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# Artificial Intelligence – A Driving way for Sustainable Organizational Growth

K. Anitha<sup>1</sup>

V. Shanthy<sup>2</sup>

## ABSTRACT

Human Resource Management functions are currently considered to be a key enabler for the organization's sustainable growth. Undoubtedly the HR practices followed in an organization can collectively contribute to the HR outcomes of the organization. The best HR practices should be aligned with the company's vision and progress strategy. Those practices should validate a care for the wellbeing of the employees and it should create a positive work environment as well as a sustainable enterprise. This paper identifies three main practices that every organization should follow to attain sustainable development. Globalization and technical expansions cause changes in the manner in which HR practices are configured in the organization. Integration of technology such as Artificial Intelligence will definitely help the organizations in their pursuit of excellence. This research enumerates the impact of how Artificial Intelligence helps the organization to attain the so called sustainable growth. The study was conducted among 72 IT employees. The paper used multiple regression and hierarchical regression analyses to test significant relationships.

**Keywords:** HR Practices, Sustainable, Organizational Growth, Artificial Intelligence.

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## INTRODUCTION

A well-defined HRM practice adds to the achievement of the organization's pre-defined objectives. Gone are those days where an organization's drive was to make profit only. The role of HRM has transformed in the past few years from a step by step approach to an agile way. Creating value more than mere outputs are what associations should be concerned about. For an Organization to sustain the implementation of HR practices, they need to be aligned to the company's vision & mission. These practices should go along with the culture of the organization and has to contribute towards sustainable growth. The concept of sustainability has become extensive and many organizations have included sustainability as one of the key drivers of their business model. The concept became familiar among the organizations after the commencement of Brundtland Commission in 1987 which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Organizations need to plan their growth according to the needs of the future so they are sustainably stable.

Sustainability can be rightly said as a process in which a commercial organization manages its process and activities in such a way that the people, economy and the environment is profited. Though for years HR practitioners are continuously improving their practices towards the growth of the organization, it is to be noted that with help of technological advancements like Artificial Intelligence, Machine Learning, etc., sustainable growth can be made effective at ease. Artificial intelligence has emerged in the market across all industries and delivers a noteworthy role in human resource management as it primarily reduces the workload of HR Managers using chatbot agnostic solutions and algorithms in the complete process right from recruitment, selection, training, development and even employee welfare.

Sustainable HR practices have been recognised recently by organizations (Pfeffer, 2010). They have started to implement various strategies to combat the technological advancements and strive to sustain in the competitive market. Many organizations develop HRM policies and actions, and implement practices aimed at increasing workers' sustainable employability at work (Billett et al., 2011; Semeijn et al., 2015; van Harten et al., 2016; Veth et al., 2015). Ehnert (2009) in her book Sustainable Human resource Management specifies that the Swiss approach, hypothesises sustainability as a shared benefit referring to employers and employees as equivalent partners - fulfilment of individual needs and upholding of competitiveness of an organization. It is clear that in order to avail an enhancing organization growth sustainable HR practices which are economically viable and socially efficient needs to be followed. With the above aspect in mind this research paper has derived three HR practices such as *Comprehensive Recruitment, Psychological Contract & Employee Wellbeing* which is considered to be need of the hour for inclusion in this research. The present study investigates the impact of these practices on organizational growth with the power of technology – Artificial Intelligence (AI).

Research studies have not yet proved any unanimously accepted metrics for the changing technological advancements. Yet a prominent shift towards artificial intelligence is evident from the increasing number of initiatives that have emerged in HRM practices. Similarly Adams (2017) has suggested that there should be methodical investigation of artificial intelligence on basis of nation. In regard to that current study has chosen artificial intelligence as a moderating construct within sustainable HRM practices and organisational growth which makes the association stronger and regulates the significance of artificial intelligence enhancing the organizational growth on use of sustainable HR practices.

## Literature Review

### Sustainable HR Practices

According to Prins et al. (2014) research in the area of Sustainable HRM is an evolving segment and has created notions on how sustainability can be used beneficial for HRM. Mariappanadar (2003) added in his research that a “Sustainable HR strategy can be rightly said as the management of human resources to meet the ideal needs of the company and society of the present without conceding the capability to meet the needs of the future”. Ehnert (2006) defined Sustainable HRM as those extended theoretical methods and events aimed at a socially responsible and economically applicable recruitment and selection, development, deployment, and downsizing of employees. She also noted that, the Sustainable Management perspective discovers “what companies themselves have to do with their environments to have sturdy access to skilled human resources (Sustainable HRM)”. According to Thom and Zaugg (2004), a sustainable HR policy emphasises on applying proper, translucent measures for recruitment and retention, training and development, performance management and motivation and employee engagement. They defined sustainable HRM as a conceptual methodology and activity that is enduring and concerned with in emerging socially viable and responsible policies for recruitment and retention, employee engagement, deployment and motivation. They also argued that Sustainable HRM is concerned with conceptual methods and events aimed at a socially responsible and economically appropriate recruitment and selection, development, deployment, and release of employees. Kramar (2014) verifies the literature on sustainable HRM based on the writings’ outcomes and groups into three categories namely Capacity reproduction, promoting social and environmental health, and connections.

