

# SKYLINE BUSINESS JOURNAL

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## EDITORIAL

This issue brings about a defining moment in the SBJ journey of scholarly pursuits. The editorial board has been enlarged and quite a few reputed academics have been co-opted. With their vast experience SBJ will surely grow from its current strength to strength of another level.

Eight research papers have been included in this issue along with regular features of 'book-review' and list of forthcoming conferences. Issue of corporate social responsibility has been raised in regard to institutional investment in one of the papers that presents a model of impact of CSR on institutional investment and institutional ownership and concludes that a positive and significant relationship exists. One paper examines the comparative buying behavior of rural urban consumers towards the purchase of mobile phones. There are in all four research papers with the Gulf Region as the focus of their studies. There is a paper on consumer behaviour and demographics which investigates young female UAE nationals' cosmetics buying pattern. In another paper consumer experiences have been explored in regard to toll-free numbers again in the UAE. In another paper a comparative analysis of the performance of various stock markets operating in the GCC (Gulf Cooperation Council) countries is the focus. The implication towards possible B2C e-Commerce adoption in the retailing operations of the region is addressed in yet another paper.

The editorial team of SBJ thanks all its patrons and contributors for continued support and wants to clarify that the process of review and publication is a lengthy process and any delay is inadvertent. The team urges all readers and well wishers to have patience and bear with us. We at SBJ are committed to quality and wish to reach out to a wider audience. The team is working out a plan to further expand its offerings and the next issue will see a few more features added.

**Dr. Amitabh Upadhya**

Editor-in-Chief



# Managing Risk for Green Supply Chain Management: Competitive Strategies for Manufacturing Companies

*R.C. Walke, Vinay Topkar, Sajal Kabiraj*

## *Abstract:*

*The roll-out of the ISO 14001 Environmental Management System (EMS) is in fact driving this type of transition towards a time where environmental friendly practices are no longer be an optional business practice, but rather a competitive necessity for survival. In the process of evaluating the environmental consideration, companies need to shift its paradigm from the conventional departmental time-static worldview to a more holistic perspective which can effectively enable the observers to envision the interconnection between economic growth, environmental and social responsibility. Such efforts will eventually result in cleaner, safer operations, reduced usage and acceptable substitutions for hazardous substances, increased product recyclability and recovery, and improved transparency of information available to all stakeholders. The primary objectives of this research paper is to explore the antecedence outcome effects of (i) Sustainable Development in creating the Green Value Chain; and (ii) Green Value Chain in creating the Sustainable Competitive Advantage, for the manufacturing companies in India*

**Keywords:** *Green Value Chain, Sustainable Development, Sustainable Competitive Advantage*

## **Introduction**

Towards the inception of new millennium, the world has quickly taken an entire new look against the evolution of novel manufacturing practices in the wake of growing environmental conscious (Zhu & Dou, 2007), whereby companies attempt to out-perform each other through creation of a nexus of Sustainability Development strategies via implementation of various environmental initiatives along the value chains (Handfield et al., 1997; Arifin et al., 2009) which span across the entire customer order cycle, start right from the beginning of raw material procurement, systematically trading through the designing, manufacturing, assembling, packaging, and logistics stages, and finally deliver to the hands of customers via distribution networks (Grunert & Hildebrandt, 2004).

The roll-out of the ISO 14001 Environmental Management System (EMS) is in fact driving this type of transition towards a time where environmental friendly practices are no longer be an optional business practice, but rather a competitive necessity for survival (Handfield et al., 1997). Grunert and Hildebrandt (2004) ascribed the changes that companies undertake toward development of special skills for adaptability and innovativeness to the environmental dynamics forces. These green trends of conserving the Earth's resources and protecting the environment are thereby exerting irresistible pressures on corporate manufacturing practices, and hence anew the entire manufacturing culture through rapid globalization influences, especially with the advancement of the information technology system (Chien & Shih, 2007).

In the process of evaluating the environmental consideration, companies need to shift its paradigm from the conventional departmental time-static worldview to a more holistic perspective which can effectively enable the observers to envision the interconnection between economic growth, environmental and social responsibility (Setthasakko, 2009). Such efforts will eventually result in cleaner, safer operations, reduced usage and acceptable substitutions for hazardous substances, increased product recyclability and recovery, and

improved transparency of information available to all stakeholders (Dawes, 2009).

## **1.1 Evolution of Green Value Chain**

The concept of a value chain has assumed a dominant position in the strategic analysis of industries over the past decades (Peppard & Rylander, 2006). Following a wave of change termed as Business Process Reengineering (BPR), that began in 1990s (Figure 1), manufacturing companies worldwide started to give due emphasis on the crucial importance of processes in value creation and management by adopting TQM and JIT management tools (Hammer, 1990). The subsequent impetus which further stressed the need for companies to develop technology-based and organizational competencies that could not be easily imitated by their business rivals was boosted under the second wave of change which was termed as Core Competency Movement (CCM) (Hamel & Prahalad, 1994). The confluence of the Business Process Reengineering and Core Competency movement had eventually engendered in unbundling of value chains, outsourcing, and innovations in contracting and supply chains. The trends which was centered on the supply chain has inspired similar trends at the corporate level as companies evolved from lean operations to lean enterprises and then to lean consumption (Kleindorfer et al, 2005).

As the new economic order unfolded, and concurrently, there has been increasing public attention placed on the overall condition of the natural environment. Manufacturing companies started to realize and recognize that the long-term success of companies actually lies not only on the profitability of business, but also the future of people and the future of the planet Earth. Waste generation and depletion of natural resources are said have outstripped the earth's ability to recuperate (Beamon, 1999). These new legitimacy concerns, which are being captured in the concept of 3P namely People, Profit and Planet. , are well aligned with the concept of Sustainable Development.

Another relatively new concept which is well in line with the green value chain concept is termed as Environmental Responsible Manufacturing (ERM). Fundamental to ERM rests on the recognition that pollution, irrespective of its type and form, is all waste. By minimizing waste, companies can reduce disposal costs, and permit requirements, avoid environmental fines, boost profits, discover new morale, protect and improve the state of the environment (Curkovic, 2003). The inception of 21st century sees the emergence of another imperative modern manufacturing strategy namely Green Manufacturing, which integrates all issues related to manufacturing with ultimate goal to reduce and minimize environmental impact and resource consumption during a product life cycle inclusive of designing, synthesis, processing, packaging, transportation, and the use of products in continuous or discrete manufacturing industries. Pursuing the Green Manufacturing strategy would enable manufacturing companies to effectively allay the environment burdens (Tan et al., 2002).

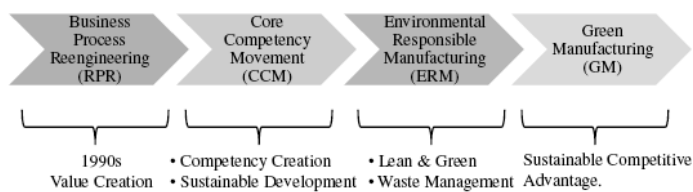


Figure 1: Evolution of Green Value Chain

In view of the increasingly wide-spread adoption of the ISO 14001 standards, it is expected that there will be reaching such a time where emphasis on Green Value Chain (GVC) via implementation of the Environmental Management System will sooner or later become a norm among the manufacturing companies in India, whereby benefits of which are evidently clear, such as increasing in overall operating efficiency; reduction in energy usage; cost saving through recycling of product inputs; improved product and service quality; less rejects and reworks; reduced packaging cost etc. (Tan, 2005). Extensive literature review indicated that most of the research studies carried out thus far is in fact:

- i. Merely concentrated on Green Supply Chain management per se (Beamon, 1999; Ofori, 2000; Hervani et al., 2005; Zhu et al., 2005; Ferretti et al., 2007; Chien & Shih, 2007; Zhu & Dou, 2007; Simpson et al., 2007; Zhu et al., 2008) and in most of the circumstances, these researches tend to focus on single aspect such as Green Purchasing (Green et al., 1998; Geng & Doberstein, 2008), Green Design (Madu et al., 2002; Pujari et al., 2003; Knight et al., 2009), Green Production (Tan et al., 2002; Taylor, 2005), Green Consumption (Spaargaren & Mol, 2008) etc., as oppose to investigate from the perspective of Green Value Chain (Sarkis & Rasheed, 1995; Caldwell & Smallman, 1996; Handfield et al., 1997; Solvang et al., 2006; Dahlstrom & Ekins, 2006).
- ii. Only covered the ostensible aspects of Green Value Chain and the linkages with its antecedence such as Sustainable development (Callens & Tyteca, 1999; Bond et al., 2001; Mog, 2004; Gandhi et al., 2006).
- iii. Rarely covered the linkage between Green Value Chain

and Sustainable Competitive Advantage (Rao & Holt, 2005).

From the aforementioned findings, it can be inferred that albeit more and more management theorists have begun to consider ecological and green sustainability as a study framework for organization, little prior theories exist to ground testable hypotheses concerning the antecedence outcome effects of Sustainable Development towards creation of Green Value Chain and therefore, the Sustainable Competitive Advantage. Lacking understanding of which may culminate in underestimating the important and crucial roles lead by these very important drivers in the efforts of creating effective sustainable strategies for the manufacturing companies.

## 2.0 Literature Review

Increasing awareness of environmental protection worldwide, and the pressure accompanying globalization has prompted manufacturing companies to improve their environmental performance (Chien & Shih, 2007), and to address all environmental related issues in order to maintain customers, exist, and thrive in an ever more critical global economy (Chavan, 2005). This environmental preoccupation appeared to become part of Sustainable Development (Callens & Tyteca, 1999). Sustainable Development often been cited as one of the main mechanism for changing the economic growth. Nevertheless, one of the main barriers to sustainable industrial development rests on how to implement these sustainable strategies or more importantly, how to introduce them into the existing practices whilst ideally improving competitiveness (Baldwin et al., 2005).

### 2.1 Value Chain versus Supply Chain

The Value Chain concept, which was epitomized by Porter (1985), defined "value chain" as the combination of nine generic value added activities that work together and are being practising within a company to provide value to customers. Value, within the context of Michael Porter's Competitive Advantage framework, is being perceived as the amount buyers are willing to pay in return for what a company provides. According to Houlihan (1987), the value created is then managed through what has been referred to as the supply chain. Al-Mudimigh et al. (2004) and Feller et al. (2006) had later extended the definition of value to a broader extend:

- i. Value is perceived by the customers rather than objectively determined by the seller;
- ii. Value is a subjective experience that is dependent on context and varies in the eyes of the beholder;
- iii. Value occurs when needs are met through the provision of products, resources, or services; and
- iv. Value is an experience, and it flows from the customers.
- v. Value typically involves a trade-off between what the customers receive and what they give up to acquire and use a product or service.



Dekker (2003) defined value chain as the horizontal linked set of value-creating activities all the way from basic raw material sources for component suppliers through the ultimate end-use product delivered into the hands of final customers. The primary focus in value chains is downstream-pivoted, mainly on the benefits that accrue to customers, the interdependent processes that generate value and the resulting demand and funds flows that are thereof created. Because value is derived from customer needs, activities that do not contribute to meeting these needs are being considered as “non value-added” waste which deserved attention and actions (Feller et al., 2006). By continuously improving material transformation process, a manufacturing system aims to constantly reduce costs and increase value-added to its products and services (Solvang et al., 2006). Hence, effective value chains will eventually lead to top line improvement or profit generation. In addition to these underpinning traditional dimensions, the connotation of value chain has been evolved, further refined and extended to embed environmental aspects. The newly transformed concept is emerged as Green Value Chain. In order to be successful with the environmentally-friendly practices, environmental strategies must be integrated into all stages of the value chain (Feller et al., 2006).

Rabelo et al. (2007) defines supply chains as life cycle processes to support the physical, information, financial, and knowledge aspects for moving products and services from suppliers to customers. Ketchen et al. (2008), on the other hand, defines supply chain as a system of people, activities, information, and resources involved in creating a product and then moving it to the customer. As the name implies, the primary focus in supply chains is upstream-pivoted, mainly on integrating supplier and producer processes, reducing waste and costs, improving efficiencies of supply, and the flow of materials from their various sources to their final destinations. The goal of managing the supply chain is the creation of value for both customers; in the form of high quality products, and the supply chain partners; in the form of increased profits. Efficient supply chain management will lead to bottom line improvement or costs reduction (Feller et al., 2006; Rabelo et al. 2007). An integrated supply chains flowing from supplier, to manufacturer, to customer and reverse logistics, which is closing the loop is termed as Green Supply Chain Management (GSCM) (Zhu et al., 2005). Similarly, when green purchasing, green manufacturing, green distribution, green marketing and reverse logistics are being combined together, they form what is termed as Green Supply Chain Management (GSCM) (Chien & Shih, 2007).

According to Al-Midimigh et al. (2004), value chain management is concerned primarily, with the customer from start to finish whereby supply chain becomes only a subset to value chain. Feller et al. (2006) summarized the relationship between a value chain and a supply chain as complementary views of an extended enterprise with integrated business processes, which enable the flows of products and services in one direction, while value as represented in terms of demand and cash flow in other direction (Figure 2).

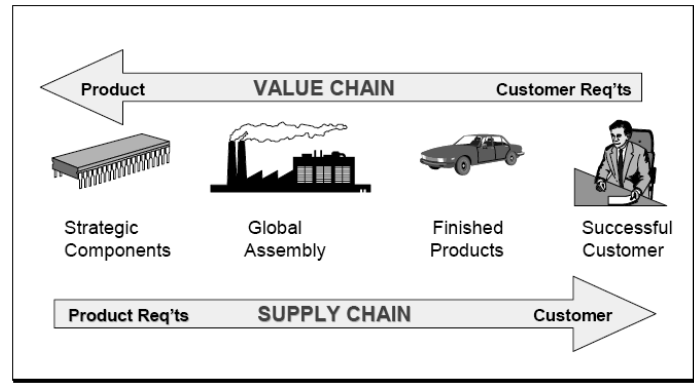


Figure 2.0: Value Chain versus Supply Chain (Feller et al., 2006)

These various definitions denoted by different authors had been summarized in Table 1 for ease of reference. Based on the preceding discussion and by integrating the salient concepts of all authors, value chain can be redefined as an upstream flow of value, in the form of demand or specifications, from customers to supplier via both the horizontal and vertical linked-set. Whereas the supply chain is a downstream flow of value-created, in the form of product and service, from the source to the customers via both the horizontal and vertical linked-set. Green value chain and green supply chain can be created by taking into consideration of the mitigation plan to allay the environmental aspect and impact. These definitions will be adopted throughout the entire research study.

Table 1: Value Chain versus Supply Chain

No	Value Chain	Supply Chain
1	Combination of nine generic value added activities that work together and are being practising within a company to provide value to customers (Porter, 1985).	Tool to manage value created (Houlihan, 1987).
2	The horizontal linked set of value-creating activities from basic raw material sources for component suppliers through the ultimate end-use product delivered into the hands of final customers (Dekker, 2003).	The vertical linked set of value-creating activities between the firm and its buyers and suppliers (Dekker, 2003).
3	Concerned primarily, with the customer from start to finish whereby supply chain becomes only a subset to value chain (Al-Midimigh et al., 2004).	A downstream flow of goods and supplies from the source to the customers (Feller et al., 2006).
4	An upstream flow of value, in the form of demand, from customers to supplier (Feller et al., 2006)	Life cycle processes to support the physical, information, financial, and knowledge aspects for moving products and services from suppliers to customers (Rabelo et al., 2007).
5	A traditional production or assembly supply chain with added component of service (Rabelo et al., 2007).	A system of people, activities, information, and resources involved in creating a product and then moving it to the customer (Ketchen et al., 2008).

## 2.2 Antecedents of Green Value Chain

Companies are today facing increasing demands from various stakeholders concerning the environmental performance of their products and processes, whereby public authorities place growing demand on companies' environmental performance to comply with legal and other requirements, customers are asking for green products, employees and neighborhood residents are concerned about the health and safety aspects of production and non-governmental organizations are pressing companies for sustainability (Pesonen, 2001). Future sustainable competitiveness is therefore closely dependent on as to what extent the manufacturing companies are greened and being environmental friendly.

In recent years, both regional and global attention has been given to the integration of economic, social and environment in a coherent form of eco-industrial development which seeks to increase business competitiveness, reducing waste and pollution, and improving working environment. Deepening environmental concerns and perceptions of increased risk to health and safety of community residents from industrial activities keeps on pressing corporations to adjust their actions evolutionary to accommodate to these changes by developing strategies and prioritizing environmental tasks (Stormer, 2008). From being perceived as a cost center, environmental management is now gaining wider acceptance as a legitimate business factor and is being viewed as a profit center whereby creating opportunities through innovation becomes a new focus of creating competitive advantage. Hence, current and future developments are expected to evolve to a process of deeper integration where products and processes are designed on the basis of environmental criteria (Stormer, 2008).

In brief, green initiatives can be driven by a combination of drivers – legal compliances, corporate citizenship, environmental protection, sustainable development, as well as long-term sustainable competitive advantages in terms of economic opportunity in the form of potential cost reductions and new marketing opportunities. In fact, the most compelling reason for organizations adopting lean is the economic and environmental benefits of going green (Dawes, 2009). Therefore, it is now imperative to analyze the entire life-cycle effects of all products and processes (Beamon, 1999; Pujari et al., 2003; Knight & Jenkins, 2009). Hervani et al. (2005) had identified competitive forces as primary reason that caused organizations to look externally to determine how to sustain long-term competitive advantage; and stakeholders as secondary reason that caused organizations to explicitly consider the environment in their strategic and operational planning execution. In addition to these, objective evidence presented by Clemens & Douglas (2006) also ascertained that external institutional force such as regulation or legislation play major roles in encouraging companies to adopt voluntary green initiatives. Nevertheless, sustainability is expected not only to be limited by merely going on green, but has to be extended to other dimensions such as Social Corporate Responsibility (Millen & Walker, 2009).

### 2.2.1 Sustainable Development

Sustainable Development (SD) is being defined by the World Commission on Environment and Development as “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Kleindorfer et al. (2005) suggested that the evolution towards sustainable operation shall therefore be integrated into three areas, namely (i) Green product and process development; (ii) Lean and green operation management; and (iii) Remanufacturing and closed-loop supply chains. Gandhi et al. (2006), through their Four Forces Model, advocate that the process leading towards Sustainable Development (SD) is in fact being driven by four forces, namely (i) Unsustainable Development; (ii) Environmental Degradation; (iii) Greening Force; and (iv) Greening Process. The causal relationship among the various constituents has been delineated as follows:

- (i) Current Unsustainable Development will result in current Environmental Degradation, and its effect is Greening Force.
- (ii) This Greening Force, in turn, will result in Greening Process, and its effect is future Sustainable Development.

According to Institutional Isomorphism Theory, Greening Force can be further classified as (i) Coercive Force e.g. law or regulations; (ii) Normative Force e.g. Society and professional organization; and (iii) Mimetic Force, where the companies have desire to be market leader (Sharfman et al., 2004). Albeit there exist barriers owing to psychological, organizational, institutional, and economic influences throughout the process of adopting the sustainable technologies in the manufacturing process (Baldwin et al., 2005), extensive studies showed that companies can actually create Sustainable Development through environmental initiatives along the entire length of value and supply chains (Caldwell & Smallman, 1996; Handfield et al., 1997; Setthasakko, 2009; Markley et al., 2007; Vachon & Mao, 2008). In fact, manufacturing companies in industrialized nations had demonstrated that the benefits gained from embarking Environmental Management System are related to green and efficient operation. This is particularly important for newly industrialized countries where Sustainable Development is lacking (Tan, 2005).

### 2.2.2 Corporate Social Responsibility

Corporate Social Responsibility (CSR), which is the main tool to implement sustainable development (Streimikiene et al., 2009), is being defined by the European Commissions as a concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment by integrating social and environmental concerns in their business operations and in their interaction with their stakeholders (COM, 2001). For decades, this popular concept, which appears to be a new battle ground for sustainable competitive advantage, has been a subject of intense debate among the scholars, practitioners and theorists. CSR, in fact, centers on the idea that a corporation may be held socially and ethically accountable by an expansive array of stakeholders such as employees, consumers, governments, communities, NGOs, investors, supply chain members, union, regulators, the media, and even the broader society including future generations (Maloni & Brown, 2006).

Meehan et al. (2006) suggested that a successful corporate responsibility orientation requires the presence of three simultaneous elements i.e. (i) Ethical and social commitments, (ii) Connection with partners in the value network; and (iii) Consistency of behavior over time to build trust. Ethical and social commitments represent the values element of social resources which comprise the ethical standards and social objectives the organization subscribes to and are manifested in its mission, strategic objectives, strategy programmes, organizational policies and corporate culture. When organization-wide commitment to robust ethical standards is deficient, due to a consistent focus on short-term profits across the value network, corporate legitimacy will likely to decline. The structure of relationship within the value, on the other hand, is the means through which a joint implementation of

a socially oriented value network is achieved. Where an individual organization espoused a commitment to particular social values, but fails to work towards their dissemination within the wider value network, a stakeholder deficit will prevail. Consistency, however, refers to the behavioral element of social resources over time and across all facets of an organizations operation. Failure to consistently behave in line with the stated value commitments, using externally assured social auditing systems, will ultimately result in Corporate Social Performance deficit. As summary, weakness in one of these three elements will engender in a failure to adequately achieve a real corporate responsibility orientation.

In the light of the recent upsurge of environmental concerns worldwide, there emerges a new terminology i.e. Ecological Citizenship. Concept of which outlines demand of citizens to be free from environmental risks inflicted on them by others, irrespective of whether these risks are originated from inside or outside of the territory of the nation-states they belong to. With the increase of both formal and informal transnational networks for environmental politics and governance, and strengthened very much by the upsurge in information governance, the post-national forms of ecological citizenship will gain most likely considerable importance in the near future (Spaargaren & Mol, 2008). Customer's environmental performance requirements can sometimes have a positive influence on a supplier's strategic level of commitment toward its environmental responsibilities. Increasing levels of the supplier's strategic environmental commitment is, in turn, expected to have a positive impact on the supplier's environmental performance. Therefore, by encapsulating environmentally relevant goals, practices or technologies within supply chain, large organizations can, through imparting new knowledge and green environmental concept, provide a modus for organizations to extend their goals of CSR, communicate their commitment to such goals and provide a leadership role to their suppliers (Simpson et al., 2007). Business benefits that derive from CSR activities can be classified into five main areas, namely (Weber, 2008):

- i. Positive effects on company image and reputation;
- ii. Positive effects on employee motivation, retention, and recruitment;
- iii. Cost savings;
- iv. Revenue increases from higher sales and market share; and
- v. CSR-related risk reduction or management.

### 2.3 Outcomes of Green Value Chain

The increasing importance of the environmental management concerns in business has eventually required operations management and value chain managers to carefully reevaluate their actions and influences owing to the very intimate relationship between value chain activities and the environmental footprint of a company (Handfield et al., 1997). Greening the value chain, thus, becomes an important consideration for breaking through the competition in creating sustainable competitive advantage for future survival of many industries (Rao & Holt, 2005).

In a survey conducted by Tan (2005), the main three major "reason-grouping" indicates that manufacturing companies in India generally adopt Environmental Management System attributable to (i) aiming at gaining competitive advantages; (ii) aiming at gaining government incentives; and (iii) influence from authoritative parties such as parent companies. Chavan (2005), on the other hand, grouped these benefits into eight broad categories i.e. (i) Clean and green operation; (ii) Effective operations; (iii) Profitability; (iv) Competitive product or service; (v) Market expansion; (vi) Improvement in company image; (vii) Improvement in management; and (viii) Others.

According to Gandhi et al. (2006), greening of value chain will finally lead to future sustainability via formation of win-win alliance with regulatory, community and consumers. Hence, greening shall no longer be perceived as merely to reduce environmental impact, but also to improve efficiency and sustainable competitive advantage (Gandhi et al., 2006), whereby environmental profits are believed can be realized through achieving eco-efficiency via reducing of material flows and increasing resource productivity; using of biodegradable goods which avoid toxic emissions and waste generation etc. This implies that the strategy of the corporation has to be continually adjusted. In reality, sustainable strategies that managed to seize value-creation opportunities offers significant competitive advantages for early adopters and process innovators (Miller & Walker, 2009). Despite of various possible outcomes as being expounded in the preceding discussion, these outcomes are believed will eventually converge towards supporting the Sustainable Competitive Advantage. Hence, in this research study, Sustainable Competitive Advantage will be deemed as the sole outcome of the research interest.

#### 2.3.1 Sustainable Competitive Advantage (SCA)

Sustainable Competitive Advantage is a key to ensure a sustained, superior long-term performance (Bharadwaj et al., 1993; Lado & Wilson, 1994). According to the industrial-organization economics, sustainable competitive advantage is based on strategic positioning of companies within an industry. Mobility barriers within an industry are the first major factor that sustains competitive advantage (Baaij et al., 2004). The ability of some companies to exploit the environment issue as a competitive advantage has turned eco-efficiency in an opportunity to improve production process performance by means of new cleaner technologies, process modifications and appropriate management practices. Analyses had demonstrated that environmental management towards cleaner production processes has now been shifted from a compliance point of view into a strategic issue which supports company's long-term competitiveness (Cagno et al., 2005).

The sources of Sustainable Competitive Advantage can be classified according to four types of capability differential viz. (i) Functional differential; (ii) Positional differential; (iii) Cultural differential; and (iv) Regulatory differential (Coyne, 1986; Hall, 1992). Functional differential results from the knowledge, skill and experience of employees and other stakeholders within the value chain. When this know-

how can be utilized to produce products which will maintain and win the market share, Functional differential is created. Cultural differential includes the habits, attitudes, beliefs and values, which permeate individuals and groups throughout the entire organization. Positive organizational culture will most likely render to competitive advantage. Positional differential is closely associated with a consequence of past action which led to creation of reputation, goodwill, or a special vantage position in marketplace etc. Besides contributing to competitive advantage, Positional differential also leads to a defensible position. Regulatory differential results from the possession of legal entities such as intellectual property rights, contracts, trade secrets etc. Similar to Positional differential, Regulatory differential also leads to a defensible position, attributable mainly to protection by law (Coyne, 1986; Hall, 1992).

## 2.4 Green Value Chain and Sustainable Competitive Advantage

The concept of Sustainability is inherently difficult to define in the light of its specific meaning and practical applications are in nature (a) highly dynamic – as a result of constantly seeking for balance in the face of shifting background conditions; (b) largely indefinite – as a result of being based on necessarily abstract, context-specific, and very long-term goals; and finally, (c) highly contested – as a result of the interweaving human values, perceptions and competing political interests evoked by the concept. These important attributes are in clear contrast against those of the one-time improvements in policy, practices, infrastructure, technology etc. that can be easily eroded over time (Mog, 2004). In general, competitive advantage can result either from implementing a value-creating strategy not simultaneously being implemented by any current or potential competitors or through superior execution of the same strategy as competitors, and sustainability is said had been achieved when the advantage resists erosion by competitor behavior (Bharadwaj et al., 1993). In the context of Green Value Chain, companies will thereby improve their public image and market position, and at the same time boosting their sales and profits. Hence, environmental leadership can often deliver competitive advantages (Sarmiento et al., 2007).

## 2.5 Theoretical Framework and Hypotheses

Gil et al. (2007) had, through his research works, identified four antecedents of environmentalism i.e. social concern, regulatory forces, the possibility of gaining competitive advantage, and finally management commitment. Social concern is a two-sense antecedent. On one hand, consumers may demand environmentally friendly products. On the other hand, activists, Non-profit Organizations etc. may influence the companies' strategies and orientation. The second antecedent encompasses regulatory forces, whereby political and institutional pressure may exert on the adoption of environmental marketing actions. Furthermore, regulatory forces are an antecedent of green initiatives as they condition decisions related to packaging, product formulation and distribution channels. Thirdly, the possibility of obtaining competitive advantage is seen as an extremely important economic force

that, both internal and externally, influences this greening efforts of manufacturing companies. Apart from these, management commitment is also being considered as one of the major antecedents as its presence substantially influences companies' determination to implement greening initiatives. Apart from the preceding mentioned antecedents, the firm's size and type are also being considered as having a moderating effect between those factors and managerial behavior (Gil et al., 2007).

In order to enable realization of the greening efforts, Zhu et al. (2005) emphasized that due attention must also be placed on the development of infrastructure. Cagno et al. (2005) argued that technological change is in fact one of the most common and effective path in reduction at source interventions i.e. to come out with new cleaner technology and process, technology and process improvement. This has been supported by other authors, for example, Omer (2008) had pointed out that the development and adoption of suitable renewable energy technology in buildings has played a vital role in the greening initiative. Hence, technology availability shall also be perceived as one of the important antecedent among the others. Donnelly et al. (2006), on the other hand, are opined that apart from technology, it is imperative for the management to provide sufficient skilled personnel and financial resources to ensure implementation and continual improvement of the environmental project. The following proposition of research framework (Figure 3) adopts the basic logic of the Antecedence-Outcomes Effect Theory which links (i) various Sustainable Development Indicators to possible outcomes of Green Value Chain; and (ii) various Green Value Chain Indicators to possible outcomes of Sustainable Competitive Advantage:



## 3.0 Methodology

The present study on the “Antecedence-outcomes Analysis on Green Value Chain: Perspectives from Sustainable Development and Sustainable Competitive Advantage” for manufacturing companies in India is based on a survey which are closely related to the respective independent variables and dependent variables as presented in the Research Design Framework (Figure 3), by adopting the 5-points Likert scale. The targeted respondents comprised of those managers or executives who are directly involved in handling the environmental related projects or programs in Indian manufacturing companies.

### 3.1 Indicators of Sustainable Development

Sustainable Development, as being defined by the United Nation, encompasses the economic, environmental and social dimensions of the development process. It is a process of

change in which the exploitation of resources, the direction of investments, the orientation of technological development and the institutional change are in harmony and increase the present, as well as the future, possibility to accommodate human needs (Ragas et al., 1995). Extensive research studies indicate that economic analysis is the most developed at the strategic level, environmental assessment is much less developed, and social appraisal is the least developed form of strategic assessment (Bond et al., 2001). CSR management is, by its underpinning working principles, very similar to corporate sustainability management, which aims to integrate the economic, environment, and social aspects of business management. Hence, economic success in terms of financial performance is always been seen as a possible outcome of CSR management (Weber, 2008). In this research study, indicators for the measurement of Sustainable Development for manufacturing companies are being identified as the degree to which a company meets the legal requirements, as well as costs or expenses spent by the companies on EMS training, installation of environmental related equipment, risk mitigation plan, and for conducting CSR programs.

### **3.2 Indicators of Green Value Chain**

Achievement of Green Value Chain can be measured in terms of waste recycling, lower level of greenhouse gas emission, and environmental innovation (Vachon & Mao, 2008). Nevertheless, in order to achieve Green Value Chain, Beamon (1999) advocated that manufacturing companies must develop procedures that focus on operations analysis, continuous improvement, measurement, and objectives. According to Beamon (1999), a single performance measure will likely be inadequate in assessing the true performance. Hence, such a performance system must be viewed from a much more broaden and holistic perspective to include in the assessment of the environmental impact gave rise due to the manufacturing value chains in terms of waste, energy usage, and resource usage.

### **3.3 Indicators Of Sustainable Competitive Advantage**

Sustainable competitive advantage of an organization can be obtained through rational architecture, reputation, innovation, and strategic assets (Kay, 1995). Where resources with these kinds of characteristics are deployed in ways that create value for customers, a Sustainable Competitive Advantage can be attained leading to enduring superior marketplace performance which can be measured in conventional terms such as market share, customer satisfaction etc., and financial performance such as return in investment shareholder wealth creation, profitability etc. (Bharadwaj et al., 1993). Cagno et al. (2005) had, through analysis of 134 industrial pollution prevention project reports, confirmed that economic returns derived from cleaner production is evident.

#### **3.3.1 Financial Performance**

Financial performance, within the context of the research study, is being defined as cost reduction, growth of market share, and increment of profit. As Green Value Chain can have a significant reduction on the costs of material purchased, en-

ergy consumed, waste generated, avoidance of fines due to violation against regulations, it can have a positive effect on a corporation's financial performance (Zhu and Sarkis, 2004), and improvement in net sales (Markley & Davis, 2007).

#### **3.3.2 Environmental Performance**

Implementation of Green Value Chain is believed can often lead to significant reduction in the environmental accident, and compound due to violation against the environmental regulations (Tan, 2005), mainly attributable to better pollution control and recycling measures (Markley & Davis, 2007). Hence, evaluation on these two indicators, together with the EMS assessment rating, 5R achievement rating and usage of renewable resource in terms of percentage use will also be carried out during the survey (Hervani et al., 2005).

#### **3.3.3 Social Performance**

Tan (2005) had posited that implementation of Green Value Chain will lead to improvement of company's image and public awareness as customers and stakeholders would have more confidence in the management, and the way the company conducts its business. Hence, evaluation on these two indicators, together with the CSR rating, Customer Satisfaction rating, employees rating (Markley & Davis, 2007), frequency of customer returns, and unfavorable press coverage will be carried out during the survey (Hervani et al., 2005).

### **3.4 Control Variables**

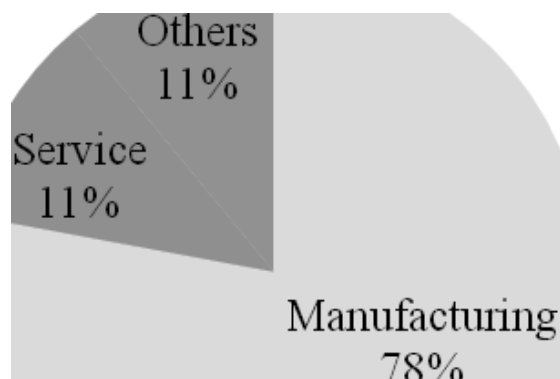
Responsible and sustainable company realizes the important of acknowledging its economic, social, and environmental responsibilities and the needs as well as the concerns of a wide range of stakeholders, while at the same time, to build on a stable platform to sustain its future growth and profitability (Streimikiene et al., 2009). Often, companies that risk regulatory and product compliance breakdowns can suffer costly business interruptions including product re-designs, delayed market launches, product recalls and sometimes, can even be blocked from selling a product in a certain country or region (Dawes, 2009). Deepening environmental concerns and perceptions of increased risk to health and safety of community residents from industrial activities have led to a significant increase in interest in research at the interface of environmental management and operations of industries (Gandhi et al., 2006). Nevertheless, the complexity of the research emerged as there are many contextual variables which could possibly affect the research outcomes. In order to ensure validity and reliability of the research findings, several control variables have been identified in this research study i.e. (i) Types of industry; (ii) Reasons to implement Green Value Chain; and (iii) Degree of involvement of respondent in implementing Green Value Chain.

### **3.5 Population and Samples**

The population of interest for this research is ISO14001 certified manufacturing companies. According to Department of Standards India (2009), there is to-date a total of 774 EMS certified companies throughout the whole India. Out of

which, about 78% or 603 are being classified as manufacturing companies (Figure 4). The related EMS certificates were issued by eight Certification Bodies accredited by Standards India. Since the total number of variables is 4, the sample size is hence determined to be 10 times of the number of variables i.e. 40.

Figure 4: ISO14001 Certified Companies in India as at 31 August 2009



### 3.5 Procedure

As data analyses involve in the research paper are mainly economic-related indicators, which are often been deemed as the most sensitive, confidential, and difficult to obtain parameters, the main data source for this research will thus be restricted only to the secondary data source released by the Public-listed Manufacturing Companies. Data obtained thereof will be analyzed by using Statistical Software Package, SPSS 16.0.

### 4.0 Conclusion

The important of environmental practice as competitive necessity in the world of business has lead towards the needs of companies to applying the Green Manufacturing as part of the evolution of Green Supply Chain. The research in the antecedence outcome effect of Sustainable Development in creating the Green Value Chain; and Green Value Chain in creating Sustainable Competitive Advantage, for the manufacturing companies in India will enable to close the gap of understanding the important and crucial role lead by these drivers towards the effort of improving the manufacturing companies sustainable strategies.

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# Toll-Free Numbers and Consumers Experiences: An Exploratory Survey

*K. Shivakumar*

## *Abstract*

*This exploratory survey examines the experiences of consumers using toll free number during the following three phases (pre-usage, usage, post-usage). Data were collected from 240 respondents residing in and around the Emirates of Sharjah and Dubai. The results indicate that the sample find toll free numbers easy to operate and helpful. However, the respondents faced problems such as long waiting time and unable to speak to the right person. To improve the services of toll free numbers professionally trained staff should be made available round the clock to attend consumers' calls and organizations can prepare a list of frequently asked questions and orient the staff who attend toll free calls. It is further suggested that studies can be carried out separately on specific service industries or manufacturing organizations.*

**Keywords:** Toll – free numbers, Consumers, Phases, Frequency, Problems, Training.

## **Introduction**

Organizations continue to put in every possible effort for getting satisfied and loyal consumers to survive and grow. However, these efforts can work only when the consumers are satisfied every time with their purchases. Organizations wanting to secure the continued patronage of their consumers should evolve strategies for their consumers to voice their compliments, complaints, and suggestions. Such strategies may well include feedback surveys, or service provider / employee evaluation forms, toll- free numbers and customer service calls (Kelli Bodey, Debra Grace, 2006).

AT&T developed 1-800 numbers in 1967 as a convenient way for businesses to pay the tolls for their customers who contacted them (Gaebler.com).

Toll free numbers are an integral part of doing business today. They combine a powerful sales and marketing tool with added benefits over a local line. Small and large business alike use toll free numbers to appeal to a larger percentage of consumers, establish confidence with customers, and take advantage of features not offered on local lines (Brandi Cummings, 2006).

A toll free number motivates a potential customer to satisfy his curiosity of the product or service in a convenient and hassle free manner since he is not charged for making calls to the company. In addition, toll free numbers serve as a user friendly marketing tool (Mark Richardson, 2008). Consumer research shows that customers who search phone book listings, when faced with a choice of several similar businesses, are much more likely to call a business with a toll free number than a business with a long- distance number and in addition, toll free numbers boost consumer confidence. Consumers assume that business with toll- free numbers are larger and more stable than their competitors (Yahoo! Small Business). Toll- free numbers are also increasingly popular for personal use. For example, parents can obtain toll-free numbers to give to a young adult who is away at college (FCC Consumer Facts, 2008).

According to the US Census Bureau, every 31 seconds a limited- English speaker enters the US. But there is a silver lining. Typically, a pharmacist in a health system, clinic or community pharmacy setting initiates a three-way call over an 800- line via a dual hand set among the patient, pharmacist, and physician. An interpreter assists the pharmacist in explaining to patients how to take medications, the proper dosage and potential interaction (Anthony Vecchione, 2006).

Even for a small association, an 800 service can still be a good investment. According to Mark B. Bundick of the National Association of Rocketry, when considering an 800 service, the combination of staff size, services offered, and the number of members who will be calling will help you determine whether you can provide a better service with an 800 number than with other methods ( Gary Fetgatter, Susan Cheshire, Mark B. Bundick, 2007).

Due to liberalization and globalization of trade, commerce and services and developments in the field of information and communication technology, the need for faster, reliable and inexpensive means of communication such as the toll-free number may become a necessity for companies operating in different industries (Mark Richardson, 2008).

## **2. Literature Review**

A few studies have been undertaken to understand the experiences of consumers using toll-free numbers.

Businesses recognize effective handling of consumer communication as one way to maintain and enhance relationships with consumers. Previously, most communication between consumers and consumer product manufacturer was done by correspondence. More recently, 1- 800, toll- free numbers have been an increasingly popular way for consumers to deliver a complaint, seek information, or give business a compliment. Although toll- free services have grown rapidly, specific information about 1-800 calling experiences is scarce (Charles L.Martin, Denise T. Smart, 1994). They further add that published empirical research pertaining to consumer-to-business communication deals almost exclusively with writ

ten correspondence.

According to a new study of television advertising by Response Marketing Group, twenty-four percent of television commercials contain a toll-free number, 91% using the 800 prefix (Anonymous, 1998).

According to a study of magazine advertising by New Response Marketing Group, fifty-eight percent of magazine advertisements contain a toll-free number, with 82% using the 800 prefix. (Anonymous, 1999)

Interactivity has become a classic good news/bad news story. More and more companies have 800- numbers and websites, and they are increasingly promoting them in their brand messages to encourage customers to contact them. The bad news is that "listening" is often only skin deep- a technological façade of promises that ends up being unfulfilled. The second "mystery shopper" conducted by the University of Colorado' Integrated Marketing Communications Graduate Program found, once again, that more than half of interactive contacts with 200 US companies were fair to down right poor. Measurements were based on the ease/ difficulty of contacting the company, nature and thoroughness of the reply, friendliness of the interaction and follow up (Tom Duncan, 1999).

Increasing number of companies has toll-free phone lines and web sites, both of which were promoted as ways to keep contact with the consumers. Unfortunately, the special phone lines are usually just a promise of an afternoon of busy signals or long waits and Web services provide an advertising platform rather than a customer service platform. (Herbert Jack Rothfled, 2000).

### 3. Research Objectives

Present study has been undertaken with the objective to know from the consumers the experiences they have had when they used the toll-free numbers. This includes:

- The source from where they came to know about the toll-free numbers
- Perceptions about using toll-free numbers
- Frequency of usage
- Institutions and organizations they have tried to contact using toll-free numbers
- The problems encountered by them
- Post usage reactions and managerial implications

### 4. Research Design

A pre-designed questionnaire on a five point scale was used to collect the primary data from the respondents (experiences). The questionnaire was framed to elicit the experiences of the respondents on the following three usage phases.

#### 4.1 Pre-usage phase

- Awareness about toll-free numbers
- Perceived utility of toll-free numbers

#### 4.2 Usage phase

- Frequency of toll-free numbers called
- Reasons for usage
- Institutions / Organizations called

#### 4.3 Post – usage phase

- Problems encountered while using toll-free numbers
- Perceived training need for the staff

Three hundred questionnaires were distributed and after repeated calls two hundred and fifty two questionnaires were got back and out of which two hundred and forty questionnaires were found to be complete in all respects and the same have been taken as the sample for the study. Convenient sampling was used to collect the primary data from the residents of both the Emirates of Sharjah and Dubai. This was because the residents of UAE come from different countries having social, economical and cultural background.

### 5. Sample Profile

Demographic information reported on the survey indicated the following:

Male respondents represented 54% of the sample, while female respondents represented the remaining 46%, with 58% percent being under 25 years of age, 40% between 35 to 50 years of age and 2% over 50 years. The report also indicated that 67% of the respondents to be single and the remaining 33% to be married.

About 33% of the respondents reported to have studied up to school level, while 47% of the sample has done a bachelor degree and 16% have done their masters and the remaining 5% of the respondents are diploma holders. The income levels of the respondents were 60% of the sample getting up to AED 5000 per month, while 22% earned between AED 5000 and 10, 000, and 18% of the respondents earned over AED 10000 per month.

### 6. Survey Results

#### 6.1 Sources of Information

Print media 81%, Radio 66% and Word of mouth 50% in that order indicated the respondents as the sources through which they came to know about the toll-free numbers.

#### 6.2 Perception about Toll-free numbers

Seventy-five percent of the respondents informed that toll-free numbers are easy to use, while 68% feel that toll-free numbers are easy to recall and 67% of the sample opined that toll-free numbers are easy to register.

#### 6.3 Frequency of Usage

About 52% of the surveyed respondents informed that they have made up to 10 calls, 25% have made between 10 and 20

calls and 23% more than 20 calls.

#### 6.4 Period when calls made

Regarding the period during which these calls were made, 31% have called in the last two months, 27% during the last one year, 22% in the last four months and 20% in the last six and eight months.

#### 6.5 Institutions / Organizations called

The survey reveals that respondents used toll- free numbers to call the following institutions and services: Banking 86%, fast – food outlets 66%, Airlines 65%, Travel Agencies 64%, Insurance 57%, and Taxis 55%. The other institutions called by the respondents include Hospitals and Medical centers and Educational institutions each 50%, and both Hotels and Drinking water each 47%.

#### 6.6 Purpose for which calls made

The survey disclosed that 78% of the respondents used the toll-free numbers to get solutions for the problems faced by them, 75% to gather the required information and 69% to get the desired service.

#### 6.7 Type of problems encountered

The survey, however, showed that the respondents encountered problems while using the toll-free numbers. They disclosed the following as the major problems encountered by them: Long waiting time/ being put on hold 75%, no response / no answer 53%, unable to speak to the right person 47% and communication problems 40%. Apart from these problems, about 25% of the respondents informed that the persons answering the calls to be not informative and also not polite while responding.

#### 6.8 Post usage reactions

More than 80% of the surveyed respondents have opined that to improve the effective usage of toll-free numbers, staff should be available to attend calls; 76% and 74% of the sample respectively feel that customers should not be put on hold or made to wait and only the right person should respond.

More than 80% of the sample strongly feels that proper training should be given to staff answering toll-free calls. Training should focus on both making these staff to be more professional, polite and courteous when answering calls, and improve their communication skills to make them to be more informative and provide relevant information to the consumers.

### 7. Hypothesis Testing

No significant level of dependency or association could be established between variables and the major phases taken for the study.

However, significant level of association could be noted be-

tween the following phases.

H1 There is no significant level of association between perceived utility and problems encountered by the respondents

Table – 1 Perceived Utility of toll- free Operations \* Problems encountered while using toll free numbers - Cross tabulation

Table – 1 above table shows that there exists a very significant association between perceived utility of toll-free operations and problems encountered by the respondents using toll free numbers.

Sample who perceived the utility of the toll-free operations to

#### Count

		Problems encountered while using toll free numbers			Total
		Less	More	Many	
Perceived Utility of toll free Operations	Low Utility	10	6	5	21
	High Utility	15	50	7	72
	Very High Utility	27	77	43	147
Total		52	133	55	240

#### Chi-Square Tests

Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
	23.545	4	.000

be high or very high, have encountered more problems.

H2 There is no significant level of association between perceived utility and perceived training need for staff / employees handling toll-free calls

Table –2 Perceived Utility of toll-free Operations \* Perceived training need for toll-free employees - Cross tabulation

Count

Perceived training need for toll-free / Staff / employees					Total
Perceived Utility of toll free Operations		Less Training need	More Training need	Intense Training need	
	Low Utility	6	9	6	21
	High Utility	15	34	23	72
	Very High Utility	6	67	74	147
Total		27	110	103	240

Chi-Square Tests

Pearson Chis	Value	df	Asymp. Sig. (2-sided)
	23.180	4	.000

Table – 2 above shows that there exists a very significant association between perceived utility of toll-free operations and perceived training need for staff/ employees handling toll free numbers.

Sample who have perceived the utility of the toll-free operations to be high or very high, feel strongly that staff / employees handling toll-free calls should be properly and professionally trained.

H3 There is no significant level of association between frequency of toll-free usage and perceived training need for staff / employees handling toll free calls

Table – 3 Frequency of toll free usage \* Perceived training need for toll free employees - Cross tabulation

Count

Perceived Training Need for Staff handling toll-free calls					Total
Frequency of toll free usage		Less Training need	More Training need	Intense Training need	
	Low	14	74	51	139
	High	11	26	35	72
	Very High	5	9	15	29
Total		30	109	101	240

Chi-Square Tests

Pearson Chi-	Value	df	Asymp. Sig. (2-sided)
	9.127	4	.050

Table – 3 above shows that there exists a significant association between frequency of toll free usage and perceived training need for staff/ employees handling toll free numbers. Sample whose frequency of toll free operations to be low or

high, in fact feel strongly that staff / employees handling toll-free calls should be properly and professionally trained.

Probably the experiences of these respondents may have prevented them from using toll free numbers more frequently and has also prompted them to express that more training should be given to the staff/ employees handling toll-free calls.

H4 There is no significant level of association between problems encountered while using toll free numbers and perceived training need for staff / employees handling toll free calls

Table – 4 Perceived training need for toll free employees \* Problems encountered while using toll free - Cross tabulation

Count

Problems encountered while using toll-free numbers					Total
Perceived training need for toll free Staff / employees		Less	More	Many	
	Less training Need	14	8	5	27
	More training Need	17	72	21	110
	Intense training Need	21	53	29	103
Total		52	133	55	240

Chi-Square Tests

Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
	24.294	4	.000

Table – 4 above shows that there exists a very significant association between problems encountered by the respondents while using toll free numbers and perceived training need for staff/ employees handling toll free numbers.

Sample who has encountered more problems while using toll free numbers feel strongly that staff / employees handling toll-free calls should be properly and professionally trained.

Maneerial Implications

Study shows that the respondents come to know about toll free numbers through print media, radio and word of mouth. This being the case organizations instead of spending their promotion budget on other media can spend more on these media, to advertise the toll free number.

This can be done by increasing the frequency of the advertisements giving the toll free number appearing in the print media currently used (e.g., newspapers, magazines) or can advertise the toll free number in other newspapers and magazines so far not advertised. Similarly ads announcing the toll

free numbers can be repeated more often in the radio channels, where it is presently advertised or new radio channels can be identified to broadcast the toll free number.

To improve the effective usage of toll free numbers consumers must be able to contact the organizations during any time of the day and organizations should ensure that there is always some staff available to attend consumers calls.

In case the requirement of the consumers can not be met immediately, instead of putting the consumers on hold or make them wait, the staff can inform the consumer that they will call back at the time which is suited to the consumer. This will also provide an opportunity for the right person to speak to the consumer.

As a part of improving customer service, internal marketing should be done to all the members of the staff who attend toll free calls, so that they are better informed and equipped to provide improved service to consumers.

Organizations can prepare a list of frequently asked questions and orient the staff who attend toll free calls with this information so that they can provide a more professional and thorough service to consumers. This list can be periodically updated as and when new questions are repeatedly raised or when new products / services are introduced or launched.

Staff handling toll free calls should be trained to be through professionals who can communicate effectively the relevant information in a polite and courteous manner. To successfully meet this requirement, organizations can customize their training programs and these training programs can be periodically updated and modified to suit the changing needs of the consumers and the organization.

### Limitations And Future Research

Firstly, any survey based method, including that adopted in this study, involves measurement error. In other words, the elicitation of a scale measurement, respondent's ability to accurately report their level of agreement with the survey statements (Kelli Bodey, Debra Grace, 2006). However, efforts were made to design the administered tool to be simple, easy to understand and respond. Convenient sampling was used to collect the data from residents living in and around the Emirates of Sharjah and Dubai.

Regarding future research, it is suggested that studies can be undertaken on specific service industries and or manufacturing organizations.

### Conclusion

While organizations have started to respond to the voices of their consumers, still plenty of scope is there for them to listen to their consumers more intently and fine tune their customer service strategies. This will encourage more and more consumers to ventilate their views and help the organizations immensely not only to improve their performances and strengthen relationships with their consumers but also their bottom line.

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# GCC Stock Markets: A Comparative Analysis

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## **Abstract:**

*A stock market is a public market where stocks of listed companies are traded. This study makes a comparative analysis of the performance of various stock markets operating in the GCC. GCC is a customs union that consists of six members Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. The study covers a period of five years and seven stock markets. The comparative analysis of the stock markets is done on the basis of trading, market capitalization and number of days trade. The study reveals that the average overall performance of Doha Securities Exchange is the best followed by Dubai Financial Market, Abu Dhabi Securities Exchange, Muscat Securities Market, Bahrain Stock Exchange, Saudi Stock Exchange and Kuwait Stock Market respectively.*

**Keywords:** Capital Market, Stock Market, Gulf Cooperation Council, Customs Union, Mutual Funds, Foreign Investors, Market Capitalization.

## **Introduction**

### **Capital Market**

The capital market is the market for securities, where companies and governments can raise long term funds. It is a market in which money is lent for periods longer than a year (Sullivan, 2003). Capital markets in the United States provide the lifeblood of capitalism. Companies turn to them to raise funds needed to finance the building of factories, office buildings, airplanes, trains, ships, telephone lines, and other assets; to conduct research and development; and to support a host of other essential corporate activities (<http://economics.about.com>). The capital market includes the stock market and the bond market. Financial regulators, such as the U.S. Securities and Exchange Commission (SEC), oversee the capital markets in their designated countries to ensure that investors are protected against fraud ([wikipedia.org](http://wikipedia.org)). The capital markets consist of the primary market and the secondary market. The primary markets are where new stock and bonds issues are sold to investors. The secondary markets are where existing securities are sold and bought from one investor or speculator to another, usually on an exchange (e.g. the Abu Dhabi Securities Exchange).

### **Stock Market**

A stock market is a public market for the trading of company stock and derivatives at an agreed price. The size of the world stock market was estimated at about \$36.6 trillion US at the beginning of October 2008 (<http://seekingalpha.com>).

### **The GCC**

The Gulf Cooperation Council (GCC) is a customs union that consists of six members Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). The GCC is an oil-based region with the largest proven oil reserves in the world (489.4 billion barrels), 36.7% of the world's total crude oil reserves. The six GCC countries have enjoyed a spectacular economic boom until late 2008. The GCC economy tripled in size to \$ 1.1 trillion during 2002 to 2008. For

the GCC region, oil and gas represent approximately 73% of total export earnings. Oil and gas sector accounts for roughly 63% of government's revenues and 41% of its GDP ([www.gulfbase.com](http://www.gulfbase.com)).

### **Previous Literature**

The published literature on the GCC stock markets is very meager and the few available are mentioned. Butler and Ma-laikah (1992), Al-Loughani (1995), Abraham et al. (2002), carried out studies on market efficiency in Kuwait, Saudi Arabia and Bahrain and found these equity markets to be inefficient. Ebid (1990) and Moustafa (2004) have carried out studies on behavior and efficiency of the UAE stock markets. The other literature available is included below under appropriate heads to avoid repetition.

### **GCC Stock Markets**

The year of setting up of the individual GCC stock market differs, but the early 1990s marked the real beginning of these markets (Table II). Each country's effort to diversify its economy, privatize its public sectors, utilize modern sophisticated technology in stock trading, establish honest legal system and enhance financial institutional infrastructures brought about the real development of these markets in the 1990s. As a result, the GCC markets have managed to attract some foreign individual and institutional investors to redirect some investments to them (Hammoudeh and Aleisa, 2004). The GCC stock markets were having a good time till 2008, but Gulf equities tumbled in 2008 as the financial crisis hit them and oil prices lost nearly two-thirds of their value from a peak of \$147 a barrel in July 2008, slashing the main source of income in the world's biggest oil exporting region (Gulf News Daily - June 07, 2009).

### **Bahrain**

Bahrain, an Arabic island in Persian Gulf, has always been an important financial and banking center, both in the Gulf region and internationally. It has a strategic geographical position as well as an open market economy with dynamic eco

conomic policies. It is a hub to several multinational firms with business in the Gulf. The Kingdom of Bahrain has 0.03% of the GCC crude oil reserves and 0.01% of the world reserves. Oil accounts for 11% of GDP, 60% of export earnings and 70% of government revenues (Table I).

### **Bahrain Stock Exchange**

The Bahrain Stock Exchange (BSE) was established in 1987 and officially started its operations on 17th June 1989, with 29 listed companies. The foreign investors can also buy, sell and own properties and bonds, units of mutual fund and warrant of domestic joint stock companies in the Bahrain Stock Exchange. An expatriate who has lived in Bahrain for more than a year is allowed to buy, sell and trade nearly up to 49% of the equities of any domestic joint stock company though he can own only one percent of the company's total capital. The foreign investors are given all the facilities that a domestic investor enjoys in the Bahrain Stock Exchange ([www.bahrainstock.com](http://www.bahrainstock.com); [www.gulfbase.com](http://www.gulfbase.com)).

### **Kuwait**

Kuwait has a small, rich and oil-dominated economy with official proven crude oil reserves of almost 7.8% of the world and 21.2% of the GCC crude oil reserves – the second largest among the GCC countries after Saudi Arabia. Petroleum accounts for 50% of GDP, 95% of export earnings and 80% of government revenue ([www.gulfbase.com](http://www.gulfbase.com)).

### **Kuwait Stock Exchange**

The Kuwait Stock Exchange (KSE) is also among the first and largest stock exchanges in the Gulf region, and is now gaining prominence as one of the most potentially important in the world. It was inaugurated in 1977. Non-Kuwait investors are permitted to own and to trade in the Kuwait Stock Exchange.

### **Oman**

Sultanate of Oman is a middle-income economy with notable oil and gas resources and substantial trade and budget surpluses. Petroleum accounts for 64% of total export earnings, 45% of government revenues and 50% of GDP ([www.gulfbase.com](http://www.gulfbase.com)).

### **The Muscat Securities Market**

Muscat Securities Market (MSM) was established in June 1988 and the trading activities started in 1989. The market started with 68 joint stock companies including 19 closed joint stock companies, having combined paid up capital of US\$ 663 million. Foreign participation on the MSM is controlled and restricted by the Muscat Securities Market Law. A law was passed in early 1997 allowing foreign investors to have up to 49% ownership in all listed companies. In 1995, the foreign participation ceiling was raised from 49% to 65% in special cases and 100% in exceptional circumstances ([www.msm.gov.om](http://www.msm.gov.om)).

### **Qatar**

Qatar is a peninsula situated halfway along the West Coast of the Arabian Gulf. Qatar is one of the smallest Gulf Countries in terms of population and geographical area but the second largest gas reserves in the world representing more than 5% of the world total. The Qatari economy is one of the most rapidly growing economies in the world. Qatar has the highest GDP per capita income in the world estimated at US \$68,467 in 2008 ([www.gulfbase.com](http://www.gulfbase.com)).

### **Doha Securities Market**

Doha Securities Market officially started its operations on May 26, 1997 with initially seventeen companies and an estimated market capitalization of around 6 billion Qatari riyals. At the beginning of its operation, Doha Securities Market allowed only Qatari citizens to trade the stocks of companies listed on the stock exchange. However, on April 3, 2005 a new law was passed allowing citizens of the Gulf countries to invest in the stocks of companies listed under industrial and service sectors to a maximum of 25% ([www2.dsm.com.qa](http://www2.dsm.com.qa)).

### **Saudi Arabia**

Saudi Arabia is an oil-based economy with the largest proven oil reserves in the world, 266.8 billion barrels, representing 54.5% of the GCC reserves, 28.4% of the OPEC and 20% of the world's total reserves. It ranks as the largest producer and exporter of petroleum in the world. Oil and gas sector account for roughly 80% of government's budgeted revenues, 45% of its GDP and 90% of export earnings. Roughly five and a half million foreign workers play an important role in the Saudi economy, especially in the oil and service sectors. ([www.gulfbase.com](http://www.gulfbase.com)).

### **Saudi Stock Exchange (Tadawul)**

Saudi Arabia is the biggest Arab economy and has the largest equities market in the Gulf Arab region with a market capitalization amounting to much more than \$246 billion, in year end 2008 (Gulf News Daily- June 07, 2009). The trading of shares in the Saudi Stock Exchange is limited to the nationals of Saudi Arabia and the other GCC nations. Non-GCC nationals can invest only through mutual funds put on offer by the Saudi banks. ([www.gulfbase.com](http://www.gulfbase.com))

### **United Arab Emirates**

The United Arab Emirates is located in the middle of the Arabian Gulf. The UAE is a federation of seven Emirates including Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Quwain, Ras al-Khaimah and Fujairah, which are governed by the Federal Supreme Council (FSC) of rulers. Abu Dhabi and Dubai, the largest and the wealthiest two Emirates, dominate the UAE economy. It is a rich and open economy with a high per capita income and a sizable annual trade surplus. Oil and Gas account for nearly 25% of GDP, 45% of export earnings and 40% of government revenue. Since the discovery of oil in the UAE, it achieved a profound transformation from a small desert region to a modern state with a very high standard of



living. Foreigners have been allowed to buy property in Dubai since 2002 ([www.gulfbase.com](http://www.gulfbase.com)).

### **There are three stock exchanges in the UAE:**

#### **1. Abu Dhabi Securities Exchange**

Abu Dhabi Securities Exchange (ADX) (formerly Abu Dhabi Securities Market) [ADSM] is a stock exchange in Abu Dhabi. It was established on 15 November 2000 to trade shares of UAE companies.

#### **2. Dubai Financial Market**

The Dubai Financial Market is a stock exchange located in Dubai. The Market commenced operations on 26th March 2000. Foreign shareholding is permitted in the UAE, but the decision as to whether to allow it is a matter left to individual companies, and this is usually reflected in their Articles of Association ([www.trowers.com](http://www.trowers.com)).

#### **3. NASDAQ Dubai (formerly called the Dubai International Financial Exchange, DIFX)**

It is a stock exchange which opened on September 26, 2005 in Dubai. NASDAQ Dubai is an international stock exchange open to investors of any nationality based in any country. It has issuers based in countries all over including UK, South Africa, Australia, India, Kuwait, Bahrain, and Saudi Arabia ([www.nasdaqdubai.com](http://www.nasdaqdubai.com)). NASDAQ Dubai currently has 19 equity instruments, 132 derivative contracts and 19 sukuks listed on it (Babu Das, 2009).

### **Methodology**

The objective of this study is to make a comparative analysis of the performance of various stock markets operating in the GCC. The study covers a period of five years from 2004 to 2008 and seven stock markets: Bahrain Stock Exchange, Doha Securities Market, Kuwait Stock Exchange, Muscat Securities Market, Saudi Stock Exchange, Abu Dhabi Securities Exchange and Dubai Financial Market. UAE has three stock markets, but the third market the NASDAQ Dubai was excluded from the study as it started operations only in 2005. The study is solely based on secondary data. Data were collected from the various stock markets operating in the GCC, various publications of the statistical departments, governments, Arab Monetary Fund and the press.

### **Analysis and Discussions**

#### **Country profile**

Among the six countries Saudi Arabia is the largest economy with a land area of 2,331,000 Sq.Km and population of 27.60 million. UAE is the second largest economy spread in an area of 83,600 Sq.Km with a population of 4.44 million and Bahrain is the smallest in area and population. Regarding the number of shares listed Muscat Securities Market ranks first with 219 stocks, followed by Kuwait Sock Market with 201 and Doha Securities Market ranks the lowest with just 43

stocks listed at the end of 2008 (Table II).

### **Stock Market Performance**

To make a comparative evaluation of the performances of the various stock markets operating in the GCC an analysis was done on the basis of trading, market capitalization and number of days traded. The details of the analysis are given below:

#### **Trading:**

##### **Value traded**

The total value of stocks traded in the GCC stock markets increased from U.S. \$517.455 billion in 2004 to more than U.S. \$781 billion in 2008, a growth of more than 51 per cent. More than half of the value traded is in the Saudi Stock Exchange. In 2004 the average annual trading in the Saudi Stock Exchange was above U.S. \$446 billion and it increased to U.S. \$483 billion in 2008, an average annual growth of 1.62%. But, the share of Saudi Stock Exchange in the total value of shares traded in the GCC has declined by 28.42%, from 86% in 2004 to 61.82% in 2008. Thus, Saudi Stock Exchange is gradually losing their prominence in the region. Whereas, the Doha Securities Market is showing the highest average annual growth rate of 481.26% and percentage share has increased from a very minute 0.32% in 2004 to 5.28% in 2008. (See Table III).

##### **Volume of shares traded**

Total volume of shares traded is highest in the Kuwait Stock Market; it was 33.43 billion in 2004 and it increased to 75.82 billion in 2008, an average annual increase of 25.36%. All other markets are showing much higher growth rate with Abu Dhabi Securities Exchange recording the highest average annual growth rate of 1463.52%, followed by Doha Securities Market with 986.80%. Among the GCC stock markets the Kuwait Stock Market had the lowest growth in volume of shares traded. The share of Kuwait Stock Market in the volume of shares traded has contracted by 56.30% from 68.46% in 2004 to 29.29% in 2008. Thus Kuwait Stock Market is gradually losing its premier position in the volume of shares traded and Abu Dhabi Securities Exchange is showing a tremendous improvement from an insignificant 1.33% in 2004 to 19.08% in 2008, followed by Doha Securities Exchange and Dubai Financial market (Table IV).

##### **Number of Transaction**

Analysis on the basis of number of transactions executed keeps Saudi Stock Exchange at the top with 12616825 transactions in 2004 and 11082545 transactions in 2008, but Saudi Stock Exchange's share in the total number of transaction executed in the GCC Stock Markets have declined from 88.54% in 2004 to 59.52% in 2008, an annual average decline of 2.43%. Bahrain Stock Exchange ranks the lowest with 14948 transactions in 2004 and 40387 transactions in 2008; but has an annual average growth of 34.04%. Whereas, Doha Securities Exchange which was at the fifth position

in 2004 improved to third position in 2008 with an excellent annual average growth rate of 510.92%. Doha Securities Exchange's share in the total number of transaction executed in the GCC Stock Markets have dramatically improved from a microscopic 0.49% in 2004 to 10.02% in 2008 (Table V).

### Market Capitalization

Saudi Stock Exchange had the highest market capitalization in 2004 with U.S. \$305.95 billion (57.64 % of total Capitalization of the GCC) and continues to hold the top position in 2008 with a market capitalization of U.S. \$246.81 billion (41.12 % of total Capitalization of the GCC). But it is showing a negative annual growth rate of 3.87%. Muscat Securities Market had the lowest market capitalization in 2004 with U.S. \$6.62 billion (1.25 % of total Capitalization of the GCC) and continues to hold the same position in 2008 with a market capitalization of U.S. \$15.64 billion (2.61 % of total Capitalization of GCC). But Muscat Securities Market is showing the highest average annual growth of 27.29% far ahead of all other GCC stock markets, followed by Doha Securities Market with an average annual growth rate of 17.92% and Dubai Financial Market with 17.15% (Table VI).

### Number of Days Traded

The average annual number of trading days is varying from 256 to 200 days during the period of study. Saudi Stock Exchange ranks top with 256 days and Doha Securities Exchange ranks the lowest with 200 days on an average. Bahrain Stock Exchange shows the maximum consistency with the highest 243 in 2004 and the lowest 237 in 2008 (Table VII).

### Conclusion

The GCC stock markets have made a remarkable growth from its inception, but these markets remain relatively small when compared to other emerging markets in terms of number of companies listed, market capitalization, number of transactions executed, traded value and volume. The Doha Securities Market ranks at number one level in annual growth, followed by Abu Dhabi Securities Exchange. Saudi Stock Exchange ranks the lowest with a negative growth in percentage share of value traded in the GCC stock markets. Abu Dhabi Securities Exchange has the highest annual average growth in volume of shares traded and Kuwait Stock Market has the lowest. Doha Securities Exchange is having the highest annual average growth in number of transactions executed whereas; Saudi Stock Exchange is having a negative annual average growth of 2.43%. Saudi Stock Exchange continues to have the highest market capitalization, but it is gradually losing its position with a negative annual growth; whereas Muscat Securities Market, though it continues to have the lowest market capitalization, is showing an appreciable annual growth. In number of trading days Saudi Stock Exchange ranks top with 256 days and Doha Securities Exchange ranks the lowest with 200 days on an average.

The analysis gives a mixed result. Hence an effort was made to narrow down the results of the analysis on the basis of

annual growth of all parameters of the study (Table VIII), which resulted in Doha Securities Exchange ranking first for value traded and number of transaction executed; Abu Dhabi Securities Exchange for volume traded; Muscat Securities Market for market capitalization and Saudi Stock Exchange for number of days traded. Thus it may be concluded with the inference that late entrants are performing better than their older counter parts.

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Table I  
Brief Profile of the GCC Nations

Country	Land Area	Population (July 2007 estimate)	Currency	Exchange Rate
Bahrain	678 Sq. Km.	0.71 million	Bahraini Dinar (BD)	BD 0.3768 = US\$ 1
Kuwait	17,818 Sq. Km.	2.51 million	Kuwaiti Dinar (KD)	KD 0.306 = US\$ 1
Oman	212,500 Sq. Km.	3.21 million	Omani Riyal (RO)	RO 0.380 = US\$ 1
Qatar	11,437 Sq. Km.	0.91 million	Qatar Riyal (QR)	QR 3.64 = US\$ 1
Saudi Arabia	2,331,000 Sq. Km.	27.60 million	Saudi Riyal (SR)	SR 3.75 = US\$ 1
U.A.E	83,600 Sq. Km.	4.44 million	Arab Emirates Dirham (AED or DH)	AED 3.671 = US\$ 1

Compiled from www.gulfbase.com

Table II  
The GCC Stock Markets

Market	Country	Year of Establishment	No. of shares listed, end 2008
Abu Dhabi Securities Exchange (ADX)	U.A.E.	2000	65
Bahrain Stock Exchange (BSE)	Bahrain	1987	51
Doha Securities Market (DSM)	Qatar	1995 *	43
Dubai Financial Market (DFM)	U.A.E.	2000	65
Kuwait Stock Exchange (KSE)	Kuwait	1977	201
Muscat Securities Market (MSM)	Oman	1988	219
Tadawul ( Saudi Stock Exchange)	Saudi Arabia	1984 **	126

Sources: Compiled from ADX; BSE; DSM; DFM; KSE; MSM and Tadawul.

\*Activities started in May 1997.

\*\*The Tadawul platform was launched in 2001, but an organized stock market existed from 1984.

Table III  
Annual Value of Stocks Traded (in Million U.S. \$)

Stock Exchange	2004	2005	2006	2007	2008	% Growth 08/04	Average Annual Growth
Abu Dhabi Securities Exchange	3335.56	26691.37	17907.82	42825.18	61279.81	1737.17	347.44
Bahrain Stock Exchange	413.7567	600.9566	1228.906	816.0696	1905.458	360.53	72.11
Doha Securities Market	1645.858	25407.03	20334.48	24738.05	41249.72	2406.28	481.26
Dubai Financial Market	11628.46	105277.7	93657.37	89904.85	69879.87	500.94	100.19
Kuwait Stock Market	51637.18	93990.64	55714.14	120659.3	116023.2	124.69	24.94
Muscat Securities Market	1895.7	2999.961	2073.74	4714.609	8033.621	323.78	64.76
Saudi Stock Exchange	446898.5	968216.8	1331783	628055.6	483122.2	8.11	1.62
Total	517455	1223184	1522699	911713.6	781493.9	51.03	10.21

Compiled from www.amf.org.ae

Table IV  
Annual Volume of Share Traded (in Million)

Stock Exchange	2004	2005	2006	2007	2008	% Growth 08/04	Average Annual Growth
Abu Dhabi Securities Exchange	651.785	7834.901	10371.63	47599.04	48346.84	7317.60	1463.52
Bahrain Stock Exchange	311.7712	378.7526	663.1517	683.8425	1480.086	374.73	74.95
Doha Securities Market	67.543	934.1991	1869.755	2761.281	3400.119	4934.01	986.80
Dubai Financial Market	4148.966	24233.67	39167.73	92438.7	66065.67	1492.34	298.47
Kuwait Stock Market	33433.37	50815.6	35520.2	66206.68	75819.67	126.78	25.36
Muscat Securities Market	336.9662	399.844	867.6244	2721.802	3881.493	1051.89	210.38
Saudi Stock Exchange	9887.702	10826.73	53879.96	53083.03	54441.98	450.60	90.12
Total	48838.11	95423.7	142340	265494.4	253435.9		

Compiled from www.amf.org.ae

Table V  
Annual Number of Transactions

Stock Exchange	2004	2005	2006	2007	2008	% Growth 08/04	Average Annual Growth
Abu Dhabi Securities Exchange	62026	531093	665415	987469	1090143	1657.56	331.51
Bahrain Stock Exchange	14948	20994	16110	24004	40387	170.18	34.04
Doha Securities Market	70275	1012174	1736160	1524306	1865516	2554.59	510.92
Dubai Financial Market	182094	1644448	2375247	2007151	1849953	915.93	183.19
Kuwait Stock Market	1052820	1908475	1397529	1976340	1874201	78.02	15.60
Muscat Securities Market	250873	337959	285737	524019	815620	225.11	45.02
Saudi Stock Exchange	12616825	13283983	12985128	11343727	11082545	-12.16	-2.43
Total	14249861	18739126	19461326	18387016	18618365		

Compiled from www.amf.org.ae

Table VI  
Market Capitalization (in Million U.S. \$)

Stock Exchange	2004	2005	2006	2007	2008	% Change 08/04	Average Annual Change
Abu Dhabi Securities Exchange	55519.12	125646.1	71688.79	112159.5	61887.63	11.47	2.29
Bahrain Stock Exchange	13513.18	17276.34	21122.84	26795.93	19954.52	47.67	9.53
Doha Securities Market	40435.9	87140.94	60913.09	95517.99	76656.74	89.58	17.92
Dubai Financial Market	35109.07	108774.7	86871.72	138697.8	65217.73	85.76	17.15
Kuwait Stock Market	73769.25	139486.1	141923.2	193513.3	113527.1	53.89	10.78
Muscat Securities Market	6615.17	10928.07	13036.98	22767.03	15643.01	136.47	27.29
Saudi Stock Exchange	305954.3	647502.7	326364.5	522721.1	246809.9	-19.33	-3.87
Total	530915.9	1136755	721921.1	1112173	599696.6		

Table VIII  
Ranks on the basis of Average Annual Growth

Stock Exchange	Value traded	Volume traded	No. of Transactions	Market Capitalization	No. of days traded
Abu Dhabi Securities Exchange	2	1	2	6	4
Bahrain Stock Exchange	4	6	4	5	3
Doha Securities Market	1	2	1	2	7
Dubai Financial Market	3	3	3	3	2
Kuwait Stock Market	6	7	6	4	6
Muscat Securities Market	5	4	5	1	5
Saudi Stock Exchange	7	5	7	7	1

Compiled from www.amf.org.ae

Table VII  
No. of days Traded every year

Stock Exchange	2004	2005	2006	2007	2008	Average
Abu Dhabi Securities Exchange	193	278	254	218	241	236.8
Bahrain Stock Exchange	243	241	242	237	243	241.2
Doha Securities Market	88	230	246	215	220	199.8
Dubai Financial Market	198	288	276	228	225	243
Kuwait Stock Market	247	242	227	229	228	234.6
Muscat Securities Market	247	233	233	236	229	235.6
Saudi Stock Exchange	297	264	257	229	233	256

Compiled from www.amf.org.ae

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# Cosmetics Buying Behavior of Young UAE Female Consumers: The Influence of Demographics

*Hamza Salim Khraim*

## *Abstract*

*The purpose of this article is to investigate the influence of demographics on cosmetic buying behavior of young female consumers in the Emirate of Abu Dhabi in the UAE. To achieve this purpose, the descriptive research methodology was employed. Convenience sampling procedure used to choose female consumers between 16 to 42 years. The findings of this study indicated that female consumers tend to compare price of different brands, prefer brands made in specific countries as well as brands that are heavily advertised. Another important outcome found from this research that personality and self-concept are not important for female consumers. Finally, there was a significant difference in the consumer age, education, and income.*

**Keywords:** *Female buying behavior, Consumer Demographics, Cosmetics, UAE*

## **Introduction**

The history of cosmetics spans at least 6,000 years of human history, and almost every society on earth. In the Western world, the use of cosmetics became prominent in the Middle Ages, typically among members of the upper classes. Although it is generally believed that cosmetics as they are now known originated in the Far East, the study of non-industrial cultures indicates the use of cosmetics in every part of the world. The war paint of native Americans, the tattooing and scarification (making of superficial incisions of the skin) practiced by many peoples (the Maori of New Zealand and numerous African cultures, for instance), and the use of woad (a plant dye used by ancient Britons to paint their bodies blue) are all forms of cosmetic used for psychological intimidation of the enemy as well as adornment (Draelos, 2007).

Cosmetics is general term applied to all preparations used externally to condition and beautify the body, by cleaning, coloring, softening, or protecting the skin, hair, nails, lips, or eyes. The U.S. Food and Drug Administration (FDA), which regulates cosmetics in the United States, defines cosmetics as products "intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or functions." This broad definition includes any material intended for use as a component of a cosmetic product. The FDA specifically excludes soap from this particular category.

The worldwide annual expenditures for cosmetics is estimated at U.S. \$18 billion. Of the major firms, the oldest and the largest is L'Oréal, which was founded by Eugene Schueller in 1909 as the French Harmless Hair Colouring Company. The market was developed in the United States during the 1910s by Elizabeth Arden, Helena Rubinstein, and Max Factor. These firms were joined by Revlon just before World War II and Estée Lauder just after (Mayell, 2004). The growth of cosmetics and beauty products markets have surged significantly as consumers are increasingly becoming aware about appearance, beauty, grooming and choice of personal care products. There are more than 3,300 companies manufacturing and distributing cosmetic and skin care products in the United States alone. Even the government does not know

exactly how many of these companies are in existence, or the vast number of beauty products marketed. Each company claims its products are unique (Whittaker, 2007).

## **Research Significance And Objectives**

Despite the importance of consumers buying behavior in general, the literature on this issue in developing countries in general and the UAE in particular, has been neglected. It is hoped that this study will contribute towards a better understanding of the importance of consumer buying behavior, to some extent, help in covering the gap in the literature. In addition, studies of consumer behavior in general on Abu Dhabi are nonexistent. This type of study is particularly crucial to this Emirate as it yields such information that will make better utilization of resources. Through marketing research in general and consumer studies in particular, manufacturers would have better understanding of the required output of all citizens of UAE society. Thus, this study provides useful information on Abu Dhabi society, to the government of this Emirate and to all dealers in the business sectors. This information should be of valuable use to marketers in the planning of their marketing strategies to ensure greater efficiency in their use of resources and greater effectiveness. For example, pricing, quality of the product and the distribution and promotional efforts of these firms are directly related to consumer purchasing behavior, and so effective marketing decisions depend on valid information pertaining to their behavior. Based on the above, the objectives of this paper are to:

- 1) Provide an overview of cosmetics market in the UAE and its importance.
- 2) Study the female buying behavior of cosmetics in the UAE.
- 3) Describe the influence of demographics on female buying behavior

## **Background On The Emirate Of Abu Dhabi**

Abu Dhabi is the capital of, and the second largest city in the United Arab Emirates. Abu Dhabi lies on a T-shaped island jutting into the Persian Gulf from the central western coast. The city proper, making up an area of 67,340 km<sup>2</sup>,

had an estimated population of 869,751 in 2009. Abu Dhabi houses important offices of the federal government, and is the seat for the United Arab Emirates Government and the home for the Emarati Royal Family. Abu Dhabi has grown to be a cosmopolitan metropolis. Its rapid development and urbanisation, coupled with the relatively high average income of its population, has transformed Abu Dhabi, making the city more Westernized than most other Arab cities. Today the city is the country's center of political, industrial activities, and a major cultural, and commercial centre due to its position as the capital. Abu Dhabi alone generates 15% of the GDP of the United Arab Emirates (Gulfnews, 2009).

Abu Dhabi is home to important financial institutions such as the Abu Dhabi Securities Exchange, the Central Bank of the United Arab Emirates and the corporate headquarters of many companies and numerous multinational corporations. One of the world's largest producers of oil Abu Dhabi, which has roughly 10 percent of the world's proven oil reserves and 4 percent of its natural gas. However, as reports of business in this region often note, doing business with these countries and the firms within them demands a tolerance for the risks associated with fluctuating oil and gas demand as well as a solid understanding of the region and its consumer and business requirements (Giunipero and Flint, 2001). Abu Dhabi has actively attempted to diversify its economy in recent years through investments in financial services and tourism. Abu Dhabi is the third most expensive city in the region, and 26th most expensive city in the world (City Mayors, 2009). Fortune stated in 2007 that Abu Dhabi was the richest city in the world.

Islam is the faith of the people of Abu Dhabi and all other Emirates. The nature of Abu Dhabi social and cultural structures and its organization are rooted in the values and traditions of Arab Muslim culture. Peoples buying behavior is heavily influenced by the values, norms, and expectations of Islam. The Islamic products range from popular Islamic banking to alcohol-free hotels, while halal cosmetic is still in its infancy in Asia and a mere novelty for Muslims in the Arab world (Mandi, 2009). Abu Dhabi social structure involves strong kinship patterns and the clan is the basis of Abu Dhabi tribal society. The extended family is the foundation of rural and urban society, and thus there is a strong sense of loyalty to the clan or family. Therefore, one can imagine the intensive social interaction that takes place in Abu Dhabi and its impact on Emiratis buying behavior.

The climate of Abu Dhabi is considered generally hot and humid throughout the summer season. The temperature fluctuates between 35 and 45 degrees Celsius and the humidity between 60 and 100 percent. In winter, the weather is pleasant and the temperatures vary between 18 and 25 degrees Celsius, and the humidity is low

### Cosmetics In The UAE Market

Arab women are known to have the healthiest and youngest looking skin in the world. Maintaining the flawlessness of their skin is the most important factor of their everyday beauty regime. It is estimated that Emirati women alone spend

close to AED 1 billion (US \$272 million) per year on beauty products and treatments (Mena Report, 2009). Preventing the harmful effects of sun on their skin is the product of a tradition kept alive by generations of women throughout the Arab world. Being tanned is not a desire for them, far from it in fact. They use all kind of measures to prevent themselves from sun exposure. While many women cover their faces for religious or cultural reasons, others who do not do so, still use parasols or scarves to protect their skin. The beauty and grooming business in the UAE and the region is expected to buck the recessionary trend.

In addition, the working women with high disposable income spend more on cosmetics and beauty products in recent years and the international brands are more popular in the UAE. The total cosmetics and personal care market in the UAE alone was worth more than \$414.2 million at retail sales value in 2005. Spurring on sales is shopping mall space growing at 50% a year. According to Retail International, retail accommodation for beauty product retailers has grown 30% in the last three years to account for 25-30% of all retail space in the UAE. European and American cosmetics sell well in the UAE, largely due to lack of local cosmetics manufacturers (Cochrane, 2006). With more than 2000 companies involved in trading cosmetics and perfumes, the Emirates wants to attract manufacturers and multinational firms to the newly established Jebel Ali Free Zone Authority's Fragrance Beauty and Fashion Park to give the UAE a greater regional role in the growing market. The park will span 2m sqm with a full range of facilities, from state of the art test laboratories to wholesale outlets. Consumption of cosmetics and fragrances in the Gulf States is one of the highest per capita in the world. Table 1 show the huge market and spendings in the UAE. Consumers in the GCC region including UAE spend on the average Dh 1,226 per head on cosmetics each year and it is one of the highest rates in the world. The market in the UAE alone was worth more than Dh 1.5 billion in retail sales last year and 8.4% increase over Dh 1.41 billion the previous year.

Table: 1 Cosmetics Spending in the UAE

Average annual amount spent per head in the UAE on cosmetics and perfume	Dh1,226 (\$334)
Sales value of cosmetics and perfume market in the UAE last year	Dh1.50 billion
The increase over the previous year	8.4 per cent
Expected number of Dubai hotels offering world-class spa treatment by 2015	200 Hotel
Current GCC spend on medical spa treatment	Dh 272 billion

This rapid growth in cosmetics sales and market in the UAE grabs the attention of beauty and skin care companies throughout the World. More international outlets are expected to open in the GCC. Paris Gallery, which has 26 outlets and controls around 60 percent of high-end cosmetics and fragrance sales in the UAE, is expected to see growth of more than 20 percent per year. Paris Gallery is planning to open another 40 retail outlets within its existing UAE, Qatar and Saudi Arabia base as well as Bahrain, Kuwait and Oman. Major brands are very active and more of the key suppliers are expected to follow such as Christian Dior and Coty. Several have established their own subsidiaries in the Gulf region to manage logistics, marketing and to work directly with their local distributors. The market's growth is also attributed to

the region's demographics, with a population of young, fashionable trendsetters with high disposable income (Abed Al Aziz, 2006).

## Review Of The Literature

### Consumer Buying Behavior

Despite the importance of consumers' buying making the literature on this issue in developing countries in general and the UAE in particular, has been neglected. We hope this study will contribute towards a better understanding of female buying behavior and, to some extent, help in covering the gap in the literature. Sproles and Kendall (1986) defined consumer decision-making style as a mental orientation characterizing a consumer's approach to making choices. Sproles and Kendall (1986) view this construct as basic consumer personality, analogous to the concept of personality in psychology (p. 268). Research on this construct can be categorized into three main approaches: the consumer typology approach (Moschis 1976) the psychographics/lifestyle approach (Lastovicka, 1982) and the consumer characteristics approach (Sproles and Kendall, 1986; Sproles and Sproles, 1990). The unifying theme among these three approaches is the tenet that all consumers engage with certain fundamental decision-making modes or styles including rational shopping, consciousness regarding brand, price, and quality among others. Among the three approaches, the consumer characteristics approach seems to be the most powerful and explanatory since it focuses on the mental orientation of consumers in making decisions. As such, this approach deals with cognitive and affective orientations of consumers in their process of decision-making. It assumes that decision-making styles can be determined by identifying general orientations towards shopping and buying. It is useful to marketers since it provides a quantitative instrument for classifying heterogeneous decision-making styles among consumers into discrete categories of orientation. Such knowledge is also useful in terms of identifying segments or clusters of consumers sharing similar orientations to shopping.

Consumers buying behavior is highly affected by demographic characteristics of consumers which affect the methods and means they use to progress through the purchase decision process model. For example, a "catch them young" theory has been gaining in popularity. The sheer size of the teen demographic makes them extremely important from a marketing perspective (MMR, 2000). Meyer (2001) assert that "consumers establish their brand preferences between the ages of 15 (sometimes younger depending on the category) and 25". If marketers miss this crucial period, it could require that they expend two to three times more marketing dollars in an attempt to capture them as they move into their twenties and beyond. Meneely et al. 2009 found that as age increases older consumers' retail buying and food-related behaviour changes as well as a decline in patronage of multiple retailers is evident as age increases. Taylor and Cosenza, 2002 found that increased information search is prevalent as education and income increase. In addition, as consumers grow older, information search and evaluation of product attributes decreases. Ailawadi et al. (2001) report that education is positively re-

lated with quality consciousness, suggesting that educated consumers are more likely to use simplifying decision heuristics: for instance, buying only more expensive and branded products.

### Empirical Research

A review of the empirical research indicates that, although research is investigating consumer buying behavior and market practices in much of the world, a significant gap remains when it comes to the Middle East region. Ben Amour (2009) paper intend to determine the effectiveness of product sampling in terms of usage in the cosmetic industry and to draw a consumer profile who is reactive to free samples and to determine product characteristics that would lead to free samples usage. To accomplish those objectives, Perfume, skin care and make-up samples were given away to 500 women. Outcome of this research shows that launching product sampling campaigns is quite effective as free samples usage appears to be high (72 per cent). Managers should give away samples of new products involving important advertising budgets. They also should offer samples of product types with a high-penetration rate. In addition, it is better to sample well-known brands rather than unknown ones. Moreover, the authors recommend targeting family brand users when offering free samples. In addition, it is not profitable to target consumers with low-annual spending within the product category. Finally, the authors suggest giving away samples to non-working house wives will help in understanding consumer attitude.

Another study by Guthrie et al. (2008) who examines women's perceptions of brand personality in relation to women's facial image and cosmetic usage. The study seeks to develop a better understanding of how various factors influence perceptions of cosmetic brands in the USA. The survey included items measuring facial image, cosmetic usage, brand personality, and brand attitude. The findings show that despite the brand personality of competence found to be important across all three brands, consumer perceptions pertaining to the remaining brand personality traits differed. The study found that consumers' facial image influenced the total quantity of cosmetics used but not the variation in quantity in different situations. Results also indicate that a relationship exists between facial image and brand perceptions. In addition, they find that a different group of brand personality traits influenced brand attitude for each cosmetic brand.

Finally, Weber (2002) investigates the differences in purchasing behavior between the US and French cosmetic markets. The study suggests that a difference should exist due to psychological factors, social influences, and the purchase situation. The paper discusses the underlying theoretical perspectives, and illustrates the various components that influence consumer behavior in this particular marketplace. The analysis and investigation is based on the cosmetic industry in terms of comparing US and French consumers and their historical purchase patterns. The results indicate that there are in fact notable differences in purchase behavior. The findings provide support for the theoretical perspectives, in addition to important managerial implications in terms of developing appropriate product development, distribution and marketing strategies

## Research Methodology, Sampling Procedure, And Data Collection

In order to solicit necessary information regarding issues of high importance to UAE female consumers, the questionnaire used in this study was developed and pilot tested through personal interviews with 5 senior level professionals at Paris Gallery, the most famous cosmetics outlet in UAE. All the Paris Gallery managers and supervisors are specialized, fully aware and familiar with almost all international brands, and they enjoy massive experience in their respective fields. The questionnaire was translated into Arabic language and then given to friends and colleagues for examination. The questionnaire contained two sections: the first section about consumers' demographics and the second section about cosmetics buying behavior (Appendix 1). Convenience sampling procedure was used to choose female consumers between 16 to 42, using five-likert scale ranging from 1= Strongly Disagree to 5= Strongly Agree. The survey was distributed at Abu Dhabi city at three malls namely; Abu Dhabi mall, Marina mall, Madinat Zayed Shopping Centre, in addition to Paris Gallery and it took two months starting from 25-Nov-2008 to 25-Jan-2009. The sample size was 382 female respondents.

Cronbach's alpha test was used to ensure the reliability of the questionnaire. The results indicate acceptable value ( $\alpha = 0.71$ ).

### Analysis

The first phase of analysis compared the results of the three demographic category including age, education and income. A description of the highest and least three important statements for each segment will be provided. The second phase of analysis focused on testing if there is any statistical difference within each category.

As shown in Table 2 female consumers aged between 16–24 choose statement number 6 “cosmetics affordability” as the highest important statement with 97 percent answer agree and strongly agree. In the second place statement 4 “Cosmetics sold at a specialty stores are better quality” with 92 percent answer agree and strongly agree. While statement 7 “I usually buy the mostly advertised cosmetics”, ranked third with 85 percent answer agree and strongly agree. The above results show that relatively young female consumers prefer cosmetics with affordable prices, since most of them are students and not working at this age. While choosing statement 4 and 7 respectively can be attributed to the lack of experience of this segment, and therefore advertisement can be very influential for this age segment. On the other hand, 70 percent of this segment said that they disagree and strongly disagree with statement 1 “Usually I try new cosmetics just for the fun of it”. Whereas 65 percent favor statement 2 “I like to use cosmetics whenever I go out”, and 60 percent for statement 10 “I use cosmetics to enhance my self confidence”.

While for the second segment of age 25-33 as shown in Table 3, statement 9 “I usually compare the price of different brands before buying cosmetics” ranked first with 87 percent of respondents agree and strongly agree. With less

than 2 percent from statement 9, statement 8 “I prefer using cosmetics made in a specific country” arrived second with 85 percent. At the third place, statement 4 “Cosmetics sold at a specialty store are better quality” with 80 percent agree and strongly agree. It's worth mentioning that again statement 4 came amongst the highest important statement for the first and second age segment. Conversely, for a second time statement 1 “Usually I try new cosmetics just for the fun of it” came at the first position, but it received higher denial with 80 percent answering disagree and strongly disagree. With 70 percent statement 12 “I use cosmetics in order to be accepted by others” arrived in the second place, and finally statement 10 ranked third with 45 percent.

Reaching the third age segment 34-42 as shown in Table 4, results was different from previous age segments as well. For example, statement 9 “I usually compare the price of different brands before buying cosmetics” once again ranked first, but with slightly lower response rate that is 82 percent of respondents agree and strongly agree. Having good appearance was important for older consumer since statement 11 “I use cosmetics to have a good appearance” arrived second with 78 percent. While with very slight difference again like segment one, statement 7 “I usually buy the mostly advertised cosmetics” ranked third with 79 percent. While for the statement that got the lowest support, statement 12 “I use cosmetics in order to be accepted by others” got the lowest support among others with 71 percent answer disagree and strongly disagree. Following statement 12, statement 1 “Usually I try new cosmetics just for the fun of it” with 70 percent and statement 10 “I use cosmetics to enhance my self confidence” again ranked third with 55 percent.

Table 2: Age from 16-24

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	70%	10%	20%
2	65%	5%	30%
3	20%	4%	76%
4	5%	3%	92%
5	15%	10%	75%
6	2%	1%	97%
7	10%	5%	85%
8	20%	1%	79%
9	15%	5%	80%
10	60%	10%	30%
11	20%	5%	75%
12	40%	3%	57%

Table 3: Age from 25-33

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	80%	5%	15%
2	40%	10%	50%
3	25%	15%	60%
4	15%	5%	80%
5	20%	20%	60%
6	13%	24%	63%
7	10%	15%	75%
8	5%	10%	85%
9	3%	10%	87%
10	45%	6%	49%
11	30%	2%	78%
12	70%	4%	26%



Table 4: Age from 34-42

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	80%	5%	15%
2	40%	10%	50%
3	25%	15%	60%
4	15%	5%	80%
5	20%	20%	60%
6	13%	24%	63%
7	10%	15%	75%
8	5%	10%	85%
9	3%	10%	87%
10	45%	6%	49%
11	30%	2%	78%
12	70%	4%	26%

**Respondent Education**

The second element of the demographic factor, level of education exhibit many discrepancies in respondent answers as well. In the first segment as shown in Table 5, respondents with school level choose statement 9 “I usually compare the price of different brands before buying cosmetics” with 87 percent agree and strongly agree. Usually consumers utilize this buying technique when they lack information and experience about the product. Another way to minimize uncertainty is buying cosmetics made in a specific country. Based on that, respondents select statement 8 with 82 percent. Advertisement can be a good source of information, so statement 7 “I usually buy the mostly advertised cosmetics” came third with 74 percent. On the other hand, 82 percent reject the idea that the main reason to use cosmetics is to be accepted by others as mentioned in statement 12. In the same direction 62 percent answered that they don't try new cosmetics just for the fun of it as statement 1 pointed out. Yet again, a personal factor has no any influence on cosmetics buying behavior since 56 percent answered disagree and strongly disagree for statement 10.

The second segment of education show very different behavior. For the first time, female with undergraduate education emphasize on personal needs. Statement 11 “I use cosmetics to have a good appearance” got the highest results with 77 percent of consumer agree and strongly agree. We can attribute this to the university environment where those students used to socialize with others. Again, country of origin attains the second position with 73 percent choosing statement 8. While 63 percent of the undergraduate respondents state that they usually know in advance the brand they going to buy. This indicates that higher level of education can play a very important role in influencing the process of decision-making. On the other side, 82 percent said that they don't use cosmetics in order to be accepted by others. On the same track, 80 percent of respondents state that they don't use cosmetics to enhance their self-confidence. This is a strong indication that cosmetics have no direct influence on female consumer personality. In line with previous result, 57 percent of consumers said that they don't buy cosmetics from people who are experts in the field. To some extent this can be true since consumers usually know in advance the brand they going to buy.

The third segment for education as shown in Table 7 is postgraduate. They show results that are more balanced and there were no extreme answers. Similar to undergraduate, postgraduate choose Statement 11 “I use cosmetics to have

a good appearance” but with 66 percent. Once again, buying the mostly advertised cosmetics and using cosmetics made in a specific country appears among the highly rated statements with 62 and 57 percent respectively. It was not surprising to get the same results with unsupported statements like the previous segment, but with different percentage. About 90 percent said that they don't use cosmetics in order to be accepted by others. While 70 percent of respondents state that they don't use cosmetics to enhance their self-confidence. Moreover, 65 percent of consumers said that they don't buy cosmetics from people who are experts in the field.

Table 5: Education Level: High School

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	62%	22%	16%
2	38%	10%	52%
3	45%	25%	30%
4	33%	5%	62%
5	35%	5%	60%
6	19%	20%	63%
7	20%	6%	74%
8	13%	5%	82%
9	4%	9%	87%
10	56%	5%	39%
11	30%	1%	69%
12	70%	4%	26%

Table 6: Education Level: Undergraduate

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	44%	40%	16%
2	29%	20%	51%
3	57%	15%	28%
4	26%	25%	49%
5	22%	15%	63%
6	20%	18%	62%
7	15%	35%	50%
8	22%	5%	73%
9	40%	10%	50%
10	80%	10%	10%
11	17%	6%	77%
12	82%	3%	15%

Table 7: Education Level: Postgraduate

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	30%	55%	15%
2	40%	10%	50%
3	65%	5%	30%
4	31%	15%	44%
5	25%	5%	50%
6	30%	20%	50%
7	15%	23%	62%
8	38%	5%	57%
9	30%	20%	50%
10	70%	20%	10%
11	22%	10%	68%
12	90%	5%	5%

**Respondent Income**

The third demographic factor to be tested is respondent income. Table 8 exhibits the first income segment that cover those with income between 3000 to 10000 DH. The results show that advertisement play a very important role again with 59 percent go for statement 7. While with very slight difference “comparing the price of different brands before buying cosmetics” arrive second with 56 percent answering agree and strongly agree. Another reappearing statement was

“I prefer using cosmetics made in a specific country” with 55 percent. Whereas 80 percent rejected the idea of buying cosmetics will enhance self-confidence. Followed by statement 3 “Usually I buy cosmetics from people who are experts in the field” with 75 percent also rejected it because they may think that consulting experts can lead to expensive brands. Once more, 75 percent of the respondents rejected statement 12 “I use cosmetics in order to be accepted by others”. From the preceding results, it is noticeable that those results are very similar to other demographic factors examined in this research so far.

Table 9 exhibit consumer answers with income range from 10001-20000 DH. It is worth mentioning that respondent answers were very close from each other. Approximately 59 percent choose statement 4 “Cosmetics sold at a specialty store are better quality than those sold in a discount store”. About 56 percent of the respondents assert that they like to use cosmetics whenever they go out. In addition, same as the previous income segment statement 9 came among the most important issues with 51 percent saying that they tend to compare the price of different brands before buying cosmetics. Compared with the least important issues with previous income segment, this segment give more emphasis on refusing the direct influence of cosmetics on their personally. About 60 percent of the respondents rejected statement 12 “I use cosmetics in order to be accepted by others”. With this direction, about 54 percent as well rejected that they use cosmetics to have a good appearance. While only 50 percent rejected statement 10 that emphasize using cosmetics to enhance self-confidence.

While the last income segment range from 20001-30000 DH as shown in Table 10. The descriptive results indicate that 69 percent of the respondents with high income like to use cosmetics whenever they go out. This statement reappears in the previous segment as well. Comparing the price of different brands before buying cosmetics appear to be important with 61 percent picked this statement. While 60 percent declare that they use cosmetics to have a good appearance. On the other hand, 70 percent of the respondent disagree and strongly disagree with statement 12 that they use cosmetics in order to be accepted by others. On the same track and parallel with the previous result, 60 percent of the respondents did not support that they use cosmetics to enhance self-confidence. Finally, 55 percent of the respondents did not support statement 3 “Usually I buy cosmetics from people who are experts in the field”. We can attribute this to the fact that they have substantial experience and knowledge about different brands in the market.

### Respondent Income

Table 8: Income from 3000-10000 DH

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	52%	43%	5%
2	30%	18%	52%
3	75%	5%	20%
4	25%	24%	51%
5	35%	15%	40%
6	30%	17%	53%
7	15%	24%	59%
8	30%	15%	55%
9	20%	24%	56%
10	80%	9%	11%
11	43%	7%	50%
12	70%	11%	19%

Table 9: Income from 10001-20000 DH

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	40%	55%	5%
2	10%	34%	56%
3	46%	5%	49%
4	36%	5%	59%
5	40%	10%	50%
6	33%	20%	47%
7	25%	25%	50%
8	45%	5%	50%
9	30%	19%	51%
10	50%	26%	24%
11	54%	18%	28%
12	60%	15%	25%

Table 10: Income from 20001-30000 DH

Question	Disagree/Strongly Disagree	Uncertain	Agree/Strongly Agree
1	40%	55%	5%
2	22%	9%	69%
3	55%	2%	43%
4	50%	5%	45%
5	31%	19%	50%
6	15%	31%	54%
7	41%	5%	54%
8	45%	14%	41%
9	20%	19%	61%
10	60%	16%	24%
11	26%	14%	60%
12	70%	13%	17%

13

Furthmore, to get more indepth about the differences between the demograhpic factors One way Anova test was performed to see if there is any difference between the various categories. As shown in Table 11, there a significant difference between the age groups as well as education, while regarding income it was partially significant.

TABLE 11: Results of One Way ANOVA of Consumers Demographic

	Age	Educ	Incom
<b>Usually I try new cosmetics just for the fun of it.</b>	.002	.001	.009
<b>I like to use cosmetics whenever I go out.</b>	.000	.000	.000
<b>Usually I buy cosmetics from people who are experts in the field.</b>	.000	.007	.004
<b>Cosmetics sold at a specialty store are better quality than those sold in discount store.</b>	.000	.006	.033
<b>I usually know in advance the brand I am going to buy.</b>	.000	.000	NS
<b>I prefer cosmetics that are affordable.</b>	.001	.007	NS
<b>I usually buy the mostly advertised cosmetics.</b>	.000	.000	.033
<b>I prefer buyngg cosmetics made in a specific country.</b>	.009	.003	.024
<b>I usually compare the price of different brands before buying cosmetics.</b>	.000	.009	NS
<b>I use cosmetics to enhance my self-confidence.</b>	.005	.002	NS
<b>I use cosmetics to have a good appearance.</b>	.000	.000	NS
<b>I use cosmetics in order to be accepted by others</b>	.000	.000	NS

Significant at 0.05 level. NS: Not Significant

### Summary Of Major Findings

This research has provided insights into female consumer buying behavior in the Emarate of Abu Dhabi. Marketers agree that classifying and developing an understanding of target customers and segments are important inputs in differentiating products and enhancing selling propensity. Most of the studies concerning buying behavior and choice profiling tend to generalize rather than develop useful segment information. Thus, most results are not useful for targeting and positioning. This study contributes to the body of knowledge in the area of consumer buying behavior and cosmetic markets. From this study, we can gain a better understanding of female consumers buying behavior by analyzing three demograph

ics elements and its influence on cosmetic buying behavior, which provide brand marketers with valuable information.

Some of the results obtained from the age factor shows that older consumers tend to compare prices more than younger consumers, while young consumers prefer affordable price more than any thing else. There was an overwhelming conformity among young consumers about price affordability with 97 percent of them emphasize on its importance. While young consumers tend to believe more than others that cosmetics sold at a specialty store is better quality than those sold in a discount store. We can attribute this to the lack of experience of such consumers. Young consumers consider advertisement a very important source of information as well as a very influential factor in consumer decision making. Another important conclusion, personal factor was slightly influential except for older category, which aimed to improve personal appearance. Almost all female consumers believe that their beauty is a precious thing, and they think that they need to depend on expert people in the field of beauty. About 76 percent of female between 16-24 buy cosmetics from expert people and 60 percent of female between 25-33 also buy it from experts. While 45 percent of female consumers between 34-42 don't buy it from experts because they think that they have good experience in choosing the product. It is important to note here that UAE is relatively composed of young population. Therefore, the sheer size of the young demographic makes them extremely important from a marketing perspective. Young consumers, as "future consumers" along with the money they will be spending over the remainder of their lives considered extremely important, even vital, to the continuing health of marketing. As a result, retailers are striving to improve their marketing efforts to young consumers.

With regard to education, female consumers with lower level of education emphasize on the importance of price, and we can attribute this to the fact those consumers are still students and they spend family money. It is very important to provide this segment with necessary information about brand features as well as to emphasize on the country of origin. With respondents from the level of the education factor are using COO as a catalyst for price and quality and to some extent to reduce the degree of risk since cosmetics can affect the external appearance of the consumer. Again, Advertisement can play a very important role in shaping the consumers outlook from different education level although with less power on those with undergraduate education. It is highly recommended to encode information about vital attribute such as price, COO, quality in the advertisement message. In connection with advertisement, cosmetics companies should not worry their advertisement dollar, since in terms of processing information in advertisements, females are reported to perceive more clutter than males (Elliott and Speck, 1998). Another important outcome from this research that personality and self-concept are found not important for consumers from different educational backgrounds. Issues such as good appearance, enhancing self-confidence are not enough to attract consumers, which mean they think in rational way rather than irrational. For both undergraduate and postgraduate, they don't rely on the experts in the cosmetics field. Yet it is important to keep provide those consumers with updated information,

since they rely on their expertise and knowledge in the market.

While the results for income show that marketers must focus on advertisement in attracting consumers with low income. The content of advertisement should provide important information about price comparison as well as country of origin. Moving to consumers with income between 10001-20000, the store where they buy cosmetics is considered very important for this segment since they believe that specialty store provide higher quality brands. In addition to that, they like to use cosmetics regularly, which highlight the importance of store patronage programs, and this can be applicable to consumers with income between 20000-30000. Despite the high income, comparing price arise as an important tool in decision making.

Finally, marketing strategists should find it useful to understand how demographics can affect consumer-buying behavior in the marketplace, which can help in segmenting consumers and markets for their brands and marketing communication. By examining how cosmetic usage determines brand perceptions, companies can improve their marketing strategies to enhance customer satisfaction and increase their customer base. Moreover, by identifying the brand personalities that attract consumers, companies can pin-point the characteristics customers look for in a product, which in turn can be used to enhance brand image. Further research on different age groups and cultures should be conducted to better understand cosmetic consumers.

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### Appendix 1: Questionnaire

Age:  16-24  25-33  34-42

Education:  High school  Undergraduate

Postgraduate

Income:  3000-10000 DH  10001-20000 DH

20001-30000 DH

1) Usually I try new cosmetics just for the fun of it.

Strongly Disagree  Disagree  Uncertain

Agree  Strongly Agree

2) I like to use cosmetics whenever I go out.

Strongly Disagree  Disagree  Uncertain

Agree  Strongly Agree

3) Usually I buy cosmetics from people who are experts in the field.

Strongly Disagree  Disagree  Uncertain

Agree  Strongly Agree

4) Cosmetics sold at a specialty store are better quality than those sold in a discount store.

Strongly Disagree  Disagree  Uncertain

Agree  Strongly Agree

5) I usually know in advance the brand I am going to buy.

- Strongly Disagree    Disagree    Uncertain  
 Agree    Strongly Agree

6) I prefer cosmetics that are affordable.

- Strongly Disagree    Disagree    Uncertain  
 Agree    Strongly Agree

7) I usually buy the mostly advertised cosmetics.

- Strongly Disagree    Disagree    Uncertain  
 Agree    Strongly Agree

8) I prefer buying cosmetics made in a specific country.

- Strongly Disagree    Disagree    Uncertain  
 Agree    Strongly Agree

9) I usually compare the price of different brands before buying cosmetics.

- Strongly Disagree    Disagree    Uncertain  
 Agree    Strongly Agree

10) I use cosmetics to enhance my self confidence.

- Strongly Disagree    Disagree    Uncertain  
 Agree    Strongly Agree

11) I use cosmetics to have a good appearance.

- Strongly Disagree    Disagree    Uncertain  
 Agree    Strongly Agree

12) I use cosmetics in order to be accepted by others

- Strongly Disagree    Disagree    Uncertain  
 Agree    Strongly Agree

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# B2C e-Commerce adoption possibilities in UAE: An empirical study on E-Readiness of Consumers

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## *Abstract:*

*This study is focused on the possibilities of adopting Internet based buying attitude from the consumers of various products and services more intensely than the existing situation in UAE. The factors such as availability of Internet access, Intensity of Internet usage and e-Commerce awareness are used as the basis for measuring such e-readiness of the consumers considered in the study. With the sample size comprising of 266 e-transactions enabled customers residing in the cities of Dubai and Sharjah, three independent multiple regression models were used to find out that the initial willingness of the consumers to shop online has significant levels of dependency towards three dimensions of e-Commerce awareness such as basic understanding, product concern and e-transaction security. Relevant findings and the implications towards the possible B2C e-Commerce adoption in the retailing operations of the region is addressed in the study carried out with a descriptive research design and survey methodology.*

**Keywords:** *Internet, B2C e-Commerce adoption, e-Commerce awareness, e-transactions, e-readiness and Buying Attitude.*

## **1. Introduction**

United Arab Emirates (UAE), despite being a major tourism and commercial hot spot of the world has not fully improvised its potentials towards B2C e-Commerce practices so far. Insufficiencies in this regard could well be noted as many of the branded retailers in various product and services segments continue to operate in traditional way without adopting Internet based selling operations. The developments like expanding virtual market place with affordable high quality Internet access both for the residents and the enterprises, decreasing cost of computers with increasing potential users signifies the underutilized opportunities and hence, the possibility of B2C e-Commerce adoption in UAE (UNCTAD, 2005; 2006; 2007; & 2008). Despite the availability of affordable high quality Internet access in the region, this situation is quite contrary to the realities that exist in economies and facilities of similar kind in other parts of the world particularly with regard to Europe, U.S and other Asian countries. However, it's worth mentioning that there exist a certain successful B2C e-Commerce models operating within UAE in terms of online ticket booking for air travel, online auctioning and online payment systems for consumer utilities etc. Also, the existing Internet penetration rate in the region confirms the availability of threshold levels of virtual market that remain underutilized so far. Based on the well established studies in this regard, this existing situation is viewed in a proposition towards solution such as insufficient levels of e-Readiness of the consumers more importantly than the readiness of the enterprises to adopt B2C type of e-Commerce. Quantification of this proposition in terms of measuring the willingness of the consumers to shop online will help in establishing the scheme map for B2C e-Commerce adoption in the region. Successful B2C e-Commerce adoption in the region might alter the existing shopping culture in UAE characterized by big malls with crowded customers.

### **1.1 Need for the study**

From the global perspective, the importance of e-Commerce adoption is being well emphasized by UNCTAD through its annual reports ever since the year 2000. Invariably in all

UNCTAD reports on e-Commerce and Development (2000; 2001; 2002; 2003; 2004; 2005; and 2006), the advantages like increased quality of life, economic optimization and operational excellence were emphasized as the basis for justification towards e-Commerce adoption. Further, these reports have pointed out various categories of Industries that can improve e-Commerce adoption under specific socio economic conditions. However, consumer attitude towards Internet based e-shopping is viewed (Liao and Cheung, 2001) as the most critical aspect determining the success of B2C e-commerce in a specific market place. Thus, the major research challenge conceived in this study is to find out the willingness of the consumers to shop online in terms of e-Readiness that could form the basis towards establishing initial reference position towards B2C e-Commerce adoption schemes in the region. E-Readiness in the context of the present study is nothing but a measure developed towards establishing the classification scheme on technology adoption possibilities both from the perspective of consumers and the enterprises. Measuring the e-Readiness of the consumers will help in identifying their willingness towards initiating online purchase for various products and services that are not offered online at present in UAE. Concomitantly, the market for various products and services offered on retailing both in traditional and non traditional form is showing a consistent growth throughout the world. The factors contributing to this growth are fuelled by issues like expanding virtual market space, decreasing cost of hardware, convenience of shopping and time saving due to logistic issues like traffic and cost of transportation. Conversely, the enterprises selling products and services are quite visibly not improvising the potential market with B2C e-Commerce applications in their routine operations in UAE and hence, a need is felt to undertake this study with the possibilities and perspectives of e-Commerce adoption from the viewpoint of customers.

### **1.2 Research Problem**

In UAE, the local enterprises like supermarkets and similar such establishments like retailers of various other products and services are the widely recognized SMBs (Small and Medium sized Business Units) and have established strong

control characterized by severe internal competition in the market for various house hold and food items (Rajmohan and Panchanatham, 2005). The presences of various big hypermarkets have still not significantly influenced the industry structure for small and medium size retailers operating in various places of UAE with continued current market propositions comprising non existence of B2C e-Commerce operations. However, in the long run based on Porter (2001) model, the adoption of B2C by any of the competing segments in the retailing operation could well alter the industry structure for small and medium size retailers in UAE. Under such circumstance some of the existing small retailing units could get cannibalized paving the way for oligopoly in the market. The best way to counter this possibility from the perspective of small and medium size enterprises is to get prepared for the changes with the ability to adopt B2C e-Commerce operation as way to compete in the market. Hence, identifying the consumer willingness to order products and services through Internet will be a worthwhile prospecting exercise on B2C e-Commerce adoption possibilities in UAE shopping culture. Thus, identifying the e-Readiness of the consumers constituting the UAE market for various products and services is viewed as the potential research problem in the present work.

### 1.3 Factors considered to measure E-Readiness

E-Readiness is the measure developed towards establishing the classification scheme on technology adoption possibilities both from the perspective of consumers and the enterprises. Since the present study is focused on the possibilities of Internet based buying attitude from the consumers of various products and services, the factors such as availability of Internet access, Intensity of Internet usage and e-Commerce awareness are used as the basis towards measuring their e-readiness.

#### (a) Availability of Internet access

The ever growing potential of Internet as information super highway is the one major reason that has been contributing to the growth of e-commerce activities throughout the world. The Infrastructure requirement for all the categories of e-commerce models is well fulfilled by the availability of Internet. According to UNCTAD (2000) in its report on e-commerce and development, the advent of Internet as a business tool has introduced profound changes both in the organization of the single firm and in the interaction of the firm with its suppliers and the customers. Thus, the market potential for the e-commerce ventures of the type B2C are calculated based on the number of Internet users available in a specific country. The number of Internet users in the world has been increasing every day and this has contributed to the tremendous growth of Internet based e-commerce in different dimensions. The initial phase of Internet revolution saw the emergence of portals and search engines which later on enabled many business models to embark B2C type of e-commerce more effectively. According to the latest statistics provided by the website [www.internetworldstats.com](http://www.internetworldstats.com), UAE's Internet penetration rate is 61 percent when compared with the global penetration rate of 26 percent. Also, it could be noted around 3 Million Internet users with broad band ac-

cess in UAE out of its total population of 5 million. These statistics confirms the availability of regional infrastructure and thresh hold levels of consumers towards establishing B2C e-Commerce operations

#### (b) Intensity of Internet usage

In order to estimate the willingness of the consumers' to order products and services through Internet the variable intensity of Internet surfing is considered as very important in the present study. In this context, Liao and Cheung (2001) reported that the individual's level of Internet usage could conveniently be measured by the frequency of access and the duration of each access. Hence, the variable intensity of Internet surfing(I) in the present study is measured in terms of Internet browsing experience in years (IBE), Internet browsing frequency (IBF),

Internet browsing time per week (IBT). Since, Internet life-style in the world is less than two decades old, an experience of more than 5 year usage by the user is considered to be very good level of experience in the present study. Further, the usage duration of more than 2 hours a day on twice a week basis is viewed to be the good intensity level of Internet usage. These matrices also forms the basis towards understanding the perception of the consumers towards initiating internet based e-Commerce

#### (c) Awareness about e-Commerce

The non-adoption of e-commerce by various potential consumers could also be due to the lack of clarity in understanding the basics of e-commerce. "Many people in developing countries tend to be excessively aware of the e-commerce possibilities to the extent that they overestimate its impact and have unrealistic expectations. What is really needed is critical analysis of real opportunities and potential pitfalls" (Ricipero, 2004). This lack of clarity in the e-commerce applications are justifiable from the standpoint that the first operational definition for e-commerce was given only in the year 2000, though many descriptive definitions can be found much before that(UNCTAD, 2001). The factor e-Commerce awareness in the present study is measured in terms of the consumers' perception about e-Commerce and its utility, product quality related inhibitions, their confidence on e-Payment systems particularly on transaction security and the their actual experience of using practical B2C e-Commerce systems that exist at present in UAE. In an effort to find out the world's best practice in e-Commerce training, Mcnicol Williams(2001) deployed these factors as the basis to measure the e-Commerce awareness of Australian public and the entrepreneurs.

## 2.0 Studies corresponding to the consumers on e-commerce

The basis for consumer oriented e-commerce applications emerge from the availability of Internet service in a specific place. The Internet was opened to the public in early 90s in the developed countries and in UAE it was from the year 1995 the public access to the Internet was made possible. Hence, it

is to be noted that consumer oriented e-commerce emerged in the developed nations of the world at least 2 or 3 years earlier than the actual availability of Internet access to the public in UAE. However, the published studies on various aspects of e-commerce technologies and its applications can be traced back from the year 1995 onwards. Many studies pertaining to B2C type of e-commerce in the recent past have given more focus to consumers of the products sold over the Internet (Benjamin and Wigand, 1995; Metha and Sivadas, 1995; Quelch and Klein, 1996; Peterson et al., 1997; Lee, 1998). The primary data for these studies have predominantly referred to the United States. The determining factors on the success of different B2C e-commerce ventures identified in these studies include consumer preferences, transaction costs with respect to logistics, communications, payments and the availability of product information.

Arthur and John (1996) studied the real business value of the online communities existed in the Internet. They classified the online communities into four categories namely (a) communities of transaction (b) communities of interest (c) communities of fantasy and (d) communities of relationship. According to them the Internet users who are classified, as the 'communities of transaction' are the real people contributing towards the online ventures like buying and selling over Internet and not the other categories of online communities. However, they opined that businesses have been slow to make use of the Internet's community building capabilities. In the context of the above study, underutilization of the virtual market place is the natural happening, which might get conquered as many business enterprises start participating in the B2C e-commerce ventures over a period of time. Also, the scope of the virtual market place can be extended if all the categories of online communities are brought under the gamut of B2C e-commerce ventures.

The customer loyalty for the firm is the basic phenomena for the successful launch of B2C e-commerce systems. In this context,

Lawrence et al. (1998) observed that the strategy of many portals is to become global supermarkets providing everything for individuals, families and the organizations. According to them the providers of these portals consider their huge customer base as the most important assets. In similar lines, Reichheld and Phil Schefter (2000) studied the impact of customer loyalty on the success of B2C e-commerce over Internet. In this context, they stated that many enterprises concentrate all their attention on attracting customers rather than retaining them in their Internet business. Further, they stated that price of the product sold over the Internet is not the major alternatives to the trust the customers have got for the same product sold outside Internet. This according to them is due to the uncertainties like non-availability of physical shopping experience the customer is likely to face in the e-commerce ventures. In the context of the above study, the firms that have established their trust over the customers in their existing model of the business can launch their Internet based B2C e-commerce ventures with pricing variations as the primary strategy.

As far as the growth of B2C type of e-commerce in developing countries is concerned, UNCTAD (2003) in its report on e-commerce and development provided various obstacles faced by these countries. The various factors identified to be hampering the growth of e-commerce in developing countries include digital divide factor, poor quality of Internet access, higher cost of Internet access, cost of computers, poor e-commerce awareness among the potential enterprises and the consumers. Despite all these obstacles, the available number of Internet users in UAE is considered to be more than significant to make an impact in terms of e-commerce ([www.internetstat.com](http://www.internetstat.com)). As far as the studies corresponding to the number of Internet users are concerned, Rajmohan and Panchanatham (2006) observed the growth in the number of ISP's throughout the world. Also, they reported the higher level of satisfaction among the customers of the Internet service. In the context of the above study, it is noted that the Internet users in the early days of Internet usage use it just for the purpose of e-mail and other communication facilities like voice chatting.

Krishnatray and Kulshrestha (2002) made a notable work on Internet usage pattern among the students and reported that more than 50 percent of the Internet users are in the age group between 15 to 24. In the context of the above study the focus was restricted only to the students and hence, more elaborate applications on the Internet usage like e-commerce was ignored. However, the increase in the number of Internet users is noted consistently in all reports of the UNCTAD ever since the year 2000. In this context, the UNCTAD (2005) in its report on e-commerce and development observes 300 percent growth in the number of Internet users in UAE between the year 2003 and 2008. In this context, Rajmohan and Panchanatham (2007) reported the availability of large virtual market place and hence, the opportunities for various segments of the society like youth, women and the enterprises throughout the world.

In a significant study made by JaiGanesh (2003) the classification of the e-market places was provided. According to this study the e-market place is primarily classified into 3 categories namely

(a) e-market place for the public (b) e-market place for the private and (c) consortia market places. Further, the study provided the empirical and theoretical basis for adoption and evolution of Internet based electronic market places.

Making sense of the emerging B2B market structures is worthwhile for the organizations in terms of fixing the timing for exploiting the web-based opportunities. In this context, Mahadeven (2003) provided the taxonomies of emerging e-Commerce market structures. In a study involving 200 e-Commerce web sites, this work has reported a list of 12 major electronic market structures classified under three distinctive categories such as collaborative market mechanism aided by collaborations among the trading partners, quasi-market mechanism characterized by electronic market initiated by the group of buyers or sellers, and neutral market mechanism characterized by the large number of buyers and sellers. Also, he provided the alternative scheme of classifying



these 12 market structures based on the appropriate timing of entries in to the market for the organizations namely degree of fragmentation and asset specificity. The market structures classified in the above study include: (i) Extranet, (ii) Trading partner network, (iii) Web EDI, (iv) Buyer centric private market, (v) Supplier centric private market, (vi) Consortia market place, (v) Seller oriented (forward) auction sites, (vi) Buyer oriented (reverse) auction sites, (vii) Neutral auctions, (viii) Exchanges, (xi) Catalog aggregators and (x) Online community. The prospects of deploying B2C type of e-commerce in selling the products like food items are to be assessed in terms of potential opportunities along with the possible pitfalls. A notable contribution that can closely be matched in this regard was provided in a study on chances and strategies for selling fresh food items over Internet. In this context, Theuvsen (2003) critically analyzed the possibilities and challenges in selling fresh products like ready-made food items over Internet. According to this study successful e-commerce applications in selling products like food items requires the fulfillment of certain preconditions like higher consumer involvement, rareness of the product sold, non substitutability of the specific nature of the product and seller differentiation among the potential consumers. Also, this study provides the conceptual basis for assessing the chances of food manufacturers in B2C e-commerce. The characteristic features of the preconditions identified in the above study include, rareness of the product sold over Internet, emotional and cognitive involvement of the consumers towards the specific product.

The theoretical and empirical framework for the study on consumer attitudes towards Internet-based e-shopping was provided by Liao and Cheung (2001). Through the survey data generated from Singapore, they measured the initial willingness of the consumers to do shopping in the Internet and reported that life content of the products, transaction security, price, Vendor quality; IT education and Internet usage significantly affect the initial willingness of the Singaporeans to e-shop on the Internet. In the context of the above study, the availability of infrastructure facilitating e-commerce with a minimum threshold size of the virtual market place is a prerequisite for the successful incorporation of B2C e-commerce. Thus, an Internet penetration rate of 61 percent in UAE when compared with the global penetration rate of 26 percent; comprising 3 Million Internet users with broad band access out of total UAE population of 5 million strongly confirms the availability of regional infrastructure and threshold levels of consumers towards establishing B2C e-Commerce operations more intensely than the present situation.

### 3.0 Research objectives & Methods

The under utilization of e-commerce applications in retailing operations of products and services in UAE is viewed in two entrepreneurial dimensions namely consumer preference towards B2C e-commerce systems and the capability of the readymade food selling enterprises to incorporate it. However, identifying the consumer preference towards the Internet based selling operations is viewed as the potential research problem in the present work and hence, the objectives and hypotheses for the study have been framed accordingly

such as;

1. To suggest the methodology to adopt B2C type of e-commerce in retailing operations of various products and service providers.
2. To measure the e-commerce awareness of the consumers of various products and services.
3. To identify the acceptance of the consumers to order products and services through Internet.

In order to accomplish these objectives, the following null hypotheses were tested and reported in this work such as;

1. e-Commerce awareness of the consumers do not depend on their socio-economic factors
2. The e-commerce awareness of the consumers do not depends on their intensity levels of browsing.
3. The willingness of the consumers to order products and services through Internet depends on their e-commerce awareness.

### 3.1 Research Design

The blue print for executing this research work is prepared considering the nature of the problem identified and subsequent objectives taken up for the work. Hence, a descriptive research design with a questionnaire for the primary data collection is employed in this work. In this context, Seltiz et al. (1959) stated that the research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. As far as the notable existing research designs on e-commerce studies are concerned, Liao and Cheung (2001) employed descriptive research design supported by regression model for an empirical study of consumer attitudes towards Internet based e-shopping in Singapore. Similarly, Mcnicol Williams (2001) employed descriptive research design with structured interview schedule for studying the e-readiness of the SMEs in Australia.

### 3.2 Details of the Questionnaire

The questionnaire employed in the work was designed with 26 variables consisting of a variable with open-ended questions and another 3 variables with 2-point scale (Yes/No) type. The remaining 21 variables were measured with 5-point scale following the standard approach provided by Aaker et al. (1998); Downing (1999); Keeney (1999) and Liu and Arnett (2000). These variables were grouped under 3 major categories such as (a) Socio-economic details comprising 8 variables (b) Measurement scheme for Internet usage comprising 4 variables (a) Measurement scheme for e-commerce awareness comprising 10 variables grouped under 3 dimensions such as basic understanding, product concerns and Online payment concerns.

### 3.3 Pre-testing

A pilot survey was conducted to obtain the preliminary assessment of reliability of the research instrument with 83 consumers who are Internet surfers. Before the deployment of the instruments to the actual planned sample size in 2 major sample areas, the data collected through the pilot study was analyzed and the results have confirmed the reliability of all the important variables.

**Table 1: Measurement items and reliabilities.**

Construct	Dimension	Item	Cronbach alpha	Composite reliability
e-Commerce awareness	Basic Understanding	E-Commerce seems to be a good idea	0.76	0.77
		I have understanding about trading on the web		
		I have never seriously entertained the idea about e-Commerce		
		I have heard some talk about e-Commerce		
		I am very curious about e-Commerce		
	Product Concerns	I do not like buying or selling products using Internet	0.85	0.85
		Buying the product through the Internet may not be as good as buying in person in a store		

**Table 1: Measurement items and reliabilities.**

Construct	Dimension	Item	Cronbach alpha	Composite reliability
	Online Payment Concerns	I feel Credit/Debit card is not essentially required for e-Commerce	0.78	0.79
		I do not trust the Internet with my credit card		
		I may like ordering the products through the Internet, but never pay on it through Credit/Debit Card		

Note: All items were measured with five-point Likert scale.

Reliability of the multi-item scale for each dimension was measured using Cronbach alphas and Composite reliabilities measures. Both measures of reliability were above the recommended minimum standard of 0.60 (Nunnally, 1978). For all three dimensions of e-Commerce awareness such as basic understanding, product concerns and online payment concerns both measures of reliability are above 0.70 as shown in table 1 which summarizes all measurement items, Cronbach alphas, composite reliability, and their scales for all the items.

### 3.4 Sampling Details

The survey for the study on consumers of various products and services was conducted in the Emirates of Dubai and Sharjah among the households who have Internet connection in their home based. The questionnaires were distributed and subsequently collected with filled up responses from the respondents. All the respondents who took part in this survey are treated as the consumers of various products and services and they were identified based on their capability to browse Internet with reasonable operational knowledge of computers. Since the availability of Internet connection in home is set forth as one of major criteria for sample selection, all the respondents who took part in the survey were with good level

of operational knowledge on computers.

Another major factor applied for sample selection is social articulation (Cosmopolitanness) of the households. Some researchers have considered this to be the central variable accounting for change and modernization (Rogers, 1983). Social articulation refers to the degree of contact of the household with the wider society through the mass media, visits to market centre and cities, and general knowledge of the wider world. In UAE context, the people living in places like Sharjah and Dubai is normally expected to have good level of social articulation. Also, the respondents were informed about the nature and the objective of this study to ensure their earnest coordination and reduce errors in the survey. Thus, the sampling procedure adopted for this survey can be categorized under judgment sampling method. The primary data pertaining to the present study was collected between September 2009 and December 2009. The sample size of the survey is 266 comprising 100 respondents in Dubai and 166 in the city of Sharjah. As far as the sample size for the consumer related survey is concerned, Hoinville et al. (1978) stated that the decision on a sample size could be based on experience and good judgment rather than relying on strict mathematical formula. Also the use of surveys in social research does not necessarily have to involve samples of 1000 or 2000; instead research with samples between 30 and 250 is adequate (Martyn Denscombe, 1999). Further, Liao and cheung (2001) employed a sample size of 250 to measure the willingness of the Singaporeans to e-shop over Internet.

### 3.5 Research models tested in the study

#### (a) e-Commerce awareness of the consumers

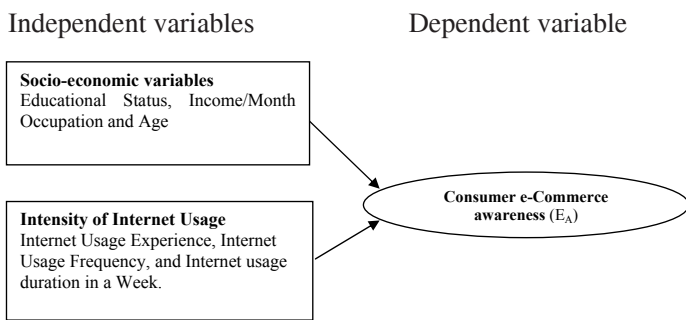
The consumers' e-Commerce awareness (EA) is considered to be the function of Socio – economic variables and their intensity levels of Internet usage as provided in the figure-1. The major socio economic variables of the consumers considered in the study include Age, Gender, Education, Income and Occupation. As far as the measure on the intensity levels of Internet usage is concerned, Liao and Cheung (2001) reported that the individual's level of Internet usage could conveniently be measured by the frequency of access and the duration of each access. Hence, the variable intensity of Internet surfing (I) is measured in terms of Internet browsing experience (IBE), Internet browsing frequency (IBF), Internet browsing time per week (IBT). This is expressed mathematically in terms of the equation 1.

$$I = IBE + IBF + IBT \quad (1)$$

Where,

- I** : Intensity of Internet browsing.
- IBE** : Internet usage experience in months and years.
- IBF** : Internet usage frequency in days.
- IBT** : Internet usage time per week.

Figure 1: Research model for consumer e-Commerce awareness Two different regression models, one consisting of so-



cio-economic variables and another consisting of variables on Intensity of Internet usage are considered in the research model framed for studying the consumers' e-Commerce awareness (EA). This research model is shown in the Figure - 1, where the dependent variable for EA is conceptualized to be influenced by two sets of independent variables. Each of this regression models is stated in the equation 2 and 3 as follows.

$$E_A = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu \longrightarrow (2)$$

Where,

- EA** : e-Commerce awareness of the consumers,
- X 1** : Educational status
- X 2** : Income/month,
- X 3** : Occupation
- X 4** : Age
- $\beta_1, \beta_2, \beta_3, \beta_4$**  : Regression coefficients which are independent normal variables with zero mean and corresponding variance
- $\beta_0$**  : Constant
- $\mu$**  : Standard error

Also,

$$E_A = \beta_0 + \beta_1 Y_1 + \beta_2 Y_2 + \beta_3 Y_3 + \beta_4 Y_4 + \mu \longrightarrow (3)$$

Where,

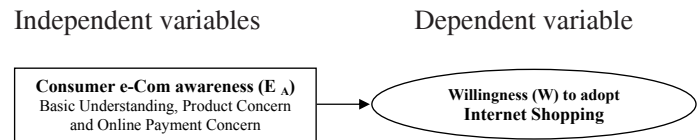
- EA** : e-Commerce awareness of the consumers
- Y 1** : Internet usage experience in months and years (IBE)
- Y 2** : Internet usage frequency in days (IBF)
- Y 3** : Internet usage time per week (IBT)
- $\beta_1, \beta_2, \beta_3,$**  : Regression coefficients which are independent normal variables with zero mean and corresponding variance
- $\beta_0$**  : Constant
- $\mu$**  : Standard error

In the context of the above two equations (2&3), it is to be noted that they are considered as two separate regression model and no attempt is made to integrate all these independent variables into a single regression model as the Independent variables are identified from two separate theoretical frameworks one from Rogers (1983) and other from Liao and Cheung (2001) respectively.

## (b) Consumer Willingness towards Internet Shopping

The consumer willingness to adopt Internet Shopping is viewed as e the function of their e-Commerce awareness as provided in figure-2. The major dimensions of consumer e-Commerce awareness considered in the study include basic understanding, product concerns and online payment concerns.

Figure 2: Research model for consumer willingness to adopt Internet Shopping



The third regression model consisting of variables of different dimensions of e-Commerce awareness such as basic understanding, product concerns and online payment concerns are considered in the research model framed for studying the consumer willingness (W) to adopt Internet based shopping and this model is stated in equation 4 as follows.

$$W = \beta_0 + \beta_1 E_1 + \beta_2 E_2 + \beta_3 E_3 + \mu \longrightarrow (4)$$

Where,

- W** : Willingness to adopt Internet based Shopping.
- E1** : Basic Understanding on e-Commerce operations.
- E2** : Concerns on the product attributes sold over Internet.
- E3** : Concerns on the online payment systems

**$\beta_1, \beta_2 \& \beta_3$**  : Regression coefficients which are independent normal variables with zero mean and corresponding variance

- $\beta_0$**  : Constant
- $\mu$**  : Standard error

The regression models provided in the equations 2, 3 and 4 are used as the basis to test the hypotheses 1, 2 and 3 taken up in the study and the results are discussed accordingly.

## 4.0 Analysis and Interpretations

### (a) Socio-economic factors and Consumer e-Commerce awareness

The e-Commerce awareness of the consumers is considered not be the dependent on of socio economic factors like educational status, income per month, age and occupation status of the consumers. These Socio-economic variables are considered in the regression model provided in the equation-2 and treated as group of key socio economic variables in the multiple regression analysis performed for testing the hypothesis - 1. The results of this test are shown in table -2, where

the F value of 9.497 is found to be significant at 5 percent level. Hence, hypothesis – 1(Null Hypothesis) is rejected at 5 percent level of significance. Also, the adjusted R Square value of 0.114 indicates that 11.4 percent of the e-Commerce awareness of the consumers is contributed by these groups of key socio economic variables for the consumers.

Table 2: Results of the regression analysis for the test of hypothesis-1

Model 1		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Adjusted R Square	F
		B		Beta			
	(Constant)	1.642	0.640	-	2.567*	0.114	9.497*
	Educational status	-1.023E-03	0.178	0.000	-0.006		
	Income per month	0.271	0.105	0.170	2.583*		
	Age	-0.175	0.108	-0.110	-1.624		
	Occupational status	0.683	0.118	0.372	5.761*		

\*Significant at 5 percent level

### Dependent variable: Consumer e-Commerce awareness

From table 2, it can also be inferred that the independent variables such as income per month and occupational status of the consumers are found to be significant at 5 percent level with the corresponding ‘t’ values of 2.583 and 5.761. Thus, the results of the regression model considered in the equation 2 provides the importance of these two variables in determining the e-Commerce awareness of the consumers. However, the effect of independent variable educational status is not found to be significant at 5 percent level among the group of key socio economic variables.

### (b) Intensity of Internet Usage and Consumer e-Commerce awareness

The intensity of Internet usage by the consumers is measured in terms of Internet usage interval, Internet usage time per week, Internet usage experience. The effects of these influencing variables were reported by Liao and Cheung (2001) to be significant on the e-commerce awareness level of the Singaporean consumers. These variables are considered in the regression model provided in equation-3 and treated as group of major influencing variables in the multiple regression analysis performed for testing the hypothesis – 2.

Model 2		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Adjusted R Square	F
		B		Beta			
	(Constant)	29.067	1.531		18.979*	0.566	78.565*
	Consumers' Internet usage interval in days	1.340	0.286	0.335	4.690*		
	Consumers' Internet usage time per week in hours	1.379	0.189	0.500	7.295*		
	Consumers' Internet usage experience in months & year	0.173	0.371	0.030	0.465		

\* Significant at 5 percent level

### Dependent Variable: e-Commerce awareness

The results of this test are shown in table 3, where the F value of 78.565 is found to be significant at 5 percent level. Hence hypothesis – 2 (Null Hypothesis) is rejected at 5 percent level of significance. Also, the adjusted R Square value of 0.566 indicates that 57 percent of the e-commerce awareness of the consumers is contributed by these groups of influencing variables for the consumers. The results of this test confirm the earlier reported finding by Liao and Cheung (2001) and Mcnicol Williams (2001). From table-3, it is to be noted that the ‘t’ values of 7.295 and 4.690 corresponding to the independent variables Internet usage time per week and Internet usage interval in days are found to be significant at 5 percent level. From these ‘t’ values, it is inferred that the e-commerce awareness of the consumers has significant dependency towards the variables Internet usage time and usage Interval of the consumers.

### (c) Consumer willingness to shop online and their e-Commerce awareness

Table 4: Results of the regression analysis for the test of hypothesis – 3

Model 3		Un standardized Coefficients	Std. Error	Standardized Coefficients	t	Adjusted R Square	F
		B		Beta			
	(Constant)	-2.731	0.672		-4.062	0.41	24.065
	e-com Basic Understanding	0.072	0.034	0.202	2.140*		
	e-Com Product Concerns	0.114	0.062	0.180	1.839*		
	e-Com transaction Security	0.163	0.049	0.320	-3.314*		

\* Significant at 5 percent level

### Dependent Variable: Willingness to shop Online.

Table 5: Details of the consumer willingness to order ready-made food items through Internet and their reliability on e-payment method

	Classification of consumer willingness to order products through Internet			Classification of consumer reliability on Internet payment methods		
	Ordinary willingness	Good willingness	Very good willingness	Ordinary reliability	Good reliability	Very good reliability
Number of consumers	102	41	123	70	95	101
Percentage	38.3%	15.4%	46.4%	26.3%	35.7%	38%
Grand total	266 (100%)			266 (100%)		

The results of test for hypothesis-3 are shown in table 4, where the F value of 24.065 is found to be significant at 5 percent level. Hence, hypothesis – 3 (Null Hypothesis) is rejected at 5 percent level of significance confirming the earlier finding. Also, the adjusted R Square value of 0.41

indicates that 41 percent of the consumers' willingness to order products through Internet is contributed by three major dimensions of e-Commerce awareness considered in the study. From table 4, it is also inferred that the 't' values of 2.140, 1.839 and -3.314 corresponding to three dimensions of e-Commerce awareness such as basic understanding, product concerns and e-com transaction concerns are found to be significant at 5 percent level. However, the negative t value for transaction concern implies increased online transaction fear causing less willingness to shop online. Thus, the initial willingness of the consumers to order product through items through Internet has significant level of dependency towards all the three dimensions of e-Commerce awareness. In similar lines, Theuvsen (2003) reported that higher consumer involvement is a major factor that can contribute to the success of the ventures like B2C type of e-commerce. Hence, the results of this regression analysis confirm the earlier findings on the possibilities towards B2C type e-commerce deployment in selling various products and services that are not offered online at present in the study area. Further, the results shown in table-5 have confirmed that 60 percent of the consumers have good and very good willingness to shop online in the study area.

## 5.0 Findings, Implications and Concluding remarks

The major finding of this work is the mismatch that exists in the market between the willingness of the consumers to shop online and the availability of such preferred facilities by them. In this context, it is found that 60 percent of the consumers who are Internet users have good and very good willingness to order products through Internet. In contrary to this most of the popular retailing enterprises in UAE is not offering B2C type of e-commerce systems in the market. With ever expanding virtual market place, this is viewed as the gross underutilization of the infrastructure on e-commerce possibilities with constantly increasing demand for such products and services. This finding made in the present study can further be substantiated by the details provided as follows.

1. The group of socio-economic factors such as educational status, income per month, occupational status and Age has significant effect on consumer e-commerce awareness. In particular, the consumer e-Commerce awareness levels have a significant level of dependency towards their income per month and occupational status. In this context, it is found that 25 percent of the consumers have their family income per month at AED 10,000 and above. As far as the various categories of occupation of the consumers are concerned 10 percent of them are found to be engaged in small business operation with 35 percent of them constituting employees of various companies and the government agencies.

2. The e-commerce awareness levels of the consumers are significantly affected by their intensity of Internet browsing. In particular, the e-commerce awareness levels of the consumers have significant level of dependency with regard to the Internet usage interval in days and its usage duration in time per week by them. In this context it is found that 35 percent of the consumers have already used Internet based e-commerce systems for purchasing and selling of products

and services.

3. The consumer willingness to order their preferred products and services through Internet is highly encouraging in terms of B2C type of e-commerce adoption in various retailing operations. In this context, it is found that 38 percent of the consumers have shown ordinary willingness to shop through Internet even if their preferred retailers offer such services. The remaining 62 percent of the consumers have shown good and very good willingness to shop through Internet, if their preferred retailers in the market offer such services. However, it is also found that the availability of secured electronic transactions (SET) have not yet shown considerable improvements in terms of customers trust towards e-transactions and this is really a concern area that is to be addressed among the Internet surfers. In this context, it is found that 35.7 and 38 percent of the consumers have shown good and very good reliability on Internet payment methods. However, the remaining 26.3 percent of the consumers are found to be with only ordinary reliability on Internet payment methods.

4. The willingness of the consumers to shop through Internet is significantly affected by their e-commerce awareness level. In this context, it is found that the willingness of the consumers to shop through Internet significantly depend on the all the three dimensions of e-commerce awareness such as basic understanding of e-Commerce, Concerns over the product and services that may be offered online and Concern over the transaction security in the Internet.

## 5.1 Implications and Concluding Remarks

Based on the above findings made in this work, the following are the managerial implications for the retailing enterprises operated in UAE. This also includes a few suggestions to the policy makers.

1. The situation for B2C e-commerce operations for some of the potential products and services is not properly improvised in the market. This is considered to be a good opportunity that remains underutilized in the market. However, certain branded but small retailers are well improvising the market with home delivery services of the products that are ordered. Hence, the existing retailers in larger context, particularly the sellers of grocery and food items in the market should come forward to offer this service more effectively than the present scenario to their customers.

2. Most of the home delivery services offered by certain branded but small retailers are based on the ordering system centered on telephone and personal ordering in the shop. This type of ordering systems are not considered to be so transparent in terms of product displayed for ordering and subsequently sold. Establishing a web based selling strategy can solve this problem. Hence, the well-established branded retailers should establish their B2C type of e-commerce portals for trading activities in UAE. In this context, the higher willingness of the consumers found in the present work to use such systems is an added advantage in the initial stages of such ventures.

3. The inhibitions of the consumers regarding the reliability of the existing e-payment methods is really a concern area that is required to be addressed among the Internet users. In this context, the role of the banking corporations more specifically those providing credit card and debit card services is viewed with higher level of significance as they are identified to be in pivotal position to take up the confidence boosting efforts among the customers on various e-payment systems. Also, these bankers should come forward to device a scheme that can facilitate e-transactions in higher volume than the present situation in UAE.

4. More elaborate role of the government than the present situations is required to facilitate the e-commerce growth in a country like UAE where the opportunities are countless. More specifically, the federal and local governments should take up the e-commerce awareness raising measures among some of the potential SMEs, SMBs and even among the Internet users as the infrastructure Internet still remains highly underutilized in terms business and macroeconomic dimensions in UAE.

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# A Critical Analysis on Monetary Potency with special reference to ELGI Equipments Ltd, Coimbatore.

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## **Abstract:**

*Financial strength of any organization leads to various development opportunities in the business field. The agro-equipment industry gains lots of momentum after the proclamation from the International Monetary Fund and World Trading Organizations, stating that food scarcity is the core problem for many countries in due course of time. The compressor manufacturing industry had a derived demand from food industry and need to be stronger to meet the challenges ahead. Hence the present study is to analyze the monetary potency of Elgi equipments with some significant models deployed i.e. Altman Z-Score (Multiple Discriminant Model). Based on the outcomes necessary suggestions were given to improve the standard of the organization.*

**Keywords:** Financial strength, Agro-equipment, Altman Z score

## **1. Introduction**

Compressor manufacturing industry is one of the basic industries that gains economic importance as it belongs to the sector of agro-equipment manufacturing industry. Elgi equipments ltd was one of such compressor manufacturer incorporated in 1960 as a private limited company at Coimbatore. And Elgi Equipments was converted into a public limited company in 1975 and came out with a public issue of 75,000 shares. It was promoted by L G Balakrishnan, his brothers and associates.

Hailing from the Elgi stable, EEL manufactures reciprocating, borewell and screw compressors. It also makes and sells garage equipment, mobile utility systems, bottling equipment and automobile accessories such as power brakes, pneumatic horns and wipers. It has two manufacturing units at Coimbatore. As part of its modernizations plans, the company invested Rs: 40 crores in the upgradation and expansion of the manufacturing facilities, especially of compressors. The company's shares are listed in BSE, NSE and CSE.

### **Statement of the Problem:**

Compressor manufacturing industry is one of the important segments of Indian economy. The compressor manufacturing industry is basically agro-based industry but it also serves to need of households also. Elgi equipments ltd is one of such compressor manufacturer that faces many problems including stiff competition from the peers and pressers due to reduced sales backed by Mansoon failures or delays. So, it is becoming necessary to study the financial health of the ELGI Equipments Ltd.

### **Scope of the Study**

The study pertains to the financial health of ELGI Equipments Ltd., Coimbatore. The study is made by making a comparison of 10 years of its liquidity, turnover, profitability and leverage position and an effective use of assets. This study also helps the company as well as the investors to understand its financial health.

## **Objectives of the Study**

- To assess financial healthiness of the study unit by using Altman Z-Score (Multiple Discriminant Model)
- To understand the absolute fact and figures of the company
- To suggest ways and means for improving the financial health of the company.

## **Source of Data**

The study is mainly based on secondary data collected from ELGI Equipments Ltd for the period of ten years from 2000 - 01 to 2009 -10. The data were obtained from the annual reports which were published by ELGI Equipments Ltd. The ratios have been calculated and interpreted from the figures of profit and loss account and balance sheet of the company.

## **A Z-SCORE ANALYSIS**

### **Application of Z – score**

“Z” score analysis, multi discriminant analysis has been introduced Edward I. Altman in 1968 to evaluate the general trend in the financial health of an enterprises over a period. Using of many accounting ratios to assess the performance may sometimes fails to predict the bankruptcy of the companies, so, he wanted to design a multiple discriminant model to predict the bankruptcy at least sometime before. At last he identifies a combination of five ratios and developed a model to predict the healthiness at least before two years than the year of bankruptcy.

### **Meaning of Financial Distress**

Financial distress may be defined as a situation where a firm is not able to meet its maturing obligations on time. A high degree of financial leverage increases the risk of financial distress and ultimately leads to liquidation result, both the equity and debt-holders are adversely affected.



**Indicators of Financial Distress**

The ratios used for prediction the financial distress include liquidity ratios, solvency ratios and activity ratios.

**Liquidity ratios**

Liquidity ratios measure the firm’s ability to meet its obligations in the short run.

**Solvency Ratios**

Solvency ratios measure the Firm’s ability to meet the debt long run

**Activity ratios**

Activity ratio measure the firm’s ability to utilize its assets in an efficient manner.

**Components of Z-Score Model**

Z-Score applied to historic performance. The model uses common financial information such as ‘sales revenue’ and ‘total assets’ to derive five basic financial ratios.

Each ratio is assigned a weight and summed together to produce the Z-Score. The five ratios used in the model are as follows:

**Variables (Ratios) Used in Z score Analysis.**

The following accounting ratios are used as variables to combine them into a single measure (index), which is efficient in predicting bankruptcy.

X1- The ratio is working capital to total assets (WC/TA). It is the measure of the net liquid assets of a concern to the total capitalization.

X2- The ratio of net operating profit to net sales (NOP/S). It indicates the efficiency of the management in manufacturing, sales, administration and other activities.

X3- The ratio of earnings before interest and taxes to total assets (EBIT/TA). It is a measure of productivity of asset employed in an enterprise is based on the earning power (profitability).

X4- The ratio of market value of equity to book value of debt (MVE/BVD). It is reciprocal of the familiar debt-equity ratio is measured by the combined market value of all shares, while debt includes both current and long term liabilities. This measure shows how much assets of the enterprise can decline in value before the liabilities exceed the assets and the concern becomes insolvent.

X5- The ratio of sales to total assets (S/TA).the capital turnover ratio is a standard financial measure for illustrating the sales generating capacity of the assets.

**Z-SCORE (ARRIVED AT USING THE WEIGHTAGE**

**FACTORS)**

For the purpose of predicting the financial health and capability of ELGI Equipments Ltd., the z-score method has been applied. The data has been obtained from the company’s financial statements. The z-score of the company has been computed for the last ten years.

The criteria for judging the Z-Score for different types of companies are explained below:

**Z-Score (for public manufacturer)**

If the score is 3.0 or above, bankruptcy is not likely to occur. If the score is 1.8 or less-bankruptcy is likely to occur. A score between 1.8 and 3.0 is the gray area.

**Z-Score (for private manufacturer)**

A score of 2.90 or above can be an indicator that bankruptcy is not likely to occur. A score of 1.23 or below is a strong indicator that bankruptcy is likely to occur. A score between 1.23 and 2.90 is the gray area. The above z-score formula has been applied and the following values of z-score have been derived as seen in table.

Since ELGI Equipments Ltd manufacturing firm applied z-score as accordingly

**Formula:**

$$Z=0.012(x1) +0.014(x2) +0.033(x3) +0.006(x4) +0.999(x5)$$

**(i) Working Capital To Total Assets (X1)**

This is a measure of the net liquid assets of firm in relation to total assets. Net liquid assets relative to total capitalization or otherwise,current assets relative to total assets. Negative ratio / Result- Negative networking capital. It is a serious problem. This ratio is computed with the help of the following formula.

**Formula:**

$$\text{Working capital to total assets} = \frac{\text{Working capital}}{\text{Total assets}}$$

Table No: 1  
Working Capital To Total Assets Ratio (X1)

Year	Working Capital	Total Assets	W .C. to T. A Ratio	Score (X1)
2000-01	63.76	112.6	0.56625222	0.006795
2001-02	57.71	118.87	0.485488349	0.005826
2002-03	46.16	88.44	0.521935776	0.006263
2003-04	38.13	83.92	0.454361296	0.005452
2004-05	45.69	99.96	0.457082833	0.005485
2005-06	59.32	119.76	0.495323981	0.005944
2006-07	73.14	125.99	0.580522264	0.006966
2007-08	79.17	136.35	0.580638064	0.006968
2008-09	79.78	166.89	0.478039427	0.005736
2009-10	93.57	196.81	0.475433159	0.005705

Source: Annual Reports of Elgi Equipments Ltd.,

**Interpretation:**

The table no: 1 shows Working capital to total assets ratio which shows a fluctuating trend during the period of study. It highest ratio of 0.006968 times registers in 2007-08 and lowest ratio of 0.005705 registers in 2009-10. The ratio fluctuates because of the fluctuations in working capital and the total assets shows increasing trend.

**(ii) Retained Earning To Total Assets Ratio (X2)**

This is a more significant ratio to study the age of a firm. New firms generally registered low figures, because they have no time to build up their cumulative profits.

**Formula:**

$$\text{Retained earnings to total assets} = \frac{\text{Retained earning}}{\text{Total assets}}$$

Table No: 2

Retained Earning To Total Assets Ratio (X2)  
(Rs in crores)

Year	Reserves & Surplus	Total Assets	R.S to T.A. Ratio	Score (X2)
2000-01	71.85	112.6	0.638099467	0.00938
2001-02	72.88	118.87	0.613106755	0.008583
2002-03	71.84	88.44	0.812302126	0.011372
2003-04	77.4	83.92	0.922306959	0.012912
2004-05	89.23	99.96	0.892657063	0.012497
2005-06	104.61	119.76	0.873496994	0.012229
2006-07	115.09	125.99	0.913485197	0.012789
2007-08	129.9	136.35	0.95269527	0.013338
2008-09	160.62	166.89	0.962430343	0.013474
2009-10	190.54	196.81	0.968141863	0.013554

Source: Annual Reports of ELGI Equipments Ltd.,

**Interpretation**

The table no: 2 shows the ratio of reserves and surplus to the total asset ratio and the lowest ratio of 0.008583 in the 2001-02, the highest ratio registers as 0.013554 in the year 2009-10. The ratio shows an increasing trend because of increasing reserves and surplus. So the ratio indicates accumulation of reserves. So, the healthiness of the company increases.

**(iii) EBIT To Total Assets Ratio (X3) :**

This ratio is a measure of the true productivity of the firm's assets EBIT=Earnings before Interest and Tax. Total assets include both fixed assets and current assets.

**Formula:**

$$\text{EBIT to total assets} = \frac{\text{EBIT}}{\text{Total assets.}}$$

$$\text{EBIT} = \text{Sales} - (\text{Variable cost} + \text{Fixed cost})$$

Table No: 3

EBIT To Total Assets Ratio (X3)

(Rs in crores)

Year	EBIT	Total Assets	EBIT to T.A. Ratio	Score (X3)
2000-01	14.29	112.60	0.126909414	0.004188
2001-02	10.69	118.87	0.089930176	0.002968
2002-03	19.13	88.44	0.216304839	0.007138
2003-04	19.33	83.92	0.230338418	0.007601
2004-05	30.18	99.96	0.301920768	0.009963
2005-06	31.84	119.76	0.265865063	0.008774
2006-07	28.06	125.99	0.222716089	0.00735
2007-08	35.93	136.35	0.263513018	0.008696
2008-09	57.06	166.89	0.341901852	0.011283
2009-10	64.70	196.81	0.328743458	0.010849

Source: Annual Reports of ELGI Equipments Ltd.,

**Interpretation:**

The table no :3 shows the ratio of EBIT to total assets, the highest ratio registers as 0.011283 in the year 2008-09 and the lowest ratio registers of 0.002968 in the 2001-02. In general, it shows an increasing trend due to the increasing trend of EBIT.

**(iv) Market Value Of Equity / Book Value Of Liabilities (X4)**

This ratio measures the market perception of the firm's performance which is reflected in market value of shares.

**Formula:**

$$\text{Equity to liabilities} = \frac{\text{Market value of equity}}{\text{Book value of liabilities}}$$

Table No: 4

Market Value Of Equity / Book Value Of Liabilities Ratio (X4)

(Rs in crores)

Year	Equity capital	Debt	Equity to Debt Ratio	Score (X4)
2000-01	89.15	37.75	2.3616	0.01417
2001-02	147.02	39.99	3.6764	0.02206
2002-03	508.3	10.51	48.3635	0.29018
2003-04	424.24	0.43	986.6047	5.91963
2004-05	481.32	4.55	105.7846	0.63471
2005-06	465.29	8.88	52.3975	0.31439
2006-07	657.66	4.63	142.0432	0.85226
2007-08	232.65	0.18	1292.5000	7.75500
2008-09	677.99	0.18	3766.6111	22.59967
2009-10	713.97	0.18	3966.5000	23.79900

Source: Annual Reports of Elgi Equipments Ltd.,

**Interpretation**

The table no 4 shows the ratio of Market value of equity to book value of debt. The ratio registers 23.799 times as ever high in 2009-10 and the lowest ratio registers as 0.0142 in 2000-01. The ratio shows a decreasing trend because of increasing market value of equities and redemption of book debts. The redemption of debt and increased market value of equity backed by accumulated reserves .The increasing trend of ratio indicates increased healthiness of the company.

Source: Annual Reports of Elgi Equipments Ltd.,

**Interpretation**

The table no 4 shows the ratio of Market value of equity to book value of debt. The ratio registers 23.799 times as ever high in 2009-10 and the lowest ratio registers as 0.0142 in 2000-01. The ratio shows a decreasing trend because of increasing market value of equities and redemption of book debts. The redemption of debt and increased market value of equity backed by accumulated reserves .The increasing trend of ratio indicates increased healthiness of the company.

**(V) Sales To Total Assets (X5)**

This ratio measures the firm’s ability in utilizing its assets. Higher the ratio betters the performance. The poor ratio indicates the underutilization of assets.

**Formula:**

$$\text{Sales to total assets} = \frac{\text{Sales}}{\text{Total assets}}$$

Table No: 5  
Sales To Total Assets Ratio (X5)  
(Rs in crores)

Year	Sales	Total Assets	Sales to T. A. ratio	Score (X5)
2000-01	143.37	112.6	1.273268206	1.270722
2001-02	159.49	118.87	1.341717843	1.339034
2002-03	194.27	88.44	2.196630484	2.192237
2003-04	221.39	83.92	2.638107722	2.632832
2004-05	290.51	99.96	2.906262505	2.90045
2005-06	285.27	119.76	2.382014028	2.37725
2006-07	312.07	125.99	2.476942614	2.471989
2007-08	378.58	136.35	2.776530986	2.770978
2008-09	451.29	166.89	2.704116484	2.698708
2009-10	479.42	196.81	2.435953458	2.431082

Source: Annual Reports of ElGI Equipments Ltd.,

**Interpretation:**

The table no 5 shows the relationship between sales and total assets. The lowest ratio of 1.270 registers in the year 2000-01 and the highest ratio of 2.90045 are registered in the year 2004-05. The ratio shows on increasing trend with fluctuations due to increased sales. It shows efficiency of the firm increases year after year by increased sales.

Table No: 6  
ALTMAN Complete Z-Score

Source: Annual Reports of Elgi Equipments Ltd.,

Year	X1	X2	X3	X4	X5	Total Score (X1+X2+X3+X4+x5)
2000-01	0.006795027	0.009380062	0.000309542	0.01417	1.270722	1.3014
2001-02	0.00582586	0.008583495	0.000283255	0.02206	1.339034	1.3758
2002-03	0.006263229	0.01137223	0.000375284	0.29018	2.192237	2.5004
2003-04	0.005452336	0.012912297	0.000426106	5.91963	2.632832	8.5713
2004-05	0.005484994	0.012497199	0.000412408	0.63471	2.90045	3.5536
2005-06	0.005943888	0.012228958	0.000403556	0.31439	2.37725	2.7102
2006-07	0.006966267	0.012788793	0.00042203	0.85226	2.471989	3.3444
2007-08	0.006967657	0.013337734	0.000440145	7.75500	2.770978	10.5467
2008-09	0.005736473	0.013474025	0.000444643	22.59967	2.698708	25.318
2009-10	0.005705198	0.013553986	0.000447282	23.79900	2.431082	26.2498

**Interpretation:**

The table no: 6 show complete scores of z-score. The complete score registers an increasing trend during the study period. The lowest score registers as 1.3014 in 2000-01 and the highest ratio registers 26.2498 in 2009-10. In general, the score shows an increasing trend with fluctuations due to increased reserves & surpluses, increased market value of equities and redemption of debt. In the entire study period shows the total score increases year after year is a strong sign that the company is moving from ranges of bankruptcy to financial healthiness.

**Findings:**

- (I) Working Capital To Total Assets (X1) :  
The ratio fluctuates because of the fluctuations in working capital and the total assets shows increasing trend.
- (ii) Retained Earning To Total Assets Ratio (X2):  
The ratio indicates accumulation of reserves. So, the healthiness of the company increases year after year.
- (Iii) EBIT To Total Assets Ratio (X3) :  
It shows an increasing trend due to the increasing trend of EBIT.
- (Iv) Market Value Of Equity / Book Value Of Liabilities (X4):

The redemption of debt and increased market value of equity backed by accumulated reserves increases the ratio. It indicates increased healthiness of the company.

#### (V) Sales To Total Assets (X5):

The ratio shows an increasing trend with fluctuations due to increased sales. It shows efficiency of the firm increases year after year by increased sales.

#### Altman Complete Z-Score (Health Analysis):

The score shows an increasing trend with fluctuations due to increased reserves & surpluses, increased market value of equities and redemption of debt. In the entire study period shows the total score increases year after year is a strong sign that the company is moving from ranges of bankruptcy to financial healthiness.

#### Suggestions:

- The company should give necessary attention to keep the level of working capital at adequate level so that the score can be maintained at high level.
- The avoidance of excess working capital may help to improve operating profit of the company
- Necessary arrangements should be taken to improve the managerial competence of ELGI Equipments Ltd.

#### Conclusion:

The financial health plays a significant role in the successful functioning of the firm. Poor financial health threatens the survival and leads business failure. Most of the companies are facing the problem of financial viability today. In light of the above situation the study made an attempt to investigate the financial health of the company by using MDA with the help of financial ratios. This study would also be useful to all companies, and researchers for appraising the financial health of corporate sector.

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# A Hierarchical-Subgrouping approach for the determination of significant moderators influencing the relationship between favourable Organizational Climate and Job Attitude

Nitin Arora

## Abstract:

*This study seeks to contribute to a better understanding of the relationship between Organizational Climate and favourable employee commitment by an effort to determine the various moderators as a potential predictor through the Hierarchical Sub-group meta-analytic approach. Out of the ten moderators selected, eight moderators were found to be influencing majorly the said relationship. Gender, Age and Study Sample size exhibited very large influence in moderating the relationship. The findings have potential to affect how the Industrial Organization psychologist / HR managers / Consultants need to interpret the non-meta-analytic empirical studies before recommending the changes in the organization to increase the commitment levels in the Organizations.*

**Keywords:** Moderator, Meta-analysis, Hierarchical Sub-grouping method, favourable Organizational Climate, employee commitment

## Introduction

The use of meta-analysis as a mode for data synthesis has grown considerably in recent years, and has been also accepted for the testing of theories, the models proposed. In the beginning, around 1980s, the great challenge for meta-analysis was mere acceptance as it was always criticized for mixing apples with oranges and not combining similar studies instead mixing anything looking similar. After these earlier phases in growth, meta-analytic research focussed on to the estimation of mean effect sizes, the estimation of presence or absence of homogeneity of results thus making it more acceptable in its seriousness and approach to the field of data synthesis. Finally, all the efforts of meta-analysts started settling on testing hypotheses relating to structural equation models (Viswesvaran & Ones, 1995) and levels of analysis (Ostroff & Harrison, 1999). In particular moderator analysis, the reason, the mean effect size of the study varies substantially from study to study an important factor that diverts attention of the meta-analysts on finding out the reason for this variation, and so called moderators.

Moderator analysis asks the theoretically relevant question, How does one explain heterogeneous results? In the context of meta-analysis, a moderator variable is a systematic difference among studies under review that might explain differences in the strength or direction of observed relationships between the primary variables of interest. Under the rubric of both theory building and hypothesis testing, most contemporary meta-analytic studies include some investigation of the influence of theoretically relevant factors that might moderate the relationship between the constructs under investigation. Consequently, it is the focus of this article to conduct moderator analysis on the relationship between two variables chosen, namely favourable Organizational Climate and Organizational commitment.

## Purpose And Hypothesis

The purpose of this study is to determine the moderators that influence the relationship between favourable Organizational

climate and Organizational commitment. As the theories are well established, the only effort made is to present the results based on analysis and report it. Based on the proposed moderators most likely responsible for the variation across the studies, we propose the following hypotheses:-

H1: The relationship between favourable Organizational Climate and Commitment is significantly moderated by Publication Year.

H2: The relationship between favourable Organizational Climate and Commitment is significantly moderated by type of Publication.

H3: The relationship between favourable Organizational Climate is significantly moderated by length of studies.

H4: The relationship between favourable Organizational Climate and Commitment is significantly moderated by Gender of employees.

H5: The relationship between favourable Organizational Climate and Commitment is significantly moderated by tenure of employees

H6: The relationship between favourable Organizational Climate and Commitment is significantly moderated by educational background of employees.

H7: The relationship between favourable Organizational Climate and Commitment is significantly moderated by Age of employees.

H8: The relationship between favourable Organizational Climate and Commitment is significantly moderated by sample size of study.

H9: The relationship between favourable Organizational Climate and Commitment is significantly moderated by working status of employee

H10: The relationship between favourable Organizational Climate and Commitment is significantly moderated by type of Organization.

## Methodology

How to spot the moderators

After the end of cumbersome process of meta-analysis, dur

ing the stage of interpreting the differences in variation in effect sizes, the idea hits on the reason of these variations. This marks the beginning of the search of moderator that may be involved in the study relationships. And it is also suggested by Glass (1981), that any meta-analysis should end with a search for moderator effects. To date, Glassian meta-analyses have focused on methodological differences across studies if they could be anchored with the responsibilities of variations in effect sizes or not. This requires for coding of study variables such as study's sample size, year of study, publication year, published or unpublished, longitudinal or cross-sectional study, employee job status, etc.

In the moderator analysis, the signs of having a potential moderators could be seen either in the form of either large differences in the mean effect size (correlation) between subsets, and/ or reduction in variance within subsets. If a meta-analysis is based on a large number of studies, then there is little sampling error in meta-analytic estimates. However, if it is based on only a small number of studies, then there will be sampling error in the meta-analytic estimates of means and standard deviations. This is called second order sampling error. In this study, identifying moderators requires the coding of potential moderator variables and then performing sub-group analyses. This study attempted to examine eleven potential moderators in this relationship observed.

According to Hunter et al. (1982), a large amount of unexplained variance among studies suggests the presence of potential moderator variables, and Hunter and Schmidt (1990) argue that when "residual" variance in effect sizes across studies is great, strong evidence exists for the existence of moderator variables. That is, if a large proportion of variance remains unexplained after correcting for statistical artifacts, then differences in correlations across studies may be due to one or more moderator variables. Consequently, since the ratio of unexplained variance was greater than 25% for the dependent variables an attempt was made to uncover potential moderators.

While a wide number of moderators could potentially influence the relationship between favourable Organizational Climate and Organizational commitment, studies that were utilized in conducting meta-analysis restricted the effort in picking the potential moderators.

Hunter et al. (2004) have suggested that 25% of the variance found across studies should be assumed to be caused by unquantifiable errors. This leaves 75% of the variance in effect sizes to be accounted for by statistical artifacts and substantive moderators.

### Choosing the moderators

Once decision is made to conduct moderator analysis the next step is to decide which particular moderators to examine. The moderators that a meta-analyst might examine can be suggested by theoretical hypotheses about potentially important moderators, by methodological concerns or by experts opinions, the prevalent theoretically known moderators and also by the meta-analysts own curiosity. It is always better

to adopt a researcher's perspective that first codes only those variables that have some theoretical backing or standing and have been known as potential moderators. And then code for those variables on specific curiosity of the researcher. A different approach will be to select all possible variables and test them in due course of analysis.

### Coding studies for the moderators of interest

In this study, ten interventions or moderator variables were identified namely:

- (1) Year of Publication (1980-90, 1990-2000, 2000-above),
- (2) Type of publication (Journal, Thesis, Unpublished),
- (3) Educational background of employee (Diploma, College, Master's degree or higher, Can't tell),
- (4) Working status of employee (Full Time/ Part Time),
- (5) Tenure of employee (1-5 years, 5-10 years, more than 10 years),
- (6) Sample Size of the study (less than 30 , 30-400, more than 400),
- (7) Length of study (cross sectional or longitudinal),
- (8) Gender of employees in study (Majority of sample Upto 95% Male, Upto 95% Female, Can't tell) (Upto 95% Male/ Female means that majority of participants in the study were majorly males/ females. This type of category is taken due to the lack of data in individual studies)
- (9) Age of employee (<25, 25-35, 35-45, >45, can't tell),
- (10) Type of Organization (Manufacturing / Service).

### The Method

There are essentially four methods (Steel and Mueller 2002) available to deal with moderators that are correlated with the effect size: (1) Bivariate correlations, (2) Ordinary least squares (OLS) regression, (3) Weighted least squares (WLS) regression, (4) Hierarchical subgrouping (HS). Among these methods, there are unique advantages and disadvantages. But this study doesn't cover the differences between the four which is beyond the scope of the research paper, instead this study has utilized the fourth method, the hierarchical subgrouping (HS) method.

Firstly, the overall meta-analysis should be split into two subgroups based on the chosen moderator variable. A meta-analysis should be performed within each subgroup of studies. If the correlations of the two occupational subgroups differ in the predicted direction, this tends to confirm the predicted moderator variable.

First, we generated meta-analytic data sets obtained from the study (Arora, 2010) for the relationship between favourable Organizational climate and commitment (case 1). Second, we divided the data sets based on the potential moderators by regrouping the studies accordingly. All identified studies were then examined in terms of the selected ten potential moderators: (a) Year of Publication (1980-90, 1990-2000, 2000-above),(b) Type of publication (Journal, Thesis, Unpublished),(c) Educational background of employee (Diploma, College, Master's degree or higher, Can't tell),(d)

Working status of employee (Full Time/ Part Time), (e) Tenure of employee (1-5 years, 5-10 years, more than 10 years), (f) Sample Size of the study (less than 30, 30-400, more than 400), (g) Length of study (cross sectional or longitudinal), (h) Gender of employees in study (Upto 95% Male, Upto 95% Female, Can't tell), (i) Age of employee (<25, 25-35, 35-45, >45, can't tell), (j) Type of Organization (Manufacturing / Service).

The difference in analysis for moderator from the summary effect size is that we divide the data in sub-groups and do all the calculations as done above for each sub group so as to get individual data of heterogeneity i.e. Q values, I<sup>2</sup> values, T<sup>2</sup> value. This signifies the addition of all individual values of Q for each sub-group to one variable Q<sub>within</sub>. Q<sub>within</sub> tells us that the variance within groups is significant or not.

$$Q_{within}^* = \sum_{j=1}^p Q_j^*$$

Further,

$$Q_{bet}^* = Q^* - Q_{within}^*$$

Q<sub>bet</sub> tells us that the difference between groups is statistically significant or not. The p-value is computed using 'Q' and 'df' as two parameters. This is done for both fixed effect model and random effect model and presented for interpretation. To find a pooled estimate of T<sup>2</sup> for each sub-group we use the following formula

$$T_{within}^2 = \frac{\sum_{j=1}^p Q_j - \sum_{j=1}^p df_j}{\sum_{j=1}^p C_j}$$

### The proportion of Variance Estimate

To find the proportion of variance of sub-groups, we used the index R<sup>2</sup> which is defined as the ratio of explained variance to total variance. The value of R<sup>2</sup> ranges from 0 to 1 (0% to 100%). Any extreme value is set to 0 or 1.

$$R^2 = 1 - \left( \frac{T_{unexplained}^2}{T_{total}^2} \right)$$

For each relevant moderator and its sub-categories, we were able to generate the results as presented in the next result section.

### Results And Analysis

In addition to summarizing the domain of research to a mean

effect size datapoint, measuring publication bias existence statistically, an effective meta-analysis also attempts to find moderator variables. Moderator variables are those that may account for significant variability in effect size & they moderate the relationship between the dependent and independent variables, here Organization Climate w.r.t. Employee Commitment, Job Satisfaction and Turnover Intentions respectively. In this study, ten interventions or moderator variables were identified a priori namely:

- (1) Year of Publication,
- (2) Type of publication,
- (3) Educational background of employee,
- (4) Working status of employee,
- (5) Tenure of employee,
- (6) Sample Size of the study,
- (7) Length of study,
- (8) Gender of employee,
- (9) Age of employee,
- (10) Type of Organization.

The adoption of these 10 interventions for the 1st case (favourable Organizational Climate & Commitment) depends on the availability of sufficient data individually for each major category of moderator to interpret and analyze. In all, eleven moderators were selected for 6 cases (Arora, 2010). But in the Case 1, the eleventh moderator, Nationality of participants, has to be dropped due to the scarcity of data. The dropped variable is different in different in 6 cases actually done in the main study (Arora, 2010). Sometimes, the need arises to merge two sub-categories of moderator into one for one or more major category studied. The effects of selected Moderators "Sub-Groups (SG)" and the Sub-Group Meta data are discussed below.

### The Summary of Meta-analysis

	Fixed Effect Model	Random Effect Model
Mean Effect Size	0.515	0.569
Lower Limit	0.509	0.531
Upper Limit	0.521	0.617
Sample Size	53865	53865
No of Studies	89	89
Q	2067.644	112.142

Table: 1.0

Table 1.0 represents the final summary table of the meta-analysis procedures of combining all the studies included into one effect size and the confidence intervals. It was then the search for moderators began and the results of each sub-group is presented next.

#### 1. Mean Effect Sizes in Sub Group: Publication Year (Moderator 1)

Included in the first moderator was 'publication year' such as 1980-90, 1990-2000 and 2000-Above. The mean effect sizes and confidence intervals were obtained for each sub-category of the Publication year. Table 1.1 & Table 1.2 presents the mean effect sizes and confidence intervals for different Publication year for both fixed effect and random effect model respectively. As the table shows, all the three sub-categories consistently produced strong effect size for the outcome



(range from 0.542 to 0.706 for fixed effect and 0.548 to 0.62 for random effect), and were significantly different from zero. The Q statistics for favourable climate and Commitment were still found having significant heterogeneity. The effect sizes for in the random model analysis have majorly decreased except the category of 2000-above where it seems to grow in minor portions. Moreover, the confidence intervals also have increased in random model results signifying fewer precisions.

SUBGROUP	80-90	90-2000	2000-ABOVE
Y	0.706*	0.636	0.542
LL <sub>Y</sub>	0.671	0.616	0.532
UL <sub>Y</sub>	0.742	0.655	0.552
Q	150.6	609.2	1174

Table 1.1(Fixed Effect Model-Year of Publication)

	Summary Effect Size	80-90	90-2000	2000-ABOVE
Y	0.574	0.625*	0.624	0.548
LI <sub>Y</sub> *	0.531	0.365	0.525	0.502
UI <sub>Y</sub> *	0.617	0.885	0.727	0.595
Q*	112.142	2.627	22.997	86.101

Table 1.2 (Random Effect Model-Year of Publication)

## 2. Mean Effect Sizes in Sub Group: Type of Journal (Moderator 2)

Included in the second moderator was ‘type of publication’ such as Unpublished Journal, thesis or Journal (online and a hard-copy-Journal). The mean effect sizes and confidence intervals were obtained for each sub-category of the type of Publication. Table 1.3 and Table 1.4 presents the mean effect sizes and confidence intervals for both models. As the table shows, all the three sub-categories consistently produced strong effect size for the outcome (range from 0.43 to 0.579), and were significantly different from zero as visible in the

confidence Intervals data signifying.

SUBGROUP	UNPUBLISHED	THESIS	JOURNAL
Y	0.464	0.43	0.579*
LL <sub>Y</sub>	0.423	0.384	0.57
UL <sub>Y</sub>	0.504	0.477	0.587
Q	34.29	6.96	1967

Table: 1.3: Fixed Effect Model-Type of Publication

SUBGROUP	Summary Effect Size	UNPUBLISHED	THESIS	JOURNAL
Y	0.574	0.559	0.403	0.582*
LI <sub>Y</sub> *	0.531	0.399	0.317	0.537
UI <sub>Y</sub> *	0.617	0.719	0.491	0.628
Q*	112.142	2.587	3.824	103.099

Table: 1.4: Random Effect Model-Type of Publication

## Effect Sizes in Sub Group: Length of study (Moderator 3)

Table 1.5 and 1.6 presents the mean effect sizes and confidence intervals for each outcome at different length of study for both the models of analysis. The mean effect sizes for both sub-categories were positive and the 95% confidence intervals did not include zero. Further, both Q statistic, were statistically significant. These significant Q statistics indicated that there was systematic variability among the length of study. Specifically, the mean effect sizes for both outcomes showed that there is not much difference whether the study is studied longitudinally or cross-sectionally in fixed effect model. In random effect the cross sectional effect size is more than the Longitudinal studies signifying more strong relationship with former than latter w.r.t. the major relationship studied (i.e. favourable climate and Commitment). The effect size for cross sectional length of study and the confidence intervals increased while the Longitudinal length of study decreased in Random model of analysis.

SUBGROUP	LONGITUDINAL	CROSS-SECTIONAL
Y	0.561	0.571*
LL <sub>Y</sub>	0.537	0.562
UL <sub>Y</sub>	0.585	0.58
Q	198.1	1869

Table: 1.5: Fixed Effect Model-Length of Study

SUBGROUP	Summary Effect Size	LONGITUDINAL	CROSS-SECTIONAL
Y	0.574	0.552	0.577*
LI <sub>Y</sub> *	0.531	0.435	0.53
UI <sub>Y</sub> *	0.617	0.667	0.623
Q*	112.142	9.3687	99.578

Table: 1.6: Random Effect Model-Length of Study

## 4. Mean Effect Sizes in Sub Group: Gender (Moderator 4)

Table 1.7 and 1.8 shows the mean effect sizes and confidence intervals for each outcome at different gender of study respondents i.e employees. The mean effect sizes for all three sub-categories were positive and the 95% confidence intervals did not include zero. Further, both Q statistic, were statistically significant in fixed effect model and it got reduced in the random effect model results. These residual Q statistic

in random effect model indicated that there was still some systematic variability among the study. Specifically, the mean effect sizes for both outcomes showed that male sample prefer favourable climate (excluding unknown gender results) as a benchmark for their commitment level as compared to the female counterparts. The similar trend for decrease in effect size estimate in random model was observed here too in both main categories, male and female gender while the unknown group was found to be on the higher side in the random effect model.

SUBGROUP	Upto50-95% Male	Upto 50-95% Female	CAN'T TELL
Y	0.589*	0.533	0.606**
LL <sub>y</sub>	0.576	0.52	0.583
UL <sub>y</sub>	0.602	0.545	0.629

Table: 1.7: Fixed Effect Model-Gender

	SUMMARY	Upto 95% Male	Upto 50-95% Female	CAN'T TELL
Y	0.574	0.569*	0.521	0.631**
LI <sub>y</sub> *	0.531	0.512	0.452	0.471
UI <sub>y</sub> *	0.617	0.625	0.59	0.791
Q*	112.142	45.393	26.833	17.763

Table: 1.8: Random Effect Model-Gender

#### 5. Mean Effect Sizes in Sub Group: Tenure (Moderator 5)

Table 1.9 and 1.10 illustrates the mean effect sizes and confidence intervals for each outcome at different tenure levels for both the models fixed and random respectively. The mean effect sizes for four sub-categories were positive and the 95% confidence intervals did not include zero. Further, both Q statistic, are also statistically significant more in fixed model while less in random effect due to data segregation in different sub-groups. These residual Q statistics indicated that there was some systematic variability still remaining among the tenure of sample respondents. Specifically, the mean effect sizes for employees having tenure 5-10 years showed more strong response for the desire of favourable climate as compared to the other counterparts in their reactions towards commitment levels.

SUBGROUP	1-5 year	5-10year	>10 year	CAN'T TELL
Y	0.519	0.663*	0.514	0.418
LL <sub>y</sub>	0.503	0.648	0.499	0.377
UL <sub>y</sub>	0.536	0.678	0.529	0.46
Q	324.8	1102	257.1	7.519

Table: 1.9: Fixed Effect Model-Tenure

	Summary Effect Size	1-5 year	5-10 year	>10year	Can't tell
Y	0.574	0.535	0.617*	0.519	0.414
LI <sub>y</sub> *	0.531	0.464	0.532	0.456	0.353
UI <sub>y</sub> *	0.617	0.605	0.702	0.582	0.475
Q*	112.142	31.487	39.037	25.782	3.737

Table: 1.10: Random Effect Model-Tenure

#### 6. Mean Effect Sizes in Sub Group: Educational Background (Moderator 6)

Table 1.11 and 1.12 explains the mean effect sizes and confidence intervals for each outcome at different education levels of employees who were the unit level of analysis for each study collected. The mean effect sizes for the four sub-categories were positive and the 95% confidence intervals did not include zero. Further, both Q statistics, were also found highly statistically significant in fixed effect model while less in random effect model. Specifically, the mean effect sizes for employees having minimum college or master's degree there is not much difference between both of them in terms of their response to the relationship studied. In terms of Cohen's criteria, all are strong parameters. The residual heterogeneity shows some influence of factors not covered by the categories chosen here.

SUBGROUP	College	Diploma	Masters & higher	Can't tell
Y	0.578*	0.481	0.577	0.574
LL <sub>y</sub>	0.567	0.452	0.557	0.552
UL <sub>y</sub>	0.589	0.511	0.597	0.596
Q	1492	92.24	351.1	93.87

Table: 1.11: Fixed Effect Model-Educational Background of Respondents

	Summary effect size	College	Diploma	Masters & higher	Can't tell
Y	0.574	0.587*	0.471	0.570	0.66**
LI <sub>y</sub> *	0.531	0.525	0.387	0.466	0.544
UI <sub>y</sub> *	0.617	0.65	0.554	0.675	0.776
Q*	112.142	57.153	11.189	20.750	12.068

Table: 1.12: Random Effect Model- Educational Background of Respondents

#### 7. Mean Effect Sizes in Sub Group: Age (Moderator 7)

Table 1.13 and 1.14 represents the mean effect sizes and confidence intervals for each outcome at different age levels of employees in the study for fixed and random model respectively. The mean effect sizes for

five sub-categories were positive and the 95% confidence intervals did not include zero. Further, both Q statistics, were statistically significant. Specifically, the mean effect sizes for age <25 showed very strong response for the relationship (0.743) in fixed effect while (0.681) for random effect model. The increase in effect size was found in two sub-categories namely 25-35 year and Can't tell while other categories were found decreasing in the random effect model results. Confidence intervals ranges increased in random model results too.

SUBGROUP	Can't Tell	>45 year	<25 year	25-35 year	35-45 year
Y	0.598	0.606	0.743*	0.531	0.564
LL <sub>Y</sub>	0.576	0.57	0.712	0.517	0.549
UL <sub>Y</sub>	0.619	0.642	0.775	0.545	0.578
Q	160.9	126.8	215	491.3	848.3

Table: 1.13: Fixed Effect Model- Age of Employees

	Summary Effect Size	Can't Tell	>45 year	<25 year	25-35 year	35-45 year
Y	0.574	0.699	0.597	0.681*	0.548	0.538
LL <sub>Y</sub> *	0.531	0.557	0.449	0.517	0.478	0.466
UL <sub>Y</sub> *	0.617	0.840	0.746	0.846	0.619	0.61
Q*	112.142	13.835	6.803	8.13	38.818	32.573

Table: 1.14: Random Effect Model- Age of Employees

### 8. Mean Effect Sizes in Sub Group: Sample Size (Moderator 8)

Table 1.15 and 1.16 illustrates the mean effect sizes and confidence intervals for each outcome at different Sample Sizes in both the levels of analysis. The >400 category sees a slight rise in effect size estimate for random model while other have dropped to lower values as compared to fixed effect model results. The mean effect sizes for three sub-categories were positive and the 95% confidence intervals did not include zero. Further, both Q statistic, were more statistically significant in fixed while less in random model. These significant Q statistics indicated that there was systematic variability among the sample sizes. Specifically, the mean effect sizes for sample sizes <30 year showed extreme response (0.938 for fixed effect while 0.930 for random effect) unlike a healthy average response of other sample sizes.

SUBGROUP	< 30	30-400	>400
Y	0.938*	0.581	0.535
LL <sub>Y</sub>	0.903	0.563	0.525
UL <sub>Y</sub>	0.973	0.599	0.545
Q	3.545	685.3	905.9

Table: 1.15: Fixed Effect Model- Sample Size of the study

	Summary Effect Size	<30	30-400	400 & ABOVE
Y	0.574	0.930*	0.577	0.539
LL <sub>Y</sub> *	0.531	0.877	0.512	0.483
UL <sub>Y</sub> *	0.617	0.983	0.642	0.595
Q*	112.142	2.819	55.772	43.963

Table: 1.16: Random Effect Model- Sample Size of the Study

### 9. Mean Effect Sizes in Sub Group: Employee work type (Moderator 9)

Table 1.17 and 1.18 presents the mean effect sizes and confidence intervals for each outcome for different Employee work status(Full time/ Part Time) in both the types of models. The mean effect sizes for three sub-categories were positive and the 95% confidence intervals did not include zero. Further, both Q statistic, were statistically significant. Specifically, the mean effect sizes for Full Time employees showed stronger response (0.594 for fixed effect while 0.592 for random effect).

SUBGROUP	Full Time & Part Time	Full Time	Can't Tell
Y	0.541	0.594*	0.483
LL <sub>Y</sub>	0.519	0.584	0.462
UL <sub>Y</sub>	0.563	0.604	0.505
Q	105.9	1676	194.9

Table: 1.17: Fixed Effect Model- Work Type

	Summary Effect Size	FT & PT	FT	Can't Tell
Y	0.574	0.522	0.592*	0.512
LL <sub>Y</sub> *	0.531	0.402	0.539	0.415
UL <sub>Y</sub> *	0.617	0.642	0.645	0.609
Q*	112.142	12.543	76.152	16.256

Table: 1.18: Random Effect Model- Work Type

### 10. Mean Effect Sizes in Sub Group: Type of Organization (Moderator 10)

Table 1.19 and 1.20 presents the mean effect sizes and confidence intervals for each outcome for different type of Organization i.e. Manufacturing, Service or Mixed. In both the models, the mean effect sizes for three sub-categories were found positive and the 95% confidence intervals in both models did not include zero signifying a relationship of high order at 95% of the times the study relationship is found. Further, both Q statistic, were statistically significant. Specifically, the mean effect sizes for studies done in Mixed Industry showed large effect size response (0.579) for fixed effect model while manufacturing based organization for random effect model. Service based Organizations also moved around this region of

impact i.e. effect size. In Manufacturing category of data, the effect size estimate has increase in random model of analysis while other 2 categories were found decreasing. The residual heterogeneity gives room for other categories to influence this relationship based on type of Organization.

SUBGROUP	Service	Manufacturing	Mixed
Y	0.574*	0.52	0.579**
LL <sub>Y</sub>	0.564	0.492	0.553
UL <sub>Y</sub>	0.583	0.548	0.605
Q	1706	258.9	89.54

Table: 1.19: Fixed Effect Model- Type of Organization

	Summary Effect Size	Service	Manufacturing	Mixed
Y	0.574	0.567	0.645*	0.527
LL <sub>Y</sub> *	0.531	0.517	0.509	0.43
UL <sub>Y</sub> *	0.617	0.618	0.781	0.623
Q*	112.142	78.959	15.396	9.882

Table: 1.20: Random Effect Model- Type of Organization

The summary of the above mentioned data is presented in the following Table 1.21.

SUB-GROUP	Range of correlation	Range of Confidence Interval
Year	High(Fixed) high(Random)	High (Fixed) Moderate to high(Random)
Type of Publication	High High	Moderate to High Moderate to High
Length of Study	High High	High High
Gender	High High	High High
Tenure	High High	Moderate to High Moderate to High
Education Background	High High	High Moderate to High
Age	High High	High Moderate to High
Sample Size	High High	High High
Work Type	High High	High High
Type of Organization	High High	High High

Table 1.21: Qualitative Summary of Moderators Influence on the Relationship

## Discussion

Our moderator analysis suggests that which potential moderators are really highly influencing moderators and also among those sub-categories of potential ten

moderators, which are more closely influencing the relationship between favourable Organizational climate and commitment.

In primary studies, a common approach to describing the impact of a covariate is to report the proportion of variance explained by that covariate. That index here in meta-analysis is R<sup>2</sup>, (variance between groups) which is defined as the ratio of explained variance to total variance.

The R<sup>2</sup> index only makes sense if we are using a random-effects model, which allows us to think about explaining some of the between-studies variance. In fixed effect model it (between-studies variance) is set to zero. The value of R<sup>2</sup> ranges from 0 to 100 and in cases the values goes to above the limits on either side it is either set to 0 or to 1 as the case applies signifying either no variance or very high variance.

Potential Moderators (p < 0.05)	R <sup>2</sup>
Year of Publication	0.674
Type of Publication	0.747
Length of study	0.715
Gender	0.95
Tenure	0.866
Education	0.79
Age	0.793
Sample Size	0.849
Work Type	0.748
Organization Type	0.767

Table: 1.22

In Table 1.22, R<sup>2</sup> is highest in the moderator Gender (95%). The other significant moderators were Tenure(86.6%), Education background(79%), Age(79.3%), Sample Size (84.9%), Organization type(76.7%), type of publication (75%), work type(75%), . This indicates that the above mentioned moderators (>75%) were able to explain the majority of variance observed in the studied and can be considered as significant moderators.

Further, in the table 1.22 , the not so significant moderator were Year of Publication (67.4%) and length of study(71.5%). This indicates that these mentioned moderators were not considered as the significant explanation for the variance observed in the studies and can be considered according to the rule of thumb of Hunter and Schmidt as insignificant moderators.

Now having known the major influencing moderators, the most influencing subcategories of these moderators have to be brought to light. Except the H1 and H3 the remaining 8 (H2, H4-H10) Hypothesis are found to be significantly influencing the relationship between favourable Organizational climate and commitment.

Hypothesis	Significant Moderators	Fixed Effect Model	Random Effect Model
#2	Type of Publication	Journal (0.579)	Journal (0.582)
#4	Gender	Upto 95% Male (0.589)	Upto 95% Male (0.569)
#5	Tenure	5-10 year (0.663)	5-10 year(0.617)
#6	Educational Background	College(0.578)	College(0.587)
#7	Age	<25(0.743)	<25(0.681)
#8	Sample Size of study	<30 (0.938)	<30 (0.930)
#9	Work Type	Full Time(0.594)	Full Time(0.592)
#10	Type of Organization	Service(0.574)	Manufacturing (0.645)

Table 1.23

Table 1.23 presents those sub-categories of those significant moderators that have influenced the most among sub-groups. This results makes sense also. The Journal sub-category influences the results the most thereby signifying the much accepted presence of Publication bias in the results, as the research papers gets published majorly if the results are highly significant else it becomes the part of file-drawer problem. Males categories in Gender highly influence the relationship between the Organizational climate and commitment. This is well according to the results of many studies too which empirically suggest the work life maladjustments of female employees and her incapacity to keep upto the job commitment and losing hold of it. The Tenure (5-10 years) category indicates that young employees with less experience are more committed to job as compared to the other category indicating their commitment levels. The educational background of being just a college graduate has shown to be of high commitment levels. This indicates that they either they might have less chances to grow academically and thus having reduced chances to seek more and try to show more commitment to the jobs and stick to it for more longer time. Age category of less than 25 years shows more commitment levels as compared to older groups. This seems to be in line with the results of tenure 5-10 years too thereby showing the same logic of less experience and thus gearing up and focus on more learning rather than switching jobs more frequently. Sample size in studies with <30 has shown more commitment levels than higher sample studies. This might be due to the reason of type of sector in which they are working, possibly service sector where number of employees are less and its common in similar types of companies thereby type of job are similar in other companies too. So point of switching jobs is not much worth, thereby expressing higher commitment levels in their companies. In work type sub-group, the Full time employees are more commitment to their jobs as compared to part time/ full time mix of employees. The latter category has higher chances of less commitment as this was a part of his nature of jobs and there are less

chances of confirmation / contract in such nature of jobs. Hence the results. Finally, the type of Organization, service sector sub-category has shown more commitment in fixed effect model and manufacturing sector employees has shown more commitment in random effect model.

## Limitations

Meta-analyses offer several benefits in moderator analysis, but they also have limitations too. First, the data is secondary in nature, and therefore, we cannot use information other than those presented in the studies. The studies range from 2009-1980 thereby widening the problems in the gap between the nature of respondents within this time frame. It is also difficult to confine the studies to a particular region of the location of author. The study analysis has to flow based on the availability of literature on published journals both online or in the libraries around. Further, the list of selected moderators will be limited due to the reason that very few studies will have the common moderators and thus only those moderators can be analysed which are commonly found in most of the literature collected.

Further, although there were a large number of studies investigating the variable like commitment and Organizational climate (about 200 and more were identified), were not published empirically and so could not be included to increase the study size in meta-analysis, thereby making it more reliable and minimizing the sampling errors and measurement errors. We recognize that the presented moderator analysis has a more exploratory perspective, i.e. the sub-groups can be further categorized and can be analysed in further moderators. But due to shortage of studies in sub-groups forcing us to stop at that very point. Nevertheless, results from the moderator analysis can help researchers to design new studies that address the boundary conditions for the relationship.

## Conclusion

Notwithstanding the presented limitations, the findings from this meta-analysis contribute to a greater understanding of the relationship between favourable Organizational Climate and organization commitment by (a) estimating its list of potential moderators to a certain degree of confidence levels and significance, (b) testing to what extent those moderators might influence these results, and (c) suggesting further research directions. The Hierarchical sub-

grouping method of moderator analysis should not be viewed as conclusive or as the best method but only as a methodological tool that makes a temporary “balance sheet” of the current state of affairs in a given domain of knowledge. Its main contribution is to help researchers to open the new door of research and help them gather courage toward still-unexplored questions.

In this spirit, we hope that the results reported by our meta-analysis provide HR managers and researchers with inspirations for designing new in-depth and extensive investigations that will keep advancing the organizational climate and job attitudes literature.

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## BOOK REVIEW

### Event Planning

Judy Allen, Director, Judy Allen Productions.

Wiley and Sons, New Delhi

Pp. 306; Pbk; ISBN 8126511214; Price INR 399; 2007.

Judy Allen has been a synonym for MICE business. Titles originating from the author are always handy and well received by the readers. "Event Planning" is no exception to her body of work. The cover describes it aptly as the ultimate guide to successful meetings, corporate events, fundraising galas, conferences and conventions, incentives and other special events.

The book is divided into nine chapters. The book opens with a very strong preface in which author provides the reasons for origin of the book. The first chapter titled 'The First Step : Initial Planning and Budgeting' emphasizes the usage of Murphy's law in events; 'what can go wrong, will go wrong.' Chapter two discusses about organization and timings. Author sums up it with expression ---- 'Screen writers have their scripts, song writers their music sheets and event planners their function sheets.' The importance of function sheet has been discussed to the minutest details. Chapter three is titled, 'Location, Location, Location' inspired by Sidney Sheldon the title is to 'emphasize' on the location aspect. Author provides cues for out of box thinking and suggests new locales like yachts, roller skating rinks or armory.

Chapter four, deals in everything about transportation. The chapter not only discusses the different sets of arrangement but details about parking also. Chapter five titled 'guest arrival' actually deals with the arrival of the guest. The weather considerations have been given prime importance by placing it at the start of the chapter. Chapter six is dedicated to venue arrangement. A detailed floor plan is handy and is a must. The 'minimum call' on labor and proper tabling it in the budget can reduce the overall costing. If budgets strings are tight then overtime has to be avoided at every cost. For multi event/sessions at the same venue the authors suggest soundproofing to make all the events at the venue successful. The chapter develops to discuss the importance of lighting and can have a profound effect on the professionalism of any event and thus ample care should be taken.

The title of chapter seven, "Who's It All For?" is ambiguous. It talks about the guest list, guest profiles, invitation etc. For a good coverage of an event author emphasizes upon the meticulous approach needed for media invitation. An extra step in handling of media can provide a mass coverage of the event. If children are also a part of the guest list then a special provision and arrangement according to their age group is a wonderful idea. Chapter eight tickles the taste buds and waters the mouth of the readers and reviewer as it discusses about food and beverages which is an integral part of every event. The menu planning has to be kept in mind including the growing fad of vegetarianism. Chapter Nine is the last chapter but the most important as it contains all the topics

and tips which could not be included elsewhere in the book. It is titled, 'Other Consideration' and should be considered as the last words by the reviewer/ reader. The chapter says that entertainment is also highly geography specific. What is considered entertainment in one region may be barbaric in other. Parting gift/ takeaway / memoirs may be inexpensive but add to the 'moments of truth.' The author recommends personalized thank you letters.

The appendix at the end of the book provides sample for all the cost sheet and function sheets needed for different kind of events. The sample function is all inclusive and can be utilized for any event.

The entire book is a comprehensive guide and will help all event managers and planners. The tips mentioned in the boxes between the chapters attract the attention of the reader. Questions and Answers in between the chapters on varied topics keep on answering the developing questions in the minds of the readers. Although, at times (chapter five) too many question answers give a feeling of a notebook than a text book. Examples are cited from all over the world in each topic providing innovative ideas to the planners. From rank beginners to seasonal professionals, it provides excellent guidelines as well as helpful details. The USP of the book are it's strategically well placed thoughts and user friendly presentations. The book can be used in the classrooms as well as the boardrooms.

#### Reviewed by:-

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## Forthcoming Conferences

No.	Location	Dates	Area	Website Address
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2.	Baden-Baden Germany	1 to 5 August 2011	31st Annual Meeting of the International Institute for Advanced Studies in Systems Research and Cybernetics	<a href="http://www.iias.edu">http://www.iias.edu</a>
3.	Kathmandu Nepal	2 August 2011	Sustainable Tourism Development &	<a href="http://www.ols.org.np/icstdtm2011">http://www.ols.org.np/icstdtm2011</a>
4.	Singapore	9 to 10 August 2011	ICBF*2011: International Conference on Banking & Finance	<a href="http://www.airpak.org/CFinance.html">http://www.airpak.org/CFinance.html</a>
5.	shanghai, China	17 to 20 August 2011	Shanghai International Conference on Social Science 2011	<a href="http://www.shanghai-ic.org">http://www.shanghai-ic.org</a>
6.	Guangzhou, Guangdong, China	19 to 22 August 2011	2011 Annual Conference of China Marketing Science	<a href="http://www.ln.edu.hk/mkt/JMS2011/index.html">http://www.ln.edu.hk/mkt/JMS2011/index.html</a>
7.	Nairobi, KICC Nairobi	24 to 26 August 2011	Africa International Business and Management (AIBUMA) Conference	<a href="http://www.aibuma.org">http://www.aibuma.org</a>
8.	Linz, Upper Austria Austria	27 August 2011	Social Entrepreneurship in Europe	<a href="http://www.acrn.eu/conferences_files/SocEnt.html">http://www.acrn.eu/conferences_files/SocEnt.html</a>
9.	Maribor Slovenia	6 to 8 September 2011	4th Advances in Tourism Marketing Conference	<a href="http://www.institute.si/atmc-2011/">http://www.institute.si/atmc-2011/</a>
10.	Kaunas, Lithuania	22 to 24 September 2011	Management Horizons in Changing Economic Environment: Visions and Challenges	<a href="http://evf.vdu.lt/konferencijos/management-horizons">http://evf.vdu.lt/konferencijos/management-horizons</a>
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12.	Coimbra, Baixo Mondego, Portugal	27 to 29 September 2011	International Congress Tourism, Leisure and Culture - Destinations, Sustainability & Competitiveness	<a href="https://www.uc.pt/fluc/cegot/ctlc2011coimbra/ctlc2011/">https://www.uc.pt/fluc/cegot/ctlc2011coimbra/ctlc2011/</a>
13.	Boston, Massachusetts, United States	15 to 16 October 2011	Knowledge Globalization Conference 2011-Boston	<a href="http://www.kglobal.org">http://www.kglobal.org</a>
14.	Singapore	7 to 8 November 2011	Annual International Conference on Human Resource Management & Professional Development in the Digital Age (HRM & PD 2011)	<a href="http://www.hr-mgt.org">http://www.hr-mgt.org</a>
15.	Delhi, India	4 to 5 January 2012	Ethics, Morality, and Spirituality is the broad theme of XIII International Seminar	<a href="http://www.internationalseminar.org">http://www.internationalseminar.org</a>
16.	Seoul, Korea (South)	28 to 29 February 2012	International Management World Congress	<a href="http://im-worldcongress.review-gjsg.com">http://im-worldcongress.review-gjsg.com</a>
17.	Thessaloniki, Greece	23 to 27 May 2012	World Media Economics & Management Conference 2012	<a href="http://www.worldmediaxconf.com/">http://www.worldmediaxconf.com/</a>
18.	Vancouver, Canada	6 to 8 July 2012	Twelfth International Conference on Knowledge, Culture and Change in	<a href="http://ontheorganization.com/conference-2012/">http://ontheorganization.com/conference-2012/</a>



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