you expend your capital, you will eventually go bankrupt. This kind of development comprises the capability of future generations to meet their own demands. One of the basic rules that Native Americans followed in North America was the rule of seventh generation: "consider how your decisions will affect the lives of the seventh generation to come."

Keeping in view the present outlook, it is clear that there will be some changes required in near to future in order to prevent doomsday to happen this early. In fact, national governments and authorities are already taking actions and making policies regarding environmental protection.

Consumption is a vital part of modern lifestyle. It is there from start to the end of whatever we do. We purchase, eat, utilize and take advantage of various things. Obviously consumption itself is not a threat for our world but rather its pattern and impacts. In the course of time we get to be distinctly mindful of the negative effect of our consumption on designs of earth. This makes us to change and join the sustainable consumerism approach. With ever accumulating distresses about the magnitude of climate change, the consumerism is an important focus that needs modification. The 21st century market is aiming towards sustainable lifestyle choices, the values that underlie sustainable behaviors, the obstructions to their adoption, and ways to overcome them. The sustainability is not only the need of markets of developed economies but also the developing economies such Pakistan. Materialism is the innate characteristic of humans, however there also exists the element of self-actualization which is the essential core for concerns such as environmental protection.

### 1.1.5 Psychology of Materialism

Numerous market analysts, scientists and researchers believe that materialism - the motivation to purchase and have things - is common to people. This appears to bode well regarding Darwin's hypothesis of evolution: since natural resources are limited, people need to contend over them, and attempt to claim as large a part of them as possible.

One of the issues with this hypothesis is that longing to aggregate riches is not natural. Truth be told, this longing would have been tragic for first men. For most of our time on this planet, people have lived as hunter gatherers - little tribes who might generally move to an alternate site like after a while. It should be obvious from present day hunter gatherers, these ways of life must be non-materialistic, in light of the fact that individuals can't bear to be overloaded with superfluous goods. Since they moved at regular intervals, pointless products would just be an obstacle to them, making it more troublesome for them to move.

Another hypothesis is that the fretfulness and consistent needing which fills our materialism is a sort of evolutionary component which keeps us in a condition of alertness. (Mihalyi

Csikszentmihalyi has recommended this, for instance) Dissatisfaction continues living creatures watchful for methods for enhancing their odds of survival; in the event that they were fulfilled they wouldn't be ready, and different animals would take the favorable position.

Consumer materialism is an individual esteem that mirrors the significance a customer places on obtaining and possession of material items. In consumer-behavior literature, three components are ordinarily recognized as constituting materialism: the conviction that acquisition is essential for joy, the tendency to judge the accomplishment of one's self as well as other people by their possessions, and the significance of securing and belonging in one's life. Obvious utilization, on the other hand is different from materialism. It is a behavior that includes the proprietorship and show of status items to advance one's relative standing and rouse envy (Gatersleben, B., White, E., Abrahamse, W., Jackson, T. D., & Uzzell, D. 2009).

Materialism has vital consequences for a culture as a carter of individual utilization in this modeof economy. It also has individual ramifications as anoutcome of its pessimistic relationship with prosperity and other attractive individual results. Examine into reasons for individual contrasts in materialism has researched the part of media presentation, early family environment, and associate impacts, among others (Srikant, M. 2013).

Materialism is associated with several factors important to advertisers, including liking for status merchandise and remarkable objects, the importance of visual style when settling on an item choice, willingness to buy fake objects, and other choice factors.

## 1.2 Research Objective

The purpose of this study is to examine level of environmental concerns and materialism in consumers and relationship among environmental concern, materialistic desires and consumer behavior.

The objectives of this study are as under:

i. To determine the level of environmental concern in Pakistan and its effect on consumer buying behavior.
ii. To determine the level of materialism in Pakistan and its effects on consumer buying behavior.
iii. To investigate the underlying relationship between materialism and environmental concern in consumers of Pakistan.

## 1.3   Research Questions

Based on the research objectives following research questions are formulated:

i.   How much concerned about the environment are the people of Pakistan?

ii.   How much materialism is effecting the consumers' buying behavior in Pakistan?

iii.   Is there any relationship among environmental concern, materialism and consumer buying behavior?

## 1.4   Significance of the study

This research study could provide information on the rising issues of environmental concerns worldwide. There has been a lot of research done in developed countries but developing countries are lagging many steps behind in the scheme of sustainable future. As mentioned in many literatures, thesustainable future is impossible without the cooperation of underdeveloped countries. Consumer market of Pakistan is highly dense and well enough penetrated. It provides a right spot to find out what need to be done to create a better and sustainable markets in countries like Pakistan. Further, this study would also be a review on the information available regarding the consumer behavior in frame of environmental concern. Furthermore, this study would provide beneficial statistics about the behavior pattern of consumers when it come to a choice of saving environment at a higher cost. For the future researchers, this study can provide baseline information on the recent status environmental awareness.

## 1.5   Scope of Study

Differential support for environmental issues has long provoked the curiosity of researchers. The response to the choices present in market and ideology of consumers have been the primary focus of much research on the determinants of environmental concern. In light of recent work on environmental paradigms and advanced statistical methodologies, it may be advantageous to reexamine the tenets of this body of work. This study restates the findings of previous studies within a broader causal model, and tests that model using data from a general population survey. Analysis indicated that environmental concern variables were ineffective in explaining any of types of environmental behaviors measured here, but long term orientation was a strong predictor of support for environmental regulation. Further research might benefit most by exploring underlying belief structures ratherthan subjective

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point of view of consumers' own behavior. These results emphasize the importance of careful specification of measures in studies of environmental concern. . The instrument of research had to be chosen very carefully, yet it didn't help in acquiring the quality data. Due to biases and heuristics in human nature, it is not easy to get objective results. Furthermore, untruthfulness also caused a hurdle in data collection and analysis. And due to repeated data collection, time allocated for data collected and rate of collection was effected. Also, a widespread sample was not accessible therefore, most of the sample included students from big cities only. Considering consumers other than students and rural population could have improved the significance of results.

# 2 LITERATURE REVIEW

## 2.1 Environmental consumerism

Consumer's buying conduct affected by environmental concerns (Shrum et al. 1995) to buy items and services with negligible effect on earth's ecological system (Mainieri etal. 1997) is named as environmental consumerism.

Basically, it implies consumption practices, for example, buying green items and services (Easterling et al. 1995) for example, buying recycled items. In view of the supposition that materialistic qualities might be a critical reason for overconsumption and in this way add to the depletion of natural assets, a research was done in 2016 on the relationship that exists between materialism and environmental consciousness utilizing a publically-accessible, vast scale test of 63,077 customers in 49 countries. Results of a multilevel analysis recommends that there is a lot of diverseness in the connection between materialistic qualities and consumers' ability to give some portion of their income to save environment. In particular, they discovered a factually critical impact of materialistic values on readiness to give cash for nature in countries which have high GDP per capita, high level of idiosyncraticity, and countries with a less power gaps among people. Then again, this relationship is non-critical for countries which have lower GDP per capita, low level of idiosyncraticity, and countries with high power gaps between individuals.

A review of literature of environmental consumerism uncovered a main part of research coordinated towards creating a detailed profile of a pro-environmental consumer by usingregional (Samdahl and Robertson, 1989), social (Webster, F. E. 1975), personality (Kinnear, T. C., Taylor, J. R., & Ahmed, S. A. 1974) and an assortment of socio-demographic factors. In any case, regardless of crude investigation and mainstream thinking sociodemographic factors have turned out to be poor indicators of environmentalfriendly practices (Kinnear et al. 1974; Weigel 1977; Antil 1984a; Balderjahn 1988; Samdahl and Robertson 1989; Roberts 1996). Despite the fact that there is direct bolster that recommends a critical relationship between's sexual orientation, age, wage, region and environmentally mindful conduct (Tognacci et al. 1972; Buttel and Flinn 1978).Socio-demographic factors were compared to personality attributes (such as understanding, tolerance and harm avoidance) and were observed to be huge indicators of pro environmental practices (Kinnear et al. 1974; Arbuthnot 1977; Borden and Francis 1978; Antil 1984a). In simple words,

individuals who were more open to new ideas (resilience) with a yearning to see how things function (understanding) and are worried about being hurt by pollution would be more worried about the environment. Literature on global issues have uncovered patterns that show environmental contemplations will be a major a portion of our organizations in future.

Consumption assumes a focal part in the present day civilization, in which consumers are bombarded with marketing messages empowering material consumption. In any case, environment friendly consumers have explanations of their own behind going against traditional consumer culture, which demonstrates a high level of control over consumption. Such materialistic qualities appear to show less control which is attributable to a fascination and desire for material belonging (Kashdan and Breen 2007), while against consumption values flag a more cognizant and intelligent basic leadership style. To be sure, an interviewee from a subjective review on deliberate simplifiers said: "It is energizing to take control of your life, to take control over consumption decisions and your way of life" (Zavestoski 2002, 160), which obviously shows a feeling of control and subsequent positive emotion.

Now and again, pro-environmentalists accomplish a feeling of control by opposing marketing messages (Lee, Motion, and Conroy 2009; Rumbo 2002), also demonstrating that people with against consumption values more intentionally, and fundamentally, assess their consumption designs. Then again, TV viewership inquire about directed by Sirgy et al. (1998) recommends that materialistic individuals are swayed by advertising communications, which boost their yearning for material control. These literatures reveal the difference between environmental and materialistic values in terms of control over consumption.

Environmentally conscious consumer behavior has been in limelight of research in the marketing research world. Kotler (2003) expected that "societal marketing concept" would be one of the key segments of firms' marketing strategies, and now this figure has ended up being correct. In spite of the way that environmental concerns have extended over the span of late years, environment well-disposed brands have become out and out low levels of bit of the pie (Kalafatis et al., 1999). Kalafatis et al. (1999) states and alludes to two elucidations for this error. In the first place elucidation is that monetary concerns are more basic than environmental concerns as to purchasing behavior, and second is that the twofold confronted nature of environmental concern influencing a couple aspects of behavior and not others. Diverse reasons of affectability to environmental security have been analyzed in the writing. The 90s, for example, was named the "decade of the environment" (Drumwright, 1994), as

social and environmental concerns had risen and is now getting more attention as compared to late 20<sup>th</sup> century. Nowadays, environmental concerns have ended up being more obvious and evidentsince it has expanded. The possibility of "environmentally concerned consumer" has been portrayed in the writing in various different ways. Kirchgeorg and Meffert (1993) suggest that environmentally astute consumer may come across in different ways. They list five sorts of environmentally concerned consumer direct: Decreasing the utilization of traditional goods, changing solicitation – getting eco-pleasing things as opposed to standard ones, consuming environmentally capable items, and enthusiasm for reusing and isolated waste assembling, and participating in environmentally concerned protests or oppositions.

## 2.2  Materialism in Consumer Behavior

Consumer behavior is relatively a new arena of research, which developed immediately after the Second World War. Seller's market has vanished and buyers' market has emerged. This led to a paradigm shift from the manufacturer of product care to consumers and targeted specifically to consumer behavior. Reviewing the concept of marketing from simple concept sales to customer driven marketing has made consumer behavior itself a discipline. The growth of consumer and consumer law underscores the importance to the consumer. Consumer behavior is the study of how Individuals decide on their available resources (time, money, and effort) or aspects of use - (what do they buy, when do they buy? How to buy? etc.). Heterogeneity among people makes consumer behavior a difficult task to understand.

Richins and Dawson (1992) noticed the expression "materialism" is utilized uninhibitedly and liberally. Repeatedly, the idea of materialism has been drawn from many different points of views. The following sections clarify two expansive perspectives, to be specific socio-cultural perspective and individual perspective. Additionally, it is imperative to note that while these perspectives are clarified, materialism is theorized as an unbiased idea.

The materialism literature recommends that materialistic people depend on the outward objectives (i.e., budgetary achievement, notoriety) to accomplish life fulfillment and joy (Kasser and Ryan 1996). Be that as it may, extraneous prizes don't ensure a maintained feeling of joy, so values set on seeking after such objectives may add to the negative relationship amongst materialism and prosperity (Tatzel 2002). Inquire about demonstrates that seeking after natural objectives are a more straightforward and compelling method for accomplishing maintained fulfillment and satisfaction (Diener and Biswas-Diener 2002; Maslow 1954; Tatzel 2002), and this backing the contention that preservationist is, all in all,

more joyful than realists. For example, a person with materialistic qualities may endeavor to accomplish outward objectives by working all the more, acquiring more, and spending more, which they accept will bring joy.

## 2.3  Materialism: a socio-cultural perspective

As a socio-cultural marvel, materialism refers to a social culture in which most of the general population in the society values material objects exceedingly (Larsen et al., 1999). For instance, the USA has been seen as an exceptionally materialistic culture, more so than some other part of the world (Belk and Pollay, 1985). Besides, as noted at a societal level, materialism is on the rise in the US and all inclusive (Ghadrian, 2010). Pollay (1992) takes note of that a few history specialists (e.g., Schlesinger, 1986) keep saying that materialism is a socio-culturalprocess, which reoccuers in thirty-year cycles and sways between materialism and generosity.

## 2.4  Materialism: four perspectives

Researchers have proposed a theoretical framework for materialism. In the current study, Larsen et al's. (1999) four points of view on materialism framework are talked about. This structure utilizes a 2 x 2 framework, in light of materialism's precursors (innate/learned) and results (good/bad).

## 2.5  Psychology of sustainability

At the point when asked specifically, individuals consciously deny that their actions may be affected by trends or well-known opinions. In any case, we are organically modified to be concerned about what other individuals consider us and to attempt to sort out our behavior fit in. This is a result of our evolution: early people who were shunned from their societies confronted practically unavoidable demise out all alone. On account of this organic programming, all individuals disguise and follow up on messages from other individuals, both unequivocal and verifiable messages, about the sorts of practices expected and acknowledged by society. In the meantime, individuals essentially think little of the degree to which these social norms impact them.

An observation amongst the most critical perceptions from psychological research is that numerous choices are made via programmed, oblivious procedures on the premise of data that our rational and conscious brains are not really mindful of. There is an increasing

psychological and neuroscientific evidence that thinking process is the result of two separate system of reasoning: "a rule-based system, which is conscious, rational and deliberate, and an associative system which is unconscious, sensory-driven and impulsive" (Sloman, 1996; 2007).

Having control and self-rule over their basic leadership improves an individual's feeling of self-assurance and self-actualization, which prompts to expanded CWB (consumer well-being) (Maslow 1954; Ryan and Deci 2001). In this manner, it can be assumed that the self-sufficient nature of against consumption values decidedly effects one's impression of life fulfillment and joy. For materialistic people, the writing proposes that their consumption is chiefly determined by smaller scale level concerns, for example, satisfying their own particular material yearning or self-upgrade. This commitment to individual objectives controls them from having a more extensive extent of concerns, for example, sustainability or moral issues (Kilbourne and Pickett 2008). Interestingly, full scale level concerns frequently inspire against consumption conduct (Shaw and Newholm 2002, for example, boycotting, deliberate effortlessness, or purchaser resistance. The surviving writing demonstrates that against consumption practices are frequently determined by the attentiveness toward sustainability or as a type of resistance toward unscrupulous practices in showcasing (Cherrier and Black 2010); (Dobscha 1998); (Evans 2011). For example, inquire about on dumpster plunging demonstrates that opposing the standard market helps a few people build up a brave mental self-view (Brittain, Fernandez& Bennett 2011), while others challenge the loss of occupations by boycotting organizations who migrate their manufacturing plants seaward (Hoffmann and Müller 2009).

Environmentally concerned person shows a more extensive extent of attentiveness toward their consumption contrasted with materialist, with such unselfish convictions prompting to expanded CWB. The conviction that they are benefiting a deed for nature and society builds up the compatibility between their optimal self and the genuine self. This is upheld by various reviews, which affirm that ace social practices, for example, helping other people (Weinstein and Ryan 2010) or giving to philanthropy (Harbaugh 1998) affect emphatically on the prosperity of the on-screen character. Earlier materialism writing proposes a negative relationship between solid material longing and lessened life fulfillment and prosperity (Shaw 2002; Sirgy 1998). Materialist seek after high amount and nature of material merchandise; be that as it may, because of hedonic adjustment hypothesis that they are probably going to stay disappointed and fall into the cycle of craving (Belk, Ger, and Askegaard 2003). Then again,

people with hostile to consumption qualities are probably going to show a lower level of material longing, because of its inborn nature against consumption (Lee, Fernandez, and Hyman 2009). Rather, environmentally concerned person looks to improve their lives (i.e., intentional effortlessness) and decrease the longing of material securing and ownership (i.e., downshift). Zavestoski (2002, 150) portrays the act of intentional straightforwardness as decreasing jumble in one's life, killing oppressive time duties, and making tranquil individual space to appreciate life. Similarly, the counter consumption writing bolsters the thought that simplifiers lessen sentiments of weariness and worry by deliberately pulling back from the fast moving consumer society (Etzioni 2004; Iyer and Muncy 2009).

The most critical wellsprings of life fulfillment are nonmaterial in nature (Myers and Diener 1995). In this manner, people with hostile to consumption qualities may accomplish more noteworthy life fulfillment and CWB by being less really determined, maybe underlining encounters over belonging. A review upheld this idea by looking at the contrasts between the consumption examples of materialistic and non-materialistic people, and established that non-materialistic people spent more cash on experiential consumption (i.e., travel), which gave a more noteworthy and more supported feeling of fulfillment (Carter and Gilovich 2010, 2012; Tatzel 2002). Generally speaking, without being as outrageous as non/hostile to realists, against consumption qualities are connected with diminished longing for material ownership, which prompts to improved consumer well-being.

For understanding the consumer behavior regarding environments, we need to understand the role of psychology of consumer mind.

A General Model of predicting behavior:

$$\text{Behavior} = f \text{ (ability, motivation, knowledge of the situation)}$$

Optimism bias, initially alluded to as farfetched good faith (Weinstein, 1980), is the propensity of people to belittle the probability they will encounter unfriendly occasions, for example, skin growth or auto crashes. As an outcome of this inclination, a few people may take slight safety measures that may check these dangers. They may not, for instance, wear safety belts. Explore has revealed a few elements that intensify or restrain the likelihood that people will belittle some hazard. At the point when people feel on edge or unconfident, for example, hopefulness predisposition has a tendency to decrease.

# 3 THEORETICAL FRAMEWORK

As consumers get to be mindful of different environmental matters, increased environmental concern influence their behaviors in numerous territories from the sorts of products they buy to the political leaders they vote in favor of (Minton and Rose, 1997). Researchers have gone into depth of creating different scales for characterizing environmental practices and along with environmental concern. Maloney et al. (1975), and Dietze et al. (1998) are two great cases of such researchers. The real issue experienced during the process of pro-environmental behavior identification is the need to consolidate altogether different and free factors into a similar identification.

A conceptual framework on behavior of environmental purchase established by Chan and Lau (2000) in whichthe independent variables comprised of environmental concern and environmental knowledge, man-nature alignment as precursor factor and green buying intention as the dependent variable and actual consumption as results of the dependent variable. Nonetheless, their framework did not involvecustomer's attitude regarding toenvironmentalinfluence on buying.

It is clear that, materialism and environmental concern has to be treated as two separate traits of a consumer to see whether one effects other or not. These two traits will have to be further divided to really get to know the different aspects of a consumer's behavior.

## 3.1 Hypothesis

Following hypotheses were assumed during study:

1. H1: Environmental consumerism is positively affected by environmental concern.
    o H0: Environmental consumerism is not positively affected by environmental concern.
2. H2: Environmental consumerism is negatively affected by materialism.
    o H0: Environmental consumerism is not negatively affected by materialism.
3. H3: There is a significant negative relationship between materialism and environmental concern.
    o H0: There is not any significant negative relationship between materialism and environmental concern.

Proving these three hypotheses will require measurement of materialism, environmental concern and environmental consumerism behavior.

**Figure 3-1**
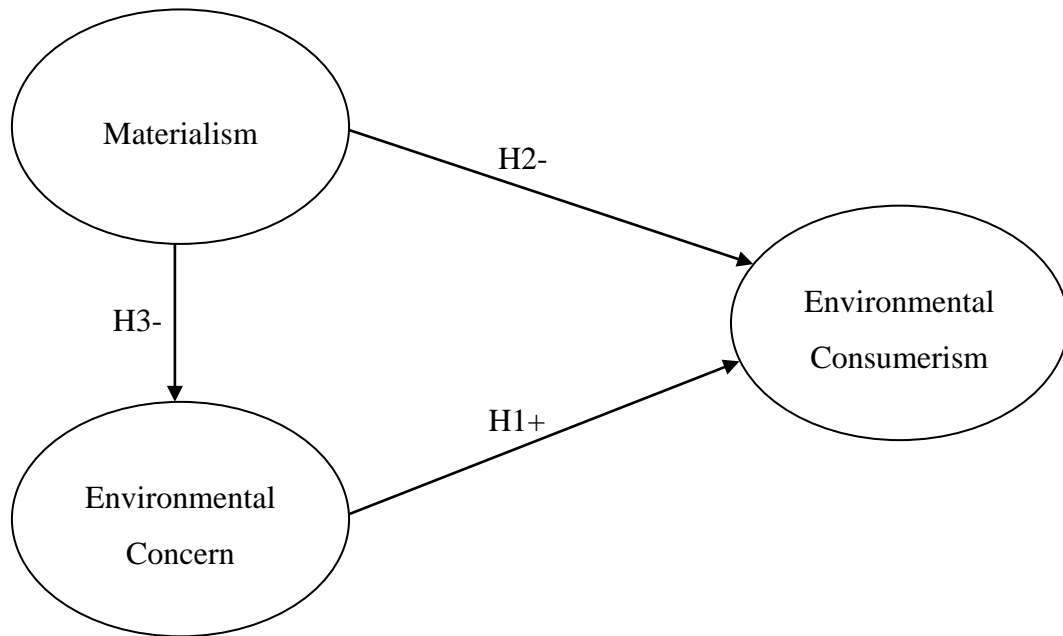
# 4 RESEARCH METHODOLOGY

This segment describes the methodimplementedfor this research. This chapter is going to explain out the methodology followed to achieve the objectives, i.e., research design, hypothesis, methods of data collection, research design, instrument, measuring scales and data collection etc. This will provide the base support to accomplish the research objectives that were laid down in the first chapter.

## 4.1 Research Design

This research is based on behavior of individuals therefore quantitative mode of research was employed. Survey methodology was used to sample the individuals from population. Statistical surveys are carried out in order to make statistical interpretations about the population being considered, and this depends greatly on the survey questions used. In this case population is the students of Pakistan.

## 4.2 Instrument

The questionnaire based survey was used as instrument for the primary data collection in this study. Similar survey based questionnairehave been used by many researchers in field of sustainability and materialism such as Roberts, J. A., & Bacon, D. R. (1997) and Aman, A. L., Harun, A., & Hussein, Z. (2012). The source of primary data collection is a structured questionnaire. The questionnaires consisted of two parts. One for materialism measurement and other for environmental concern and environmental friendly consumer behavior measurement. Data for this study is collected by a self-administered online survey that was sent mostly to students at various universities in Pakistan as well as by distributing survey questions on paper. Most of the students filled out the questionnaire. Questionnaire statements in consideration with our conceptualizations were selected and adapted from several existing measurement scales. "Environmentally conscious consumer behavior" (ECCB) and "perceived consumer effectiveness" (PCE)scales are adapted from Roberts (1996b) and McCarty and Shrum (1994). Few questions for measuring Long-term orientation (LTO) areinherited from Bearden, Money and Nevins. Materialism scale was adopted from Trinh, Viet Dung, and Ian Phau (2012). On the other hand, materialism, even though it is popular, is as yet being measured by scales created more than two decades before, while the

world has changed drastically. Trinh et al. (2012) introduced another approach for measuring materialism.

The set of measurements created by Trinh et al. (2012) adds to the developing understanding of why people purchase luxury brands and additionally fake luxury brands. Material Distinctiveness gives a set of measurement to take a hold of this thought. This is imperative and will get to be distinctly helpful in culturally diverse research evaluations. For instance, consumers with low material distinctiveness would want to buy a more obvious variant of the brand as the need for showing the logo of luxury brands is so incredible though consumers with higher material peculiarity would pursue a more circumspect adaptation of a luxury brand to emerge of the group. Every one of the inquiries for different parts, for example, Material Success, Material Happiness and Material Essentially were additionally surveyed and supplanted with a superior estimation for advantages of owning an ownership, and assessing the status idle.

## 4.3  Measurement

Since the objective here is weigh the environmental concern in comparison to materialistic concerns, two separate measurement have to be taken for both of these concerns in consumer behavior. Both of these measures are of subjective and qualitative nature, therefore it is not easy to balance the integrity in both. When asked people tend to be more generous about how much they care as compared to what they actually do when it comes consumerism.

The questionnaire was structured as follows. The survey consists of 27 statements rated on a five point Likert type scaleranged from 1=Strongly Disagree to 5= Strongly Agree. 16 out of 27 questions are for measurement of materialism. These 16 questions further divided to measure different aspect of materialism which are:

1. Material success. This factor was named as MS.
2. Material Happiness. This factor was named as MH.
3. Material Essentiality. This factor was named as ME.
4. Material Distinctiveness. This factor was named as MD.

11 out 27 questions are aimed to measure environmental concern as well as environmental conscious behavior in consumers. Environmental concern measuring items in questionnaire are named as EC1 to EC11.

The questionnaire can be found in the Appendix A.

## 4.4   Data collection

The responses to these questionnaires have been collected in the month of November and December of the year 2016.Due to time or cost constraints, wider population was a major difficulty to access therefor convenience method was used for sampling. The resultant selection can't be considered as a random sample because there is high probability of sample being students. There are no demographic factors being considered because they have been deemed invaluable by other researchers. Because majority of data has been collected from students, so we can assume that our respondents are educated people of age between 20 and 30. Initial data collected was analyzed to test the reliability by calculating Cronbach's Alpha which came out to be 0.2. It showed that data was very inconsistent and unacceptable for further analysis. So, data collection was done again but this time a little differently. Since there are 27 questions in survey and most of them require a minute to think and reassess personal values, therefore people did not respond with much honesty and tried to get done with it as soon as possible. To avoid inconsistency in second round of data collection, online survey was made more interactive by showing one slide at a time and showing some interesting photography along with to keep hold of the person's interest. Other than that, surveys filled on paper were rewarded by a chocolate bar just to get more interest of respondents in filling the questionnaire. This time, when data was analyzed there was Cronbach Alpha was above than acceptable limit. There were total 43 responses collected. 22 of them were collected from online questionnaire while rest of them were collected on paper. All the responses were recorded in IBMSPSS Data Editor that was used for further analysis and understandable presentation of data. The compiled responses were processed using principal component analysis. 6 meaningful components were extracted which were further analyzed by Pearson correlation. A detailed analysis follows in the next chapter.

# 5 DATA ANALYSIS

Collected data was compiled in SPSS for analysis. Table 5.1 shows the descriptive statistics of all data collected. Appendix B includes frequency tables of responses.

## 5.1 Statistics of data collected

**Table 5-1**

| Item | N | Range | Minimum | Maximum | Mean | | Std. Deviation | Variance |
|------|---|-------|---------|---------|------|---|----------------|----------|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Statistic |
| EC1 | 43 | 3.00 | 2.00 | 5.00 | **3.9535** | .11977 | .78539 | .617 |
| EC2 | 43 | 2.00 | 3.00 | 5.00 | **4.3953** | .08246 | .54070 | .292 |
| EC3 | 43 | 3.00 | 2.00 | 5.00 | **3.8372** | .11002 | .72145 | .520 |
| EC4 | 43 | 4.00 | 1.00 | 5.00 | **3.8140** | .18605 | 1.21999 | 1.488 |
| EC5 | 43 | 4.00 | 1.00 | 5.00 | **2.5116** | .21144 | 1.38654 | 1.922 |
| EC6 | 43 | 3.00 | 1.00 | 4.00 | **2.4419** | .20050 | 1.31479 | 1.729 |
| EC7 | 43 | 4.00 | 1.00 | 5.00 | **2.5814** | .20844 | 1.36683 | 1.868 |
| EC8 | 43 | 1.00 | 4.00 | 5.00 | **4.3953** | .07544 | .49471 | .245 |
| EC9 | 43 | 1.00 | 4.00 | 5.00 | **4.4186** | .07612 | .49917 | .249 |
| EC10 | 43 | 4.00 | 1.00 | 5.00 | **3.5349** | .17403 | 1.14119 | 1.302 |
| EC11 | 43 | 1.00 | 4.00 | 5.00 | **4.4651** | .07696 | .50468 | .255 |
| MS1 | 43 | 3.00 | 1.00 | 4.00 | **2.3721** | .17299 | 1.13438 | 1.287 |
| MS2 | 43 | 4.00 | 1.00 | 5.00 | **2.3953** | .17964 | 1.17796 | 1.388 |
| MS3 | 43 | 4.00 | 1.00 | 5.00 | **2.3953** | .20280 | 1.32987 | 1.769 |
| MS4 | 43 | 3.00 | 1.00 | 4.00 | **1.9535** | .17277 | 1.13292 | 1.283 |
| MH1 | 43 | 4.00 | 1.00 | 5.00 | **3.0233** | .17127 | 1.12310 | 1.261 |
| MH2 | 43 | 3.00 | 1.00 | 4.00 | **1.8837** | .16708 | 1.09565 | 1.200 |
| MH3 | 43 | 3.00 | 1.00 | 4.00 | **2.3721** | .17299 | 1.13438 | 1.287 |
| MH4 | 43 | 3.00 | 1.00 | 4.00 | **2.1395** | .16831 | 1.10370 | 1.218 |
| ME1 | 43 | 3.00 | 1.00 | 4.00 | **2.3256** | .17834 | 1.16947 | 1.368 |
| ME2 | 43 | 3.00 | 1.00 | 4.00 | **2.4884** | .15384 | 1.00882 | 1.018 |
| ME3 | 43 | 4.00 | 1.00 | 5.00 | **2.7209** | .18625 | 1.22135 | 1.492 |
| ME4 | 43 | 4.00 | 1.00 | 5.00 | **2.1860** | .18000 | 1.18031 | 1.393 |
| MD1 | 43 | 3.00 | 2.00 | 5.00 | **3.5581** | .16064 | 1.05339 | 1.110 |
| MD2 | 43 | 3.00 | 2.00 | 5.00 | **3.7674** | .14055 | .92162 | .849 |
| MD3 | 43 | 3.00 | 1.00 | 4.00 | **2.1395** | .15460 | 1.01375 | 1.028 |
| MD4 | 43 | 4.00 | 1.00 | 5.00 | **3.1395** | .17791 | 1.16663 | 1.361 |

## 5.2 Reliability Analysis

The study is essentially qualitative in nature. In order to provide a justification for the implementation of this model Cronbach's alpha is calculated. Cronbach's alpha is a measure of inner consistency that shows how closely linked a set of variables are as a gathering. It is considered to be a measure of scale ofconsistent quality. A "high" value of alpha does not suggest that the measure is unidimensional. However, it helps measuring inner consistency, to prove that the scale in question is unidimensional, further analyses are performed in forthcoming sections of this study. Exploratory variable analysis is one strategy for checking dimensionality. Truthfully speaking, Cronbach's alpha is not a statistical test - it is a coefficient of unwavering quality (or consistency).Questionnaire is divided into three parts for testing its reliability because coding of questions is as such that some answers tend to go in opposite dimension as compared to rest of the questions. So, in environmental consumerism part of questionnaire, three questions were separated which were EC5, EC6 and EC7 and were tested separately for reliability (see Table 5-3). Results reliability test of environmental consumerism part of questionnaire can be seen in Table 5-2. All the 16 materialism measuring items of questionnaire were tested together for reliability. Results of reliability test of materialism scale can be seen in Table 5-4. Cronbach's Alpha of all three parts is more than 0.8 which shows a good consistency among the variables of all these parts. This division of data in three parts shows that there are basically three dimensions in which the collected data can be analyzed.

**Table 5-2**

| Reliability test results for EC scale excluding items EC5, EC6 and EC7 | |
|:---:|:---:|
| Cronbach's Alpha | N of Items |
| .856 | 8 |

**Table 5-3**

| Reliability test results for items EC5, EC6 andEC7 | |
|:---:|:---:|
| Cronbach's Alpha | N of Items |
| .985 | 3 |

**Table 5-4**

| Reliability test results for materialism scale | |
|:---:|:---:|
| Cronbach's Alpha | N of Items |
| .901 | 16 |

## 5.3 Principal component analysis

To condense the collected data into fewer and simple interpretable factors principal component analysis was used. Principal components analysis is a method for classifying a smaller number of uncorrelated variables, called principal components, from a large set of data. The objective of principal components analysis is to define the extent of variance with the minimumnumber of principal components. In this section, all the 27 variables of collected data are converged into fewer components.

### 5.3.1 Materialism Variables

Initially, to check whether we can minimize 16 variables of materialism scale into only one variable Kaiser-Meyer-Olkin and Bartlett's Test was run on data. The results can be seen in followingTable 5-5. Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.419 whereas the Kaiser-Meyer-Olkin Measure of sampling adequacy for principal component analysis required should be at least greater than 0.6. So, it means we can't load all 16 variables of materialism scale into only one component.

**Table 5-5**

| Kaiser-Meyer-Olkin & Bartlett's Test results for materialism data with all 16 variables | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .419 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1015.562 |
| | Df | 120 |
| | Sig. | .000 |

Since a single variable can't adequately explain the data collected on materialism, there has to be more than one component. To check how many components are needed to explain the most of the variance, eigenvalues and percentage of variance of component was analyzed.Table 5-6 shows the initial eigenvalues and percentages of variance of all component. Rule of thumb is that number of component for which eigenvalues are greater than 1 should be selected. In Table 5-6 we can see that first three components have eigenvalue more than 1 and fourth component's eigenvalue of almost 1. So, using four components will be a better option. Cumulative variance of first four components is more than 80%, so we can safely say that using four components can explain most of the variances in data.

Figure 5-2 shows the component plot in two component rotated space. It is clear Y-axis dimension is the measure of material distinctiveness whereas X-axis dimension is the

measure of material success. Other two aspects of materialism are also shown in plot but they are not much distinctive in any direction since this plot can only represent two dimensions.

**Table 5-6**

| Compon ent | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings[a] |
|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total |
| 1 | 7.941 | 49.628 | 49.628 | 7.941 | 49.628 | 49.628 | 7.904 |
| 2 | 2.836 | 17.726 | 67.354 | 2.836 | 17.726 | 67.354 | 2.918 |
| 3 | 1.364 | 8.526 | 75.881 | | | | |
| 4 | .939 | 5.871 | 81.752 | | | | |
| 5 | .813 | 5.083 | 86.835 | | | | |
| 6 | .653 | 4.080 | 90.915 | | | | |
| 7 | .533 | 3.328 | 94.243 | | | | |
| 8 | .379 | 2.371 | 96.614 | | | | |
| 9 | .221 | 1.382 | 97.996 | | | | |
| 10 | .148 | .924 | 98.921 | | | | |
| 11 | .090 | .561 | 99.482 | | | | |
| 12 | .035 | .220 | 99.702 | | | | |
| 13 | .031 | .197 | 99.899 | | | | |
| 14 | .010 | .064 | 99.963 | | | | |
| 15 | .005 | .031 | 99.994 | | | | |
| 16 | .001 | .006 | 100.000 | | | | |

Total Variance Explained materialism data with all 16 variables

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Figure 5-1**
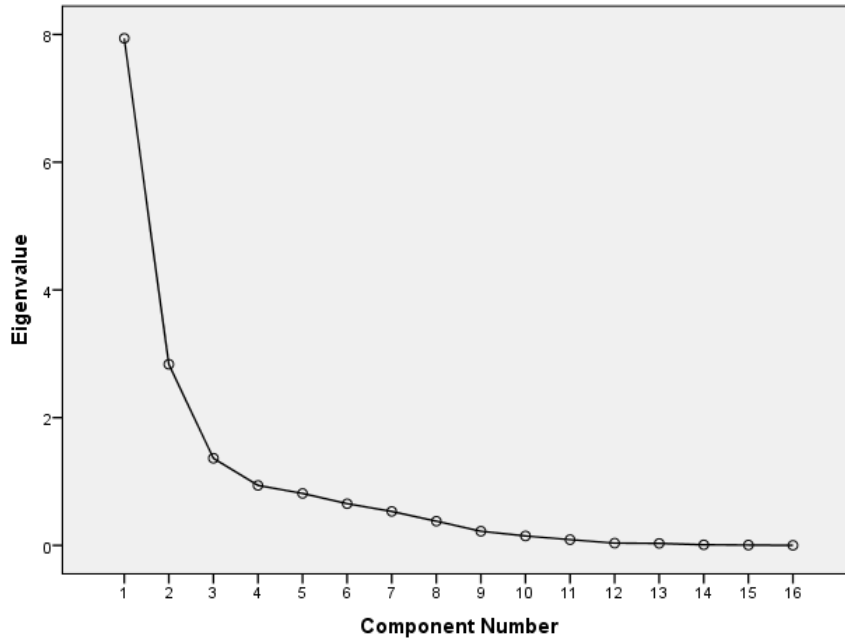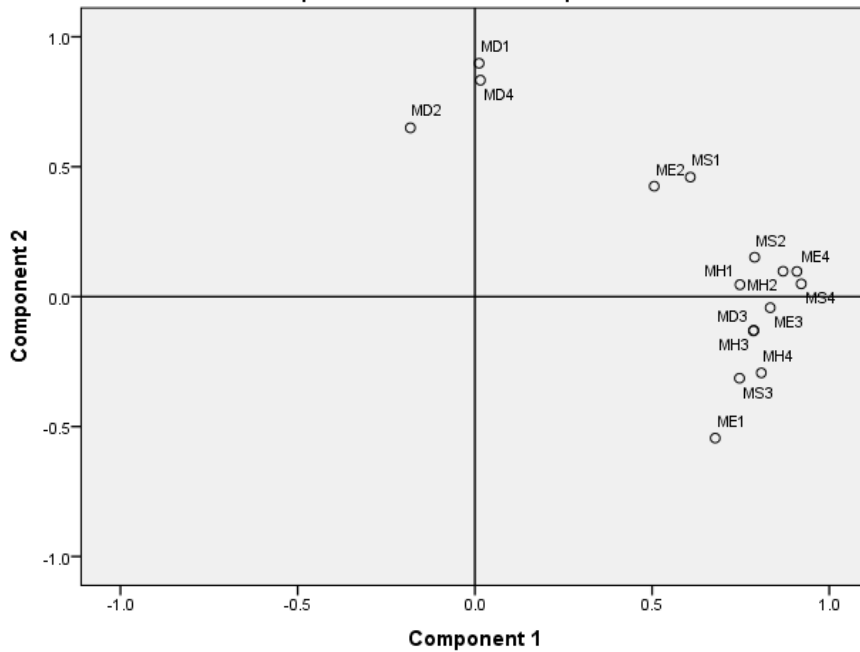
**Scree Plot**



**Figure 5-2**

**Component Plot in Rotated Space**



This distinctiveness in dimensions of components clearly show that we can easily divide the variables according to the aspect of materialism that are material success (MS), material happiness(MH), material essentiality (ME) and material distinctiveness (MD).

### 5.3.2 Material Success

Statements MS1, MS2, MS3 and MS4 in questionnaire measure the importance of material success for a consumer. To test the reliability of these four items KMO and Bartlett's Test were run on the collected data. Table 5-7 shows the result of test.

**Table 5-7**

| KMO and Bartlett's Test for 5.3.2 for Material Success variables | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .783 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 88.386 |
| | Df | 6 |
| | Sig. | .000 |

Kaiser-Meyer-Olkin measure of sampling adequacy is 0.783 and as discussed earlier, the acceptable range is above 0.6. It means that this scale of measuring importance of material success for a consumer is adequate enough.

Table 5-8 and scree plot in Figure 5-3 shows the eigenvalues and percentage of variance for first four components of material success variables. Only the first component has the eigenvalue greater than 1 which implicates that we can converge 4 statements of material success measurement into 1 component.

**Table 5-8**

| Total Variance Explained for Material Success components | | | | | | |
|---|---|---|---|---|---|---|
| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.859 | 71.468 | 71.468 | 2.859 | 71.468 | 71.468 |
| 2 | .637 | 15.935 | 87.402 | | | |
| 3 | .314 | 7.841 | 95.244 | | | |
| 4 | .190 | 4.756 | 100.000 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |

**Figure 5-3**
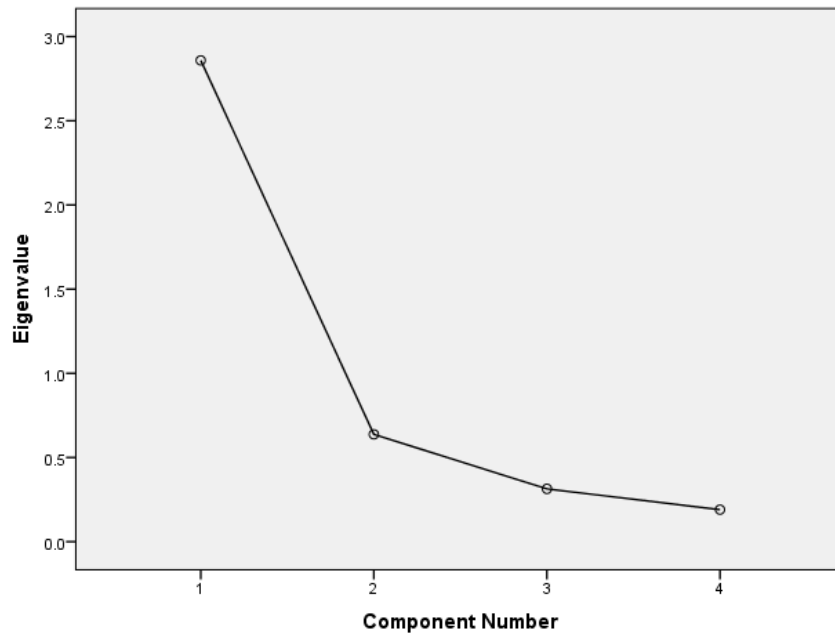


Using principal component analysis, one component was extracted out of MS1, MS2, MS3 and MS4 which implicates the overall measurementof material success aspect in materialism scale. Table 5-9 shows the component loading for all four items.

**Table 5-9**

| Component Matrix[a] | |
|---|---|
| | Component |
| | 1 |
| MS4 | .927 |
| MS2 | .900 |
| MS3 | .810 |
| MS1 | .730 |
| Extraction Method: Principal Component Analysis. | |
| a. 1 components extracted. | |

### 5.3.3 Material Happiness

Statements MH1, MH2, MH3 and MH4 in questionnaire measure the importance of material happiness for a consumer. To test the reliability of these four statements, KMO and Bartlett's Test were run on these four variables of collected data. Table 5-10shows the results of test.

**Table 5-10**

| Kaiser-Meyer-Olkin & Bartlett's Test results for Material Happiness Variables | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .799 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 76.944 |
| | df | 6 |
| | Sig. | .000 |

Kaiser-Meyer-Olkin measure of sampling adequacy is 0.799which is within acceptable range. It means that this scale of measuring the aspect of material happiness for a consumer is adequate for principal component analysis.

Table 5-11 shows the eigenvalues and percentage of variance for first four components of material happiness variables. Only the first component have the eigenvalue greater than 1 which implicates that we can converge 4 items of material happiness measurement into 1 component.

**Table 5-11**

| Total Variance Explained for Material Happiness component | | | | | | |
|---|---|---|---|---|---|---|
| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.844 | 71.099 | 71.099 | 2.844 | 71.099 | 71.099 |
| 2 | .525 | 13.135 | 84.234 | | | |
| 3 | .365 | 9.120 | 93.353 | | | |
| 4 | .266 | 6.647 | 100.000 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |

Using principal component analysis, one component was extracted out of variable answers to statements MH1, MH2, MH3 and MH4 of questionnaire which implicates the overall measure of material happiness aspect in materialism scale. Table 5-12shows the component loading for these four items.

**Table 5-12**

| | Component |
| --- | --- |
| **Component Matrix<sup>a</sup>** | |
| | 1 |
| MH2 | .880 |
| MH1 | .849 |
| MH3 | .846 |
| MH4 | .795 |
| Extraction Method: Principal Component Analysis. | |
| a. 1 components extracted. | |

### 5.3.4  Material Essentiality

Statements ME1, ME2, ME3 and ME4 in survey questionnaire measure the importance of material essentiality for consumers. To test the reliability of these four items KMO and Bartlett's Test were run on these four variables of collected data. Table 5-13shows the results of test.

**Table 5-13**

| Kaiser-Meyer-Olkin & Bartlett's Test results for  Material Essentiality | | |
| --- | --- | --- |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .663 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 67.540 |
| | df | 6 |
| | Sig. | .000 |

Kaiser-Meyer-Olkin measure of sampling adequacy is 0.663 which is within acceptable range. It shows that this scale of measuring the aspect of material essentiality in a consumer is adequate for principal component analysis.

Table 5-14shows the eigenvalues and percentage of variance for first four components of material essentiality variables. Only the first component have the eigenvalue greater than 1 which implicates that we can converge 4 items of material essentiality measurement into 1 component.

**Table 5-14**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.566 | 64.155 | 64.155 | 2.566 | 64.155 | 64.155 |
| 2 | .795 | 19.877 | 84.033 | | | |
| 3 | .429 | 10.728 | 94.761 | | | |
| 4 | .210 | 5.239 | 100.000 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |

Total Variance Explained spanning header applies to table above.

**Table 5-15**

| Component Matrix^a | |
|---|---|
| | Component |
| | 1 |
| ME3 | .916 |
| ME4 | .819 |
| ME1 | .770 |
| ME2 | .681 |
| Extraction Method: Principal Component Analysis. | |
| a. 1 components extracted. | |

Using principal component analysis, one component was extracted out of variable answers to statements ME1, ME2, ME3 and ME4 of questionnaire which implicates the overall measure of material essentiality aspect in materialism scale. Table 5-15shows the component loading for these four items.

### 5.3.5 Material Distinctiveness

Statements MD1, MD2, MD3 and MD4 in survey questionnaire measure the materialism from aspect ofdistinctiveness for consumers. To test the reliability of these four items KMO and Bartlett's Test were run on these four variables of collected data. Table 5-16shows the results of test.

**Table 5-16**

| Kaiser-Meyer-Olkin & Bartlett's Test results for Material Distinctiveness | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .626 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 38.833 |
| | df | 6 |
| | Sig. | .000 |

Kaiser-Meyer-Olkin measure of sampling adequacy is 0.626 which is within acceptable range. It means that this scale of measuring the aspect of material distinctiveness for a consumer is adequate for principal component analysis.

Table 5-17shows the eigenvalues and percentage of variance for first four components of material distinctiveness variables. Only the first component have the eigenvalue greater than 1 which implicates that we can converge 4 items of material distinctiveness measurement into 1 component.

**Table 5-17**

| Total Variance Explained | | | | | | |
|---|---|---|---|---|---|---|
| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.080 | 51.991 | 51.991 | 2.080 | 51.991 | 51.991 |
| 2 | 1.032 | 25.807 | 77.798 | | | |
| 3 | .590 | 14.762 | 92.560 | | | |
| 4 | .298 | 7.440 | 100.000 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |

**Table 5-18**

| Component Matrix[a] | |
|---|---|
| | Component |
| | 1 |
| MD1 | .883 |
| MD4 | .833 |
| MD2 | .739 |
| MD3 | -.243 |
| Extraction Method: Principal Component Analysis. | |
| a. 1 components extracted. | |

Using principal component analysis, one component was extracted out of variable answers to statements MD1, MD2, MD3 and MD4 of questionnaire which implicates the overall measure of material distinctiveness aspect in materialism scale. Table 5-18shows the component loading for these four items. This component inherits comparatively less loading from item MD3. The reason is explained by Figure 5-2, that is MD3 is more inclined towards the component 1 dimension whereas all other MD items are inclined towards component 2 dimension. MD3 asks about uncomfortableness when we see another person wearing this same clothes, uncomfortableness also negates happiness, so it makes sense if the MD dimension is overlapping with material happiness.

### 5.3.6  Environmental Concern

In questionnaire, 11 out of 27 statements are about environment concern in consumers. Out of these 11, 4 of them are specifically about buying behavior in term of being conscious about environment or ecological long term concern. Firstly, all these 11 questions were tested all together for adequacy. Table 5-19 shows the KMO and Bartlett's Test results. KMO measure is 0.851 which in very good adequacy range. This means we can go further with principal component analysis.

**Table 5-19**

| Kaiser-Meyer-Olkin & Bartlett's Test results for single factor deduction of EC | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .851 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 442.307 |
| | df | 55 |
| | Sig. | .000 |

When tested for variance in each component after principal component analysis for converging in single component, it was deduced that only one component can't cover all the variance percent in data of 11 environmental concern variable. Table 5-20 shows the eigenvalues and percentages of variance for all component. It can also be seen in scree plot in Figure 5-4 that eigenvalue is more than 1 for first two components. It means, environmental concern data should be extracted in at least two components.

**Table 5-20**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 6.435 | 58.496 | 58.496 | 6.435 | 58.496 | 58.496 |
| 2 | 1.590 | 14.451 | 72.947 | | | |
| 3 | .836 | 7.604 | 80.551 | | | |
| 4 | .701 | 6.377 | 86.928 | | | |
| 5 | .432 | 3.928 | 90.857 | | | |
| 6 | .381 | 3.463 | 94.320 | | | |
| 7 | .232 | 2.108 | 96.428 | | | |
| 8 | .175 | 1.591 | 98.019 | | | |
| 9 | .146 | 1.328 | 99.347 | | | |
| 10 | .038 | .342 | 99.688 | | | |
| 11 | .034 | .312 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

**Figure 5-4**



Scree Plot
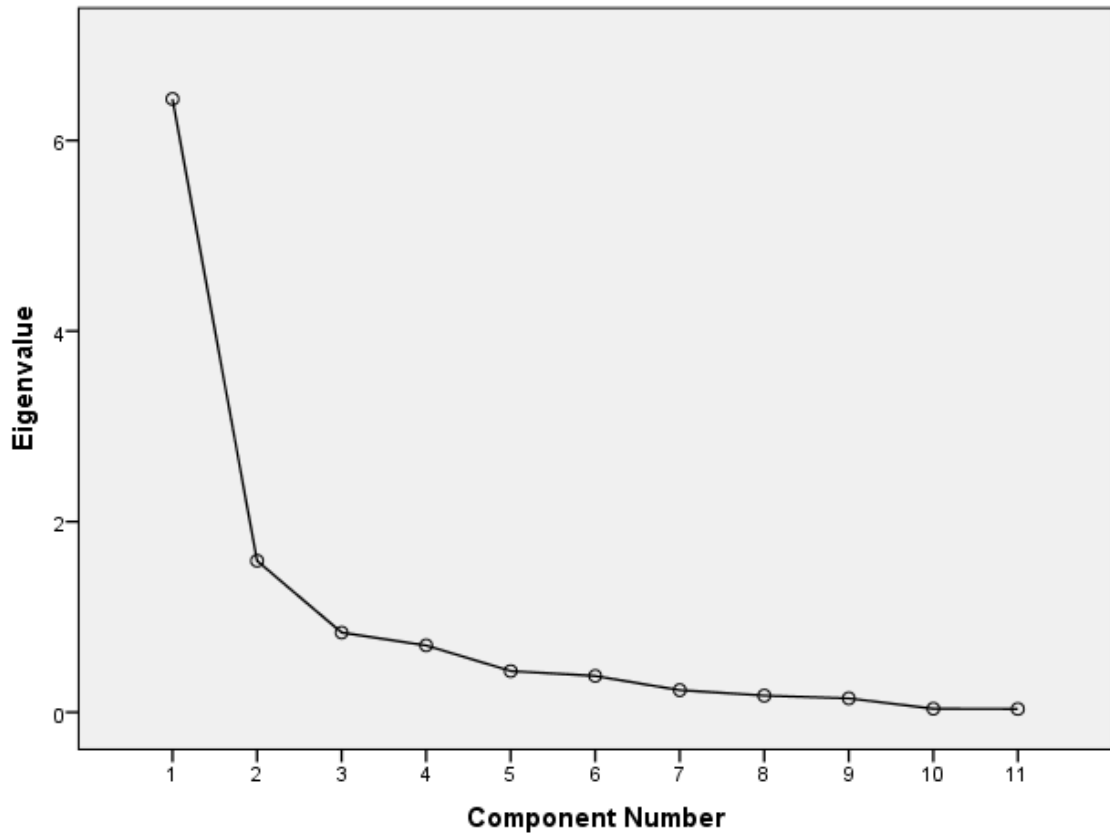
Now the question is how to divide, 11 items in two components. For this purpose, component plot in rotated space for two components was generated for all environmental concern items which can be seen in Figure 5-5. It shows that EC2, EC1, EC3 and EC11 are in different dimension as compared to all other EC items. These four EC items are specifically asking for information regarding to the buying behavior of consumers whereas all other EC items are regarding to the general environmental concern or point-of-view of consumers. So, it means that component 1 is the measure in dimension of environmental concern, knowledge and point-of-view. And component 2 is the measure in dimension of environmentally conscious behavior of consumers.

According to inclination EC items between dimension of concern and behavior, EC items can be divided in two parts:

- EC factor 1: Measure of environmental concern, knowledge and point of view.
- EC factor 2: Measure of consumer behavior regarding environmental concern.

**Figure 5-5**



Component Plot in Rotated Space
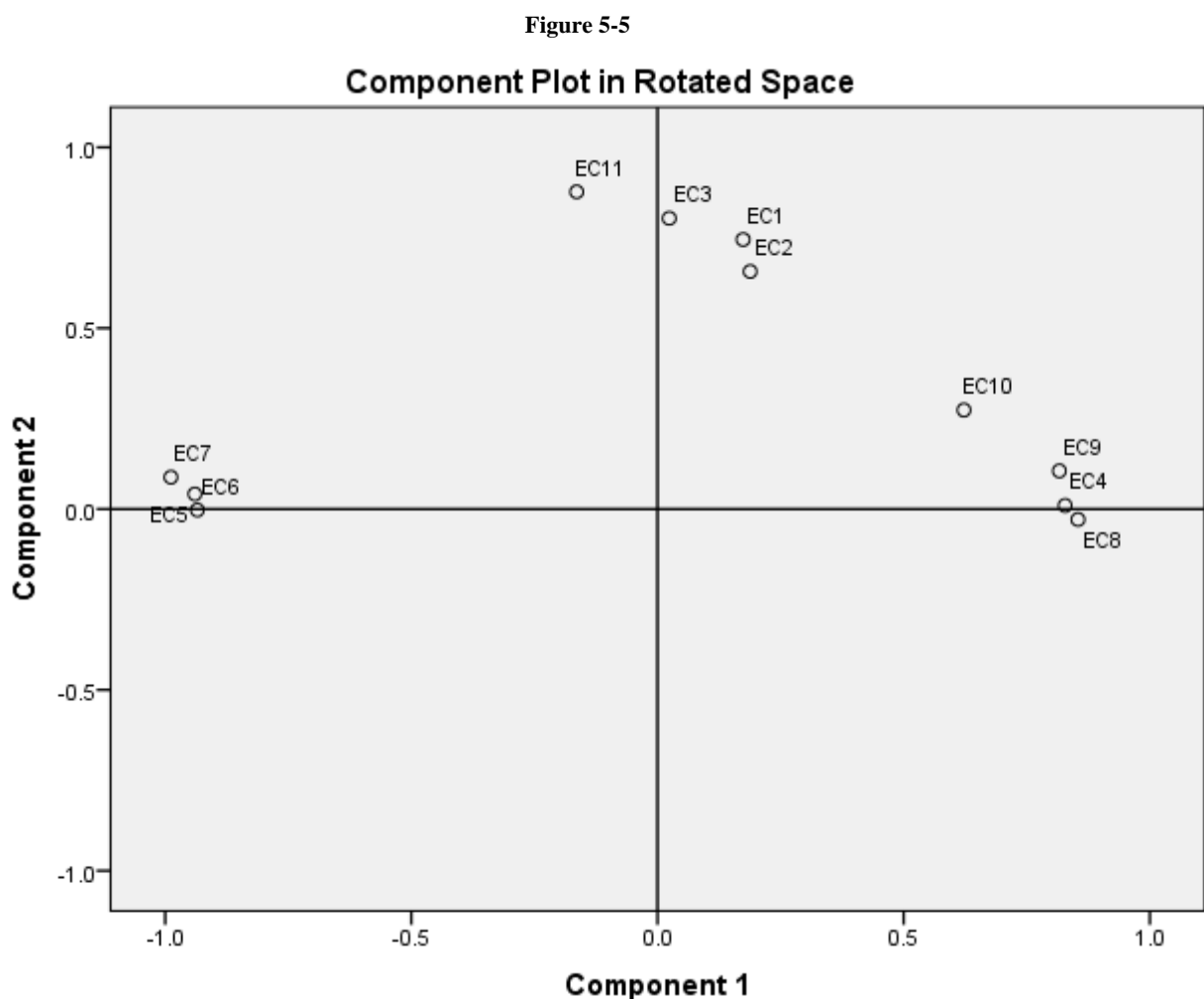
### 5.3.7  EC Factor 1

As described earlier, EC factor 1 is the measure of environmental concern, knowledge and point-of-view. Questionnaire statements EC4, EC5, EC6, EC7, EC8, EC9 and EC10 are extracted into a single component named as EC factor 1. To check whether principal component analysis is viable or not, Kaiser-Meyer-Olkin Measure of Sampling Adequacy was tested. KMO measure is 0.878 which in within the very good adequacy range. Table 5-21 shows the results.

**Table 5-21**

| Kaiser-Meyer-Olkin & Bartlett's Test results for  EC factor 1 variables | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .878 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 352.242 |
| | df | 21 |
| | Sig. | .000 |

Table 5-22 shows the eigenvalues and percentages of variances of each all components. Only first component has the eigenvalue above 1 and it also covers 76.36% variance which means we can adequately extract these 7 EC items into a single factor 'EC Factor 1' or EC (short for Environmental concern).

**Table 5-22**

| Total Variance Explained | | | | | | |
|---|---|---|---|---|---|---|
| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 5.345 | 76.363 | 76.363 | 5.345 | 76.363 | 76.363 |
| 2 | .727 | 10.389 | 86.751 | | | |
| 3 | .380 | 5.432 | 92.184 | | | |
| 4 | .256 | 3.651 | 95.834 | | | |
| 5 | .216 | 3.090 | 98.924 | | | |
| 6 | .041 | .584 | 99.508 | | | |
| 7 | .034 | .492 | 100.000 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |

Table 5-13 shows the component extraction from 7 EC variables. Minimum loading is for EC10 which is 0.77. It is within acceptable range.

**Table 5-23**

| Component Matrix<sup>a</sup> | |
| --- | --- |
| | Component |
| | 1 |
| EC7 | -.938 |
| EC6 | -.929 |
| EC5 | -.910 |
| EC9 | .877 |
| EC8 | .842 |
| EC4 | .840 |
| EC10 | .770 |
| Extraction Method: Principal Component Analysis. | |
| a. 1 components extracted. | |

### 5.3.8  EC Factor 2

As described earlier, EC factor 2 is the measure of consumer behavior in environmental context. Questionnaire statements EC1, EC2, EC3 and EC11 are extracted into a single component named as EC factor 2. To check whether principal component analysis is viable or not, Kaiser-Meyer-Olkin Measure of Sampling Adequacy was tested. KMO measure is 0.675 which in within fair adequacy range. Table 5-24shows the results.

**Table 5-24**

| Kaiser-Meyer-Olkin & Bartlett's Test results for EC factor 2 variables | | |
| --- | --- | --- |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .675 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 69.947 |
| | df | 6 |
| | Sig. | .000 |

Table 5-25shows the eigenvalues and percentages of variances of each all components. Only first component has the eigenvalue above 1 and it also covers 64.347% variance which means

we can adequately extract these 4 EC items into a single factor 'EC Factor 2' or EB (that is short for Environmentally concerned Behavior).

**Table 5-25**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.574 | 64.347 | 64.347 | 2.574 | 64.347 | 64.347 |
| 2 | .832 | 20.807 | 85.154 | | | |
| 3 | .384 | 9.592 | 94.746 | | | |
| 4 | .210 | 5.254 | 100.000 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |

**Total Variance Explained**

**Table 5-26**

**Component Matrix**[a]

| | Component |
|---|---|
| | 1 |
| EC1 | .854 |
| EC3 | .824 |
| EC11 | .770 |
| EC2 | .756 |
| Extraction Method: Principal Component Analysis. | |
| a. 1 components extracted. | |

Table 5-26shows the component extraction from 4 EC variables. Minimum loading is for EC2 which is 0.756. It is within acceptable range.

### 5.3.9  Extracted Principal Components

After applying principal component analysis, 6 components are extracted out of 27 variables. These 6 component represent a unique variability of 6 different properties. 4 of these components are the materialism measurement variables whereas other 2 are the measures of environmental concern and environmentally inclined behavior:

1.  MS: Material Success

2. MH: Material Happiness

3. ME: Material Essentiality

4. MD: Material Distinctiveness

5. EC: Environmental Concern

6. EB: Environmentally inclined behavior

Table 5-27 shows the statistics of finally extracted components. All questionnaire items of collected data are translated into 6 factors using regression analysis with coefficients of extracted components. Since they are extracted using principal component analysis, there mean is zero whereas standard deviation and variance is 1. So, we can only analyze the results of questionnaire variables by interpreting their median and mode.

**Table 5-27**

| Statistics for Extracted Principal Components | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | MS | MH | ME | MD | EC | EB |
| N | Valid | 43 | 43 | 43 | 43 | 43 | 43 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 |
| Median | | -.4735392 | -.3722354 | -.4443313 | .0785279 | -.3661624 | .1447250 |
| Mode | | -1.25211 | -1.43614[a] | -1.02187[a] | -2.02859[a] | 1.30027 | -.39864 |
| Minimum | | -1.25211 | -1.43614 | -1.55523 | -2.02859 | -1.26411 | -2.13150 |
| Maximum | | 1.93623 | 1.73908 | 1.45699 | 1.82670 | 1.30027 | 1.60400 |
| a. Multiple modes exist. The smallest value is shown | | | | | | | |

Materialism component are more inclined towards negative pole which shows that respondents consider themselves less materialistic than average of scale. Environmental concern data is inclined towards positive side which means that respondents are more concerned about environment than the average of scale. On the other side, environmentally concerned behavior data doesn't ascent towards positive side as much as environmental concern which shows that even though concern is higher than average but it is not pushing the behavior as much as it is supposed to do.

## 5.4 Correlation Analysis

The six principal components extracted were tested for Pearson Correlation among them. Table 5-28 shows the results.

**Table 5-28**

| | | MS | MH | ME | MD | EC | EB |
|---|---|---|---|---|---|---|---|
| | |  |
| MS | Pearson Correlation | 1 | .797** | .734** | -.088 | -.180 | .029 |
| | Significance(2-tailed) | | 0 | 0 | .575 | .248 | .852 |
| | N | 43 | 43 | 43 | 43 | 43 | 43 |
| MH | Pearson Correlation | .797** | 1 | .892** | -.246 | -.208 | .003 |
| | Significance(2-tailed) | 0 | | 0 | .112 | .181 | .987 |
| | N | 43 | 43 | 43 | 43 | 43 | 43 |
| ME | Pearson Correlation | .734** | .892** | 1 | -.207 | -.239 | -.004 |
| | Significance(2-tailed) | 0 | 0 | | .182 | .122 | .982 |
| | N | 43 | 43 | 43 | 43 | 43 | 43 |
| MD | Pearson Correlation | -.088 | -.246 | -.207 | 1 | -.201 | -.055 |
| | Significance(2-tailed) | .575 | .112 | .182 | | .197 | .728 |
| | N | 43 | 43 | 43 | 43 | 43 | 43 |
| EC | Pearson Correlation | -.180 | -.208 | -.239 | -.201 | 1 | **.545**** |
| | Significance(2-tailed) | .248 | .181 | .122 | .197 | | 0 |
| | N | 43 | 43 | 43 | 43 | 43 | 43 |
| EB | Pearson Correlation | .029 | .003 | -.004 | -.055 | **.545**** | 1 |
| | Significance(2-tailed) | .852 | .987 | .982 | .728 | 0 | |
| | N | 43 | 43 | 43 | 43 | 43 | 43 |

Correlations among six principal components

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

The highest correlation is between EC and EB, which means environmental concern is a stimulus for environmentally concerned consumer behavior to a significant extent. This proves out first null hypothesis is rejected (H1).

Other than EC and EB, there is no significant correlation among components. However, we can deduce the polarity of correlation with slight higher person correlation values. All the correlation between environmental concern and materialisms components are negative, it means that materialism in an individual somewhat minimizes the environmental concern and vice versa. But this, correlation is not significant, therefore we can't reject null hypothesis about relation between environmental concern(EC) and materialism (H3). Also, there is not any significant negative correlation between environmentally concerned consumer behavior(EC) and materialism, therefore null hypothesis isn't rejected (H2).

# 6 IMPLICATIONS AND DISCUSSION

## 6.1 Implications

Data analysis has shown that out of three assumed hypotheses only one is not rejected. Which means:

- There is a significant positive relationship between environmental concern and environmental consumerism.
- There is no significant relationship between materialism and environmental consumerism. However, there is a slight negative correlation between the two but not enough to reject the null hypothesis.
- There is no significant relationship between materialism and environmental concern. However, there is a slight negative correlation between the two.

To interpret it in the marketing context, we can easily say that the consumers (essentially, the respondents of our questionnaire) are not quite much motivated towards the environmental consumerism. Still, materialism weighs heavy in the scale. However, it doesn't mean they didn't show any concern about environment. Since, the component EC tends to be above average, it means although consumers are aware of alarming situation of environment but they aren't ready to take any unmaterialistic action to do some good ecologically.

## 6.2 Discussion

The outcomes show that general environmental concern is positively associated with consumer's buying decisions when it comes to behaving responsibly for the sake of environment. In other words, we can say that environmental friendly consumer behavior roots from the concern for the environment as many other studies also implicated this.

One of the objectives of this research was to evaluate if environmental concerns of people affect their consumer behavior. From the results, it may be inferred that sample consumers tend to be environmentally concerned and are also aware about environment related issues. Within the sample limitations of this research, it may also be indicated that consumer'senvironmental concern is a possibleforecaster of their inclination towards environmental consumerism, although such inferences may only be drawn after a more extensiveresearch based on a widely and randomly generated data. This study introduced materialism in comparison to materialism, to see if given the choices of either materialistic

benefits or broad scale benefit for whole humanity, what a consumer inclined to choose, well it turns out, choice of materialistic desires is still heavier in Pakistan.

The second objective was to determine how materialistic desires are influencing buying decisions of consumers. Materialism scale adopted from Trinh, Viet Dung, and Ian Phau (2012) provided very consistent results and show a high correlation among all the aspects of materialism. Analysis shows that the only aspect of materialism that is above average is material distinctiveness which means people are willing to buy products which make them stand out from other. Other three aspects were, however, below average which is not unexpected given that people gave their subjective point of view of themselves. No one likes to consider him/herself a materialist.

The thirdobjectives of this research was based on relationship between materialism and environmentalism, but this study showed that there is not any significant relationship. May be, with the larger sample size, significant may get more prominent. Within the research frame of this study we can only say that materialistic desires of a consumers don't mingle with their environmental concern and these both values in consumer's behavior effect their buying decisions independently.

This study also suggests that educated Pakistan consumers are aware about the environment but not much concerned when it comes to buying if compared to their materialistic desires. There is also the factor of hopeless which can be deducted from item EC6 and EC7 of questionnaire. There statements asked about the point of view of consumers. The mean of all responses is above average which shows that consumers don't believe that action of one individual can't make a difference, so nothing can be change that easily. This hopelessness is rooted in the psychological social biases discussed in literature review. Culture of society is playing a role here. Since, most of the Pakistan's population is unaware of circumstances which be causing this culture of non-difference to the harm on environment. Our sample, which was also part of this culture, although education, was even aware of the harm being done on environment still showed the behavior of indifference towards environment.

The relation among the components of materialism shows that there is a consistency among all aspects of materialism except for material distinctiveness. Material distinctiveness mean is higher as compared to other materialism aspects andit's inclined towards agreeableness in contrast to other three aspects. It means that wanting to be unique and different from others is the major underlying factor for materialism in our sample consumers.A review upheld this

idea by looking at the contrasts between the consumption examples of materialistic and non-materialistic people, and established that non-materialistic people spent more cash on experiential consumption (i.e., travel), which gave a more noteworthy and more supported feeling of fulfillment (Carter and Gilovich 2010, 2012; Tatzel 2002). Generally speaking, without being as outrageous as non/hostile to materialists, pro-environmental qualities are connected with diminished longing for material ownership, which prompts to improved consumer well-being.

# 7 CONCLUSIONS AND RECOMMENDATIONS

## 7.1 Conclusion

As we move forward to era of sustainability, the need for sustainable development is growing. Aim of this research was to investigate whether consumers of Pakistan are ready to purchase sustainable goods at a higher cost for the sake of environment also keeping in view their materialistic desires which are assumed to be harmful for environment. The results of this research illustrate that, although there is significant concern about environment in educated consumers of Pakistan but it's not likely that environmental concern will cause an environmental friendly behavior.On the other hand, this research also, deduced that how materialism and its four aspects are effecting decisions of consumers' buying behaviors. Materialism doesn't necessarily counter play with environmental concern but effects the consumer behavior as a whole. There is still a lot of gap in research on relationship between environmental concern and materialism.

## 7.2 Limitations

There were two major limitations to this study. The instrument of research had to be chosen very carefully, yet it didn't help in acquiring the quality data. Due to biases and heuristics in human nature, it is not easy to get objective results. Furthermore, untruthfulness also caused a hurdle in data collection and analysis.

Second limitation was the limited sample. Due to repeated data collection, time allocated for data collected and rate of collection was effected. Also, a widespread sample was not accessible therefore, most of the sample included students from big cities only. Considering consumers other than students and rural population could have improved the significance of results.

## 7.3 Recommendations

We have come to know in this study, that preference for material benefit is still higher in Pakistan. But unfortunately, such consumer trend can't go further than twenty years as anticipated by current trends. To keep up with the changing winds, marketers need to make a shift in consumerism culture. We have deduced in this study that concern isn't causing enough behavioral change due to cultural context of consumerism, therefore a change on social level is needed instead of individual level. The secret of changing mindset of

consumers towards sustainability leis in the academic research of psychology of sustainability. So, it is recommended that marketers and researchers should first understand the underlying causes of what is obstructing the social level change in consumerism before introducing the environmental consumerism in market.

When questionedopenly, people fervently negate that their actions could be affected by trends or widespread beliefs. However, we have biologically oriented ourselves to worry about what others think of us and try to make adjustment in our behavior. This is the resultant of our evolution: the first human beings who were not accepted from their group, seemed almost safe to internalize. Due to this biological orientation, everyoneadopts and act on messages from others, about the kind of behavior and beliefs accepted in society, Along with this, people undermine the extent to which they affect these social messages. In essence, people tent to adopt their behavior to the social default. Since marketers play an important role in setting the social default, so by setting sustainability a social default we can introduce a change at social level of consumer behavior.

## 7.4   Area of further research

There is a lot of research being carried in environmental consumerism since it's the essential part of lifestyle of next decade. Still there is a lot of literature gap when it comes to how to influence a change in consumer behavior. Psychology of sustainability sheds light on such behavioral patterns. But within the context of developing nation where the level of poverty is higher and level of consumer well-being is lower, there is a high chance that consumers will not get used to of environmental consumerism as easily as consumers in developed nations. Therefore, it is recommended that research should be carried on the path that takes developing nations toward sustainability.

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