The majority of research on HR practices focuses on the impact of HR practices on employee and organizational performance (e.g. Guest & Conway, 2011; Huselid, 1995). Cohen et al. (2012) proposed three facets of a sustainable organization which is all-inclusive employee development, wellbeing of the employees, organizational culture and leadership. Child and Kieser (1981) argue that organizational growth is a by-product of various other strategies and if the organization satisfies the needs of the employees then it fosters growth. Wirtenberg et al. (2007) in his research stated, executing sustainable human resource

policies help in creating more creative and striving workforce which leads to organizational success. From the above literature review we propose that:

**H<sub>1</sub>** – Sustainable HR practices is positively related to Organizational Growth.

### ***Comprehensive Recruitment***

Mondy (2010) defines Recruitment as the process of identifying different springs of personnel necessity and its effective consumption to achieve organizational intentions. Recruitment serves to be a positive approach which fascinates countless jobseekers to get urged to propose for the opportunity indicated by the organization. Perfect strategies are to be maintained by the associations to pick up the right candidate for the right organization. Strategies vary from company to company and are purely based on Goals, Brand Recognition, Culture, Time, Location, and Digital Footprint & Approach. As highlighted by Boxall and Purcell (2008) the firms' recruitment strategies are the most perilous strategies concerned among the human resource activities, in order for them to survive and succeed in a competitive environment. According to Windolf (1986) the choice of a particular recruitment strategy by an organization is specific to the resources available to the organization at hand and its environmental dynamics.

### ***Psychological Contract***

Psychological contract as the names states, defines the implicit exchange relationship between the employer & employees was proposed by Argyris (1960). The psychological contract influenced by our desired goals and outcomes whereby the expectation of achieving these goals and outcomes determines the motivation to work and therefore influences behaviour at work (Porter & Lawler, 1968). Goffee and Nicholson (1994) and Davidson (2001) advocated employee expectations comprise reward for work/effort, safe and positive working conditions, opportunities for personal improvement and career progression, and equitable personnel policies. In a research study conducted by Sam and Anitha (2014) it was found that positive psychological contract will boost employee commitment and loyalty towards the organizational growth. The above statement can be confirmed with the study conducted by (Sturges et al., 2005) who proposed that fulfilling psychological contract will result employee, commitment & satisfaction which will eventually result in a positive effect of employees flexible behaviour and business performance. One such reinforcement is effective inducement of employee engagement which will reinforce a positive working culture thus fulfilling psychological contract.

## ***Employee Wellbeing***

Human Resource practices are now heading their search in promoting employee wellbeing among the organizations (Beer et al., 2015). In a research conducted by Lyubomirsky (2001) there is no clear definition for employee wellbeing but researchers can perceive the meaning of this term. Few authors in their study describe that employee wellbeing cause to high job performance, organizational citizenship behaviour, and flexible effort and reduce employee turnover and absenteeism (Judge et al., 2001; Wright & Cropanzano, 1998). Essential factors leading to organizational and personal wellbeing involves open communication, team working and co-operation, flexibility, support, and a balance between work and personal life (Kraybill, 2003). Regarding employee health, several studies noticed that the provision of training and development opportunities, decentralized job design, information-sharing, employment security, and sickness absence policies were associated with employee wellbeing (Bal et al., 2013; Kroon et al., 2009; Peccei, 2004).

## ***Artificial Intelligence (AI)***

AI was coined by John McCarthy in 1956 as he performed in the academic conference and explained the term, as he recommended artificial intelligence (AI) will contribute in different specializations like applied science, psychology, medical sciences, linguistics, biology, engineering, management and interdisciplinary programs. Merlin and Jayam (2018) in their study emphasis that Artificial Intelligence tries to implement innovative changes in HRM practices like recruitment, training, talent management & retention and its role is more noteworthy in future. Kolbjornsrud et al. (2016) studied the fact that artificial intelligence will soon be able to do the managerial tasks that devour much of managers' time faster, better and at lower cost. Though AI is being a buzz-word right from 2000 still it is an evolving concept and organizations are trying to hook up AI into it for a sustainable growth.

McKinsey (MGI) (2017) endorsed that organizational culture must support alliance of humans and robots and that trust is key. By adopting such new technologies, to build trust, McKinsey recommended that companies must connect with employees to know about their apprehensions about working with advanced technologies as the adoption of the technology will require many employees to reskill. Autor (2015) stated that Artificial Intelligence will be able to automate several tasks and the technology altered will change the type of work available skill needed. The World Economic Forum anticipated new skills (including problem solving) are becoming more significant and that by 2020, almost one third of the core skillset which was preferred will not be considered. Artificial intelligence will enhance the organizations and individuals to adapt. Through Artificial Intelligence Organizational growth can be achieved effortlessly. Based on this the below hypothesis was framed.

**H<sub>2</sub>** – Artificial Intelligence moderates the relationship between sustainable HR practices & Organizational Growth

## **Problem Statement**

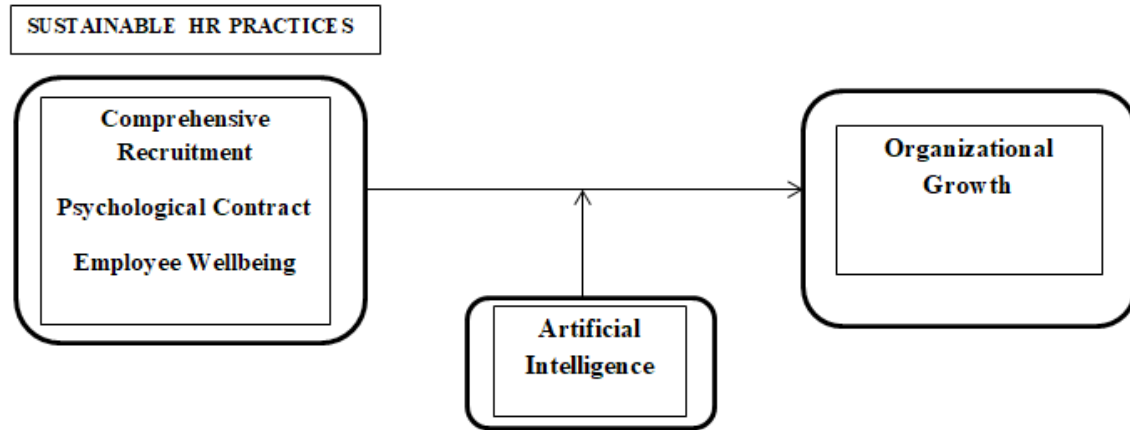
Sustainability helps business to succeed their organizational goals concerning the economic, environmental and societal aspects. Of course sustainability has a positive impact on the competitive business environment but that should not be limited to corporate social responsibility alone. Organizations do not oversee the significance of sustainability on human resources which will have a negative effect on the company in future. Ehnert (2009) in her research argues that sustainable HR model is that which fore-stalls on the different effects of implementing a policy and measures organizational success in social and environmental scopes. A conducive work environment is built in implementing these HR practices. Fom-brun et al. (1984) stresses the necessity to apply “best practices” in selection, appraisal, rewards, and HR development to increase shareholder value in the organizations. So implementation of such HR practices which is considered to be the best practices is necessary today to sustain globally. It is in this aspect that this paper aims to study three such HR practices and its impact on Organizational growth through techno-logical advancement like Artificial Intelligence.

## **Conceptual Framework**

Conceptual framework is a pictorial representation where, descriptive categories are systematically placed in a broad structure of explicit propositions, statements or relationships between two or more empirical properties to be accepted or rejected. McGaghie et al. (2001) defines conceptual framework as the one which “sets the stage” for the particular research question that initiates the research being reported based on the problem statement. It can be said as a tentative assumption or theory which lies as the base of the research. Based on the above literature review conceptual framework was illustrated. The hypothesis de-veloped was formulated to test effect of sustainable HR practices on organizational growth and the impact of artificial intelligence on the two.



Figure 1

*Conceptual Framework***Methodology**

The primary data for the research was collected from a total of 72 samples using a structured questionnaire. The questionnaire was adapted from previous research done by Ybema et al. (2006). All samples were employees working in IT and ITES industry.

The collected data was exposed to reliability test utilizing Cronbach's Alpha. It is essential to figure Cronbach's Alpha coefficient for reliability and consistency while applying Likert type scales in research (Gliem & Gliem, 2003). The Cronbach's alpha values of numerous factors are exhibited in table 1. From the exhibit it could be clearly seen that the reliability co-efficient factors for this research are above 0.60, which is a conventional value (Malhotra, 2004) and which indicates a high level of internal consistency for the scale (George & Mallery, 2003). So it is clear that the items establishing every construct under this research have reasonable internal reliability.

Table 1

*Cronbach's Alpha Reliability Test*

<b>Instruments</b>	<b>Cronbach's Alpha</b>	<b>No. of Items</b>
Sustainable HR Practices	0.822	<b>5</b>
Organizational Growth	0.797	<b>7</b>
Artificial Intelligence	0.864	<b>5</b>

## Results

The data collected were subjected to statistical analysis through SPSS. To test the first hypothesis regression analysis was facilitated. The authors have chosen regression analysis as it best identifies the changes in each independent variable and are related to the changes in dependent variable.

Table 2

### *Regression Analysis between Sustainable HR Practices and Organizational Growth*

Independent variable	R <sup>2</sup>	Accustomed R <sup>2</sup>	F value	Beta value	P value
Sustainable HR Practices	.751	.751	1.341	.867	.000***

\*\*\* $p < .001$

On analysis it is found that sustainable HR practices is significant and positively influences organizational growth.

With the advent of AI in existence in the global market organizations feels at ease in implementing and tracking the sustainable practices. From the HRM literature, the mutual gains model proposes that HR practices, implemented in organizations to advance employees' skills and abilities, also motivate them to perform well, and provide opportunities for employees to exert discretionary effort (Jiang et al., 2012) are related to both employee wellbeing and performance (van De Voorde et al., 2012) which progresses towards the overall organizational growth.

Artificial Intelligence provides umpteen numbers of benefits in providing a well streamlined comprehensive recruitment strategy for the organizations. Readiness of skills and acquiring the prospective talent is the principal dare in the current scenario. Consistent speed and quality of hiring appears to be the vigorous priority to organizations. Creating a comprehensive strategy through AI will help the organizations in doing the routine administrative tasks easily & effectively. Chatbots like **Tribe Pad** serves to be an integrated Applicant Tracking System to categorise resumes. **Arya** helps the recruiters in sourcing the potential candidates from the resume pool according to the job description. According to Windolf (1986), the choice of a precise recruitment strategy by an organization is specific to the resources available to the organization at hand and its environmental dynamics. With the above stand point organizations can invest in AI for a sustainable growth. According to Barney (2001) firms should persistently assess their workforce to ensure that they have the right people with the right skills in the right places to ensure sustained competitive advantage. This is possible with AI in existence. Table 4 explains the moderating relationship between AI & sustainable HRM practices to achieve organizational growth.

Table 3

*Hierarchical Regression Analysis of Sustainable HR Practices on the Interaction between Work Organizational Growth and Artificial Intelligence*

Steps	Independent Variables	R <sup>2</sup>	Accustomed R <sup>2</sup>	R <sup>2</sup> Change	F Change	Sig F Change	Beta Value
Step 1	Sustainable HR Practices						.867***
	Artificial Intelligence	.751	.751	.751	1341.10	.000	-0.42***
Step 2	Sustainable HR Practices *	.753	.752	.002	3.203	.074	.863
	Artificial Intelligence						

\*\*\* $p < .001$

Step 1 regression results states that there is a core outcome between Sustainable HR Practices, Organizational Growth & Artificial Intelligence. Accustomed R<sup>2</sup> is .751 and the model is fit as indicated by the significance of F value (1341.105);  $p = .000$ ;  $\beta$  coefficient is .867\*\* for Sustainable HR Practices and -0.42\*\* for Artificial Intelligence. Sustainable HR Practices has a positive effect and Artificial Intelligence has a negative effect to Organizational Growth.

On analysis of the moderating effects in step 2, accustomed R<sup>2</sup> = .752; R<sup>2</sup> change = .002; F change = 3.203; Sig F change = .074. R<sup>2</sup> change specifies that there is a development in the R<sup>2</sup> value when the 2<sup>nd</sup> predictor is added in the 2<sup>nd</sup> step.

The R<sup>2</sup> change is verified with the F change. It states that F change is significant ( $p = .074$ ). A significant F change specifies that there is noteworthy development in the estimate by the moderating variable. The model is a perfect fit for both the core effect and the moderating effect model.

Employee health is well-thought-out a sub-dimension of employee wellbeing (Danna & Griffin, 1999). Artificial Intelligence plays a vivid role in analysing the mental health of the employees. **Dr. Cooper** is a chatbot assistant which assists employees on their queries related to their wellbeing. **Cogito** is one such AI assistant which identifies stressed employees. With this HR people can recognise the cause of stress and necessary action can be implemented immediately for the betterment of employees. Happy employ-

ees will eventually perform better. **Moodkit, Woebot & Wysa** are mental health bots which identifies behavioural changes in an employee. By this organizations can implement essential solutions to overcome the ambiguous situations.

As previous researchers say that psychological contract is an exchange of terms & conditions to be shared by the employee & employer. Cropanzano and Mitchell (2005) proposed that social exchange relationships are cultivated when an organization shows concern for its employees. In other words, positive social exchange relationships create effective employee attitudes and behaviours which in turn play a vivid role in impacting organizational growth. These social exchange relationships can be brought with the help of AI Robots in place. Artificial Intelligence is actually transforming the workplace into a more digitised way. **Qlearsite** uses Natural Language processing to instrument pulse-style engagement surveys which provides apt feedback in a dashboard so that organizations can look into future improvements. Also with the help of chatbots like **Mya, Allyo, XOR** have a detailed conversation with the employees and tries to get their expectations so that employer can match it for them to achieve their organizational goals.

## CONCLUSION

Studies have proved that informal HR practices will impact the key HR outcomes. The importance of a creating nice working environment for employees and open positive culture creates a good sustainable growth for the company. To create sustainable HR practices it is necessary to monitor the employee strength and leverage them accordingly that will enhance the organization and employees towards growth. Through technological innovation like Artificial Intelligence employees are monitored and are in contact with the HR on a daily basis. It is not necessary that a HR person needs to speak to the employee to gain insights; instead it's all done by a chatbot or robot. AI also condenses the use of paper, electronically viable documents anytime anywhere which makes the environment too sustainable.

APAC Workforce Insights discovered that increased use of automation and artificial intelligence at the workplace effects in increased employee satisfaction. It can be understood that satisfied employees always perform better. Sustainable HRM practices like comprehensive recruitment strategies, better psychological contract and effective plans of enhancing employee wellbeing are offering competitive advantage globally and AI assists organizations for effective solutions to compete in a competitive environment.

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# Prospects and Problems in Emerging Pharmaceutical Market: Gulf Cooperation Council Countries

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## ABSTRACT

The purpose of this viewpoint article is to critically evaluate Gulf Cooperation Council (GCC) countries as an emerging pharmaceutical market through VUCA frame work and to identify prospects and problems. Within the literature, prospects and problems in GCC countries as an emerging pharmaceutical market are not fully addressed *vis a vis* VUCA environment and this is the gap the study addresses. This is an explorative qualitative study based on the author's working experience in GCC region & discussion with stakeholders like regulatory authority, channel partners and Physicians. This study may provide the subtle insights to offset the impact of VUCA business environment prevailing in GCC pharmaceutical market. This study may be used to maneuver the resources to yield competitive advantage to pharmaceutical business in GCC countries and for new entrants.

**Keywords:** Competitive Advantage, Emerging Pharmaceutical Markets, GCC (Gulf Cooperation Council) Countries, Middle East, Regulatory and VUCA (Volatile Uncertain Complex Ambiguous).

## INTRODUCTION

Many definitions, terminologies have been coined to describe features of countries offering growth spurts by very many global economic agencies and by leading academicians from international business schools. The markets with the scope to provide increased profits, growth opportunities and with more elements of

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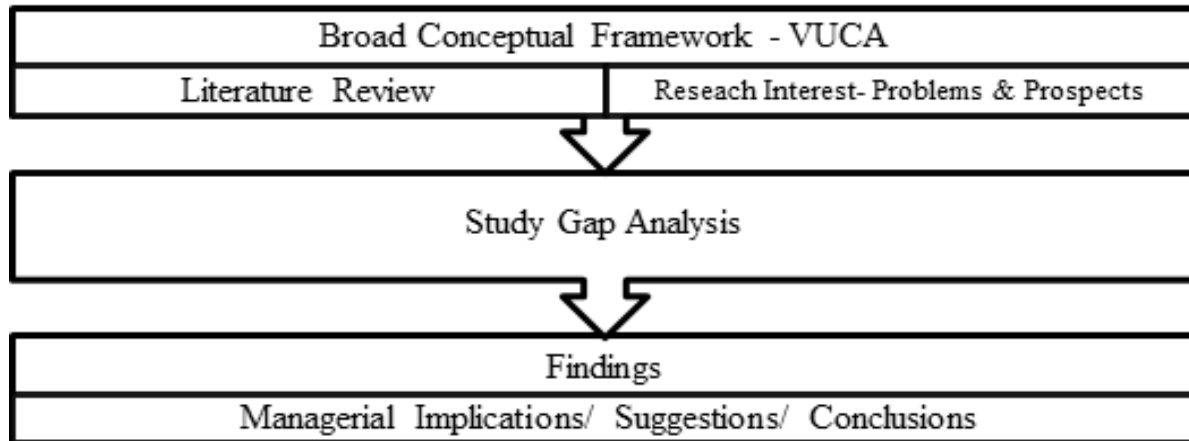
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risk from various factors apart from patent/brand infringement, termed as “Less Developed Countries” in 1970s’, are defined as “Global Emerging Market” (GEM). In 2009, Dr. Kvint defined emerging market/country as a society which is transitioning from a political/ economy system of dictatorship to a democratic free-market-oriented-economy, with increasing economic freedom, slow integration with the global market place and with other members of the GEM (Global Emerging Market). It is characterized by working middle class with improved standards of living, social/ political stability and tolerance, as well as an increase in cooperation with global multilateral institution (Kvint, 2019). GCC countries amply fall into emerging market category considering the present characteristics of the GCC countries. GCC countries have of late seriously embarked the democratic policies in most of political social structures though not fully. The economic developments along with higher educational and buying power of GCC countries make them the right candidate of emerging markets. GCC countries have been offering promising growth spurts for most industries in spite of its small geographical and demographic size. GCC countries currently hold about significant position in terms world’s oil reserves and position in OPEC. Recently, Kingdom of Bahrain has struck natural gas in the southern part of its island. The oil rich status gives GCC countries an advantage over other emerging markets in terms of resource availability with respective GCC governments (Shubita, 2015). In the coming decade GCC region will encounter rapid economic growth, political volatility, increased competitive rivalry which will be reflected in pharmaceutical business also.

The demographic pattern of GCC countries may have an impact on the demand of pharmaceutical products in the region (Al- Essa et al., 2015, p. 3). Business environment at present in GCC region is more VUCA (volatile, uncertain, complex and ambiguous) than ever because of political/ economy uncertainty, complex social structure, and specific unique regional issues. Ambiguity in macro level policies is a feature of any evolving political structure: GCC is still experimenting and evolving with regards to political structure. One of the demographically most vibrant region in the world is GCC with quantum rise in pediatric and leaping geriatric life expectancy is heaven to pharmaceutical industry; for life style diseases are bane out of increased life expectancy.

Informal discussions with undersecretaries of Ministry of Health, CEOs & Regulatory Heads of NHRA (National Health Regulatory Authority), Directors of Directorate of Material Management, Public Health Staff of Ministry of Health of GCC countries over a period of three years yielded information which was validated through successive discussions. Industry specific market related information was accrued through interactions with major pharmaceutical agents of GCC. Information about problems faced by major pharmaceutical suppliers was collected from senior managers of major pharmaceutical suppliers to GCC. Most information from the sources were validated, the accuracy and authenticity by counter checking from each other.

Figure 1

*Broad Conceptual Framework - VUCA*

Authors Contribution

***Objective of Study***

Though not prominent and significant, considering global population and pharmaceutical market, GCC region offers enormous economic profit opportunities. This study aims to focus on those prospect and problem areas specific to GCC countries' pharmaceutical business environment (VUCA analysis) for distinct competence in pharmaceutical business and of course which will offer better opportunity for good health of GCC community.

***Conceptual Background***

World is rapidly changing due to interconnectedness and competitiveness. The term VUCA describes some important factors of competitiveness. A simple Google search shows over 396,000 search results in January 2015 (Mack et al., 2016). Sustenance in a densely competitive business environment like GCC region is similar to sustenance in a battlefield. VUCA: Volatility, Uncertainty, Complexity, Ambiguity, the acronym VCUA, was first developed by the US war college to define conditions military leaders encounter on the battlefield. Recently every organization is thinking about how to get a business excellence in VUCA environment (Bhandari et al., 2019). In a 'VUCA world' experts opinion that core activities essential to driving organizational performance like strategic planning are viewed as mere exercises in futility (Bennett & Lemoine, 2014). Understanding VUCA elements hence is imperative for sustenance of business. Analyzing the prevailing pharmaceutical business environment in GCC region in the context of VUCA frame work to assess its prospects and problems is the conceptual background of this study.

## Literature Review

Articles from journal, books relating to GCC pharmaceutical markets from 2004 to 2017 were reviewed. Six articles elaborate on the regulatory/ registration aspects like challenges and opportunities, strength and weakness of GCC centralized registration. Some of the authors have dealt in detail economic advantage, strategic issues. Kingdom of Saudi Arabia being the major constituent of GCC, two recent publications is more on KSA. One article is on pricing of pharmaceuticals in GCC. Extant literatures confirm that GCC as an emerging market has abundant scope for rapid growth.

GCC region in Middle East is a promising niche with vast opportunity in spite of unique VUCA dicey environment with regards to regulatory, commercial policy, culture and aspirations. To really grasp the pulse of the customer very many finer aspects concerning the industry and the society need to be fully understood to evaluate the prospects and problems pertaining to industry, which VUCA frame work can provide. Table1 provides observations of the authors relating to GCC as a promising emerging pharmaceutical market.

### *Research Gap / Study Opportunity*

The authors have discussed/ detailed on regulatory, policy, economic viability, technology, government participation in health care, government purchase mechanism, registration etc pertaining to either GCC or Middle East region and on its scope to be a promising emerging pharmaceutical market. None have specifically addressed the pharmaceutical business environment applying VUCA concept and have analyzed the prospects and problems of pharmaceutical industry/ business specific to six GCC nations which is indeed complex yet important for successful business operation. This is the gap this study attempts to address.

Table1

#### *Research Gap/ Study Opportunity*

<b>Year</b>	<b>Author's name</b>	<b>Findings</b>
2018	Eljilany et al.	Economic factors have strong impact on pharmaceutical business in GCC countries since major health care provider is Ministry of health.
2017	Obeidat et al.	Successful strategy implementation in pharmaceutical industry in the Middle East is influenced/ depend on variety of variables specific to Middle East region.

<b>Year</b>	<b>Author's name</b>	<b>Findings</b>
2017	Alrasheedy et al.	Kingdom of Saudi Arabia dependency on imported medicines, dominated by patented and original medicines, pricing and process of usage.
2017	Asiri.	Literature on Kingdom of Saudi Arabia regulation and criticizes on its ambiguity in spite of being the largest pharmaceutical market in Middle East.
2017	Hassan et al.	Prevailing health regulatory system in UAE and its impact on pharmaceutical business.
2015	Al-Rubaie et al.	Strength and weakness of centralized registration procedure in GCC region and views of pharmaceutical companies.
2015	Balasubramanian et al.	Regulatory prerequisite for pharmaceutical products as per UAE guidelines.
2015	Shubita.	Advantages of GCC region as an emerging market.
2015	Hasan and Lessing.	Lack of unified pharmaceutical pricing & pricing policy among member countries of GCC and the United Arab Emirates (UAE) paving way for infiltration of medicines between GCC countries.
2015	Al-Essa et al.	Over view of medicine regulatory system in Gulf region.
2014	Tiwari.	Healthcare industry in United Arab Emirates forecast to show significant growth potential.
2014	Data on Executive Board of GCC countries	Vision, mission and objectives of executive board of GCC countries council of health ministers and its limitation in forming unified health regulatory policy for GCC countries.
2012	Tantash.	Challenges & opportunities for generics in Middle East.
2006	Mourshed et al.	Challenges and opportunities in GCC region healthcare.
2004	Hill and Johnson.	Emerging challenges and opportunities in drug registration and regulation in developing countries.

## VUCA Analysis: Pharmaceutical Business in GCC Region

### *Volatility*

The applied meaning of volatile is that which is liable for sudden change. GCC region has been from time immemorial susceptible for unprecedented change, mostly welcome change with regards to social, political, and economic aspects. These changes have been contagious due to geographical, ethnic and cultural proximity of the nations comprising of GCC region. The recent embargo on Qatar by three constituent nations of GCC is candid example apart from many latent similar actions from one another. Volatility is mostly economical due to dancing crude/ natural gas prices and due to political views and aspirations of not only constituent GCC nations but also of other global nation. Turmoil in any of the Levant constituents causes economic tremors in GCC region apart from historic Iran/Iraq issues. In practice what is spoken as Arab brother hood is selective and situation specific. Constant conflict between Kingdom of Saudi Arabia and Yemen is a fuming factor for economic instability in GCC. Volatility at apex destabilizes all those economic activities down below the apex. In context of this article, health spending (procurement of pharmaceuticals) by government has been taking the slap in GCC region where majority health care service is offered by the governments. Perceived heightened security need of each GCC nations & the opportunistic arms sale race has pushed allocation of funds for health care service to back burner. Ethnicity, power centers of clans, rapid commercial adventurism add to more volatility to pharmaceutical business environment.

### *Uncertainty*

Risk is central to any business and risk is proportional to economic profits provided risk is adequately addressed. Risk, as a cluster of independent variable necessitates estimate in order to form a sensible sustainable competent advantage strategy. But unpredictable unprecedented uncertainty obliterates any scope to strategically address risk. Transportation time of essential pharmaceuticals due to port of entry hassles because of odd weekends (Friday & Saturday) prevailing only in GCC, accumulated payment dues from Government organizations/ Ministries, over and or under estimated demand of pharmaceuticals in government institutions, haphazard and multi-level purchase of pharmaceuticals by government institutions and threat of cancellation /return of pharmaceutical products pose uncertainty. Expiry at government pharmaceutical warehouses and the demand for compensation and safe disposal of expiry medicines from pharmaceutical suppliers adds to uncertainty. Further, restrictive practices by most of the MNC pharmaceutical suppliers and institution/government buyers add up to uncertainty. Uncertainty with regards to import approvals, regulatory approvals due to lack of understanding is a hurdle (D. Richter, personal discussion, 2017)

## **Complexity**

Complexity is when too many confounding and extraneous variables pose problems in business and cannot be tackled easily by scientific methods. Complexity in organization structure, policy and decision making is a force to reckon with in forming strategy for sustainability. In GCC region the rules, policies and procedures apparently may look simpler but the interpretations and applications are complex owing to the many socio political factors. Many GCC institutions are still rudimentary in adhering to standard operation practices in supply chain. The commercial laws in GCC region impose variety of strictures and segregates organization within the strategic group in industry. The ubiquitous term “Vasta” is often used to hasten and retard commercial activities. Complexity in drug registration & commercialization with regards to bio engineered / protein derived pharmaceutical entities pose a unique set of complexity. Frequent changes in the requirements of statutory certificates like no pork, no heavy metal and no pesticide certificates for the ingredient of protein derived/ bio engineered/ blood related medicines/ vaccines pose a complex issues sometimes leading to withdrawal of medicines and heavy loss. The high ambient temperature prevailing in most seasons in GCC is a complex issue in pharmaceutical manufacturing and distribution. The inordinate delays in custom clearing from ports where mostly only local population is employed pose a complex logistic problem (A. Pallath, personal discussion, 2017). Non availability of adequate local talent and the restrictions related to localization/ expatriate employment coupled with work culture of local population adds to the complexity in pharmaceutical business. Density of different nationals with varying ethnicity in Healthcare service in GCC is high which is subtle but a substantial complexity.

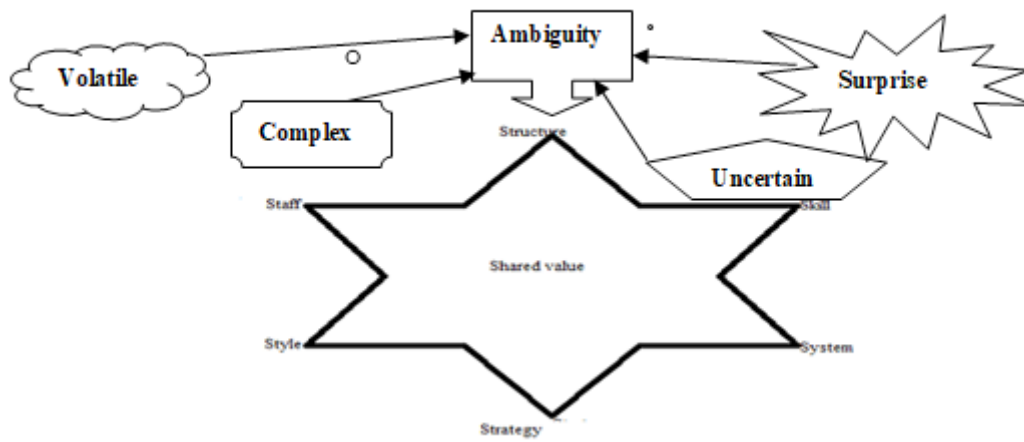
## **Ambiguity**

While volatile, uncertain, complex phenomena can be termed as sensory aspect of strategy and looking outward towards business environment, ambiguity is inward looking and related to strategic decisions based on the volatile uncertain and complex business environment. Most notable organizations in GCC are family/ proprietor managed rather than professionally managed and not keen on strategic vision, style and skill. Structures of most organizations in GCC are not tuned to support long term strategy either. The original defense strategic parlance VUCA did miss out the aspect of significant importance for success or failure in both warfare and business, i.e. “Surprise”. Even if the entire operating environments are addressed using VUCA framework, success will still be elusive if element of “surprise” is not envisaged and tackled appropriately for which competency and agility are deciding factors. The boon and bane aspect of GCC region is “surprise” which spring up either as unforeseen opportunity or as flash of threat. Sudden blockade of milk from Kingdom of Saudi Arabia immediately after the Qatar embargo by 3 GCC constituent countries sprang as surprise but then offered opportunity to Danish and Turkish dairy products manufactures while surprise withdrawal of GCC rail road link project lead to sudden loss of investment to few local and international organizations and their prospect of opportunity short lived. Exit of Qatar from GCC

council has led to ambiguity in GCC centralized SGH system of bulk pharmaceutical purchase. Following is the author's diagrammatic depiction of VUCA of pharmaceutical business environment.

Figure 2

*VUCA Model of Business Environment in GCC Region*



*Source.* The McKinsey 7-S Framework, incorporated into author's idea on VUCA model of business environment in GCC region

## Prospects

The economies of the Middle East, in particular GCC countries will continue to encounter rapid business growth in spite of political volatility & risk, and increase in competitive intra& inter rivalry. Aspirant international investors need to choose either to ignore GCC/Middle East countries missing the opportunity with great potential or to make a careful evaluation of which GCC/ Middle East countries to enter and how to enter them successfully (Tim, 2012, p. 3-6). To cite an example from recent report by Moody's Investor Service, a credit rating company, ARAMCO from Kingdom of Saudi Arabia with \$111.1 billion is most profitable organization in the world (Batrawy, 2019). Most of the GCC countries have become business and investor friendly and have swift processing for startup ventures, offering substantial incentives, privileges and benefits. Pioneering endeavors' of Bahrain Chamber of Commerce & Industries and Economic Development Board of Kingdom of Bahrain are examples. Over two decades of pan world economic data confirm that 70% of growth in GDP and gross surplus (an economic assessment of profit) happened in five globally significant business activities: financial services, asset management, internet/ media/ software product development, pharmaceuticals and medical product development (Ramaswamy et al., 2019). All six GCC nations have been classified under high income economies by per capita GNI (Gross National



Income) by World Economic Situation and Prospects 2018 report of United Nations Organization. Most of the GCC governments still are in the center stage of global economy by fortune of natural oil & gas and can spend significant amount of resources for health of its population. So the availability of prospective customer is certain for research oriented and or generic pharmaceuticals. GCC region is a fertile ground for global MNC (Multi-National Corporations) for there are no research based pharmaceutical organization in GCC. There are less than ten generic pharmaceutical manufacturing organizations in GCC region and their contribution in spite of governmental support is not significant (Director, DMM, Bahrain, personal discussion 2016). The abundant availability of energy augmented with plans to harness solar energy coupled with skilled yet not expensive expatriate skills/ labor with incentives for startup industries are wide windows of opportunities. Geographical proximity, availability of exports promotion trade zones in most of the GCC countries offering logistics leverage & incentives are prospective propositions. The enviable elegant Arabic life style and social structure is the precursor to many chronic debilitating disorders like Dyslipidemia, Type 1 & Type 2 Diabetes, blood related genetic disorders and increased incidence of malignancy and cardiac ailments are prospects to plunge in to pharmaceutical business in GCC region. Majority of GCC countries are in the spree to slash government direct spending in health care and to privatize health care even to local population. This is an opportunity to health insurance & for other allied health care business to enter into pharmaceutical business as barriers of entry are weak. The growth of GCC population is above global level and its burgeoning pediatric, geriatric segments is an opportunity since use of medicine is maximum during these phases of life. Recent entry of international medical schools in a big way in GCC region offers immense scope for pharmaceuticals to conduct their multi stage clinical trials on new pharmaceutical entities with least hassle. The growing western educated population in GCC is an advantage to pharmaceutical organization in terms of skill sourcing and customer base. GCC nations aspire for health security which in itself is a prospective sign for pharmaceutical industry. The positive side of volatile skirmishes among GCC nations is that there has been a persistent competitiveness which is good for economic and other developments of GCC region and the common thread among GCC nations are always intact and strong.

## Problems

The economic slump which GCC region had seen just after the Gulf war, in 2008 and just after the Arab spring in 2011 are per se example of volatility which is a problem while assessing the environment for forming a strategy. The matters of territorial security between GCC nations and the neighboring countries favoring arms race among GCC nations leads to indirect negative impact on business environment. Unique set of problems relating to pharmaceutical industry is related to pharmaceutical product registration, pricing and renewal of registration which is complex as they keep changing and are different in each of GCC countries. The centralized GCC registration located in Kingdom of Saudi Arabia is not fully functional and not recognized by other constituent GCC member countries. Though the centralized phar-

maceuticals purchasing committee, head quartered in Kingdom of Saudi Arabia aimed to cater to all GCC nations' need of medicine (offering opportunity for bulk business pharmaceutical organizations) has only increased the bargaining power of buyer and is a challenge in pricing pharmaceutical products in GCC. The disparity in pharmaceutical pricing between geographically close countries lead to clandestine movement of products which is a major issue to tackle between channel partners of GCC countries (same brand of medicine priced less in Kingdom of Saudi Arabia entering Kingdom of Bahrain, Qatar are common) in spite of attempts to unify the price across GCC region. Separation of Qatar from active association of Gulf Cooperation Council has dwindled down the strength of GCC economy and heightened the aggression. Divergent political aspirations of GCC nations which are inimical to each other are a serious risk aspect for foreign direct investment. International commercial laws are not fully applicable and country specific laws & legal system have not matured to offer full protection to legitimate commercial activity. Gradually decreasing expatriate population in all GCC nations because of policy decisions is an issue pharmaceutical organizations need to address while planning demand. Unlike South East Asian emerging markets (like Singapore) the governmental support from GCC countries for startup business is not omni-present across various departments and is tardy. GCC authorities are yet to be fully efficient and stringent and hence accreditation of business activity in one of the GCC member country is not valid/ accredited across other GCC countries. Business activity without local partner near impossible/ unviable and lack of clarity in commercial law interpretation is a restricting factor for business investment and full involvement. There are serious doubts about aspired sustained spurt of economic growth after Qatar FIFA World cup in 2020 and Dubai Expo 2022.

## **Future Research Guidance**

Study to critically evaluate the problems and prospects related to pharmaceutical business before and after the Qatar separation from Gulf Cooperation Council will be of contemporary value. Detailed study to assess the scope of pharmaceutical multi stage clinical trials in GCC countries will offer ideas for opportunities to organizations in medical clinical trial business. Study on scope of Biosimilars research, manufacturing in GCC region and its impact in GCC countries (which will open avenue for economical therapeutic substitutes) may open up new vista for business. Elaborate study on the GCC country specific regulatory authorities' roles and activities with the aim to find the viability for one unified regulatory for GCC countries will benefit pharmaceutical business and communities of GCC region. COVID19 is neither a head wind nor turbulence to pharmaceutical business. It's a forced placidity & forced stability strategy period to many businesses and opportunity to pharmaceutical industry. Understanding post COVID19 impact of GCC business scenario Vis a Vis VUCA can be an interesting study.

## Managerial Application

Scanning aspects of volatility, uncertainty and complexity in business environment augmented with unambiguous firm decision is what can offer sustainable competitive advantage. Mercurial VUCA business environment specific to pharmaceutical industry of GCC region identified in this study will help to form better strategy to achieve substantial competitive advantage through distinctive competence, unique capabilities. The practical ground level aspects dealt in this study will support framing tactical moves to obliterate risk time to time. Constituent elements of business environments are in a way customers. Understanding customers is the crux to success in business. This study can help to better understand customer /elements of business environment. While India is second largest exporter of generic medicines to most countries with manufacturing facilities in most advanced countries, it is yet to make any significant inroads into GCC region. With maximum Indian expatriate workforce population (at all level), geographical proximity, cultural understanding and with favorable political climate it is most ideal time to venture well into GCC region by Indian pharmaceutical industry before China entrenches further deep in GCC region.

## Limitations of the Study

This study is mainly based on the observations and practical experience of the author coupled with the information gathered from pharmaceutical managers and health authorities of GCC region by informal interactions & hence though reliable not amenable for empirical validation. No hypothesis is formed and tested because the objective of the study/article was to assess the prospects and problems of pharmaceutical industry in GCC region from the ground level. Guidance to investing in GCC countries and aspects of setting business are out of purview of this study/article even though some aspects for prospecting in GCC markets have been dealt with. All stake holders view on pharmaceutical industry in GCC region not taken and documented though some of the views of stakeholders have been captured. Since the study is exploratory in nature and based on the authors experience/ observations specific sample design not adopted.

## SUGGESTION AND CONCLUSION

GCC region is vibrant business opportunity. Egregious characteristics of vibrant business region are business environment being VUCA with a surprise element. Vibrant region is risk but risk is challenge and optimum challenge sharpens the strategy for sustainability. With vision & agility to tackle volatility, with knowledge to understand the uncertainty, with clarity & restructuring in complex environment and experimentation to outsmart ambiguity, GCC can be an opportunity classically embedded in a challenging VUCA business environment. Multinational organizations and or Indian multinational pharmaceutical organizations aspiring entry into GCC countries need to carefully consider appropriate entry model and

ownership mode. Mid location, fortunate with oil, energy surplus, infrastructure savvy, best digital connectivity, opulence in life style and with benevolent mostly monarchy political system in place, make GCC a paradise for pharmaceutical startup more so because pharmaceutical industry in GCC is not crowded yet. Though the concept of globalization has crept in all over the world, still local leaning is predominantly prominent which will offer great leverage to pharmaceutical start up brands in GCC. Pharmaceutical industry is oldest industry imbibing, adopting new technologies as suited /demanded by s business regions like GCC. Pharmaceutical business is neither a sun rise or sun set but a stable shining sustenance business (of life and so drugs are classified as essential commodity) and so is for GCC region. Sometimes VUCA, whether in GCC or in any other market can a Chaos and it is up to the leadership of the organization venturing in GCC region to understand it, minimize the disruptive destabilizing effect and be ready to face it (Watt et al., 2016). Arabs of GCC region are traditional traders, by and large business ethics compliance is close to their hearts which in itself is an intangible ubiquitous resource. Nevertheless high level of adherence to statutory compliance is most important. The business opportunity is ripe and right in GCC region for those pharmaceutical organizations with exact wherewithal.

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# An Analytical Study on Learning Preferences of Employees in COVID Scenario

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## ABSTRACT

With the evolution of technology from Waterfall Model to an imperative agile ADDIE Model to set forth a learning and development process, currently there is a need to take a step forward towards collaborating it with the working environment. This calls for the transformation of L&D from Learning Management Systems (LMS) towards Learner's Experience Platforms (LXP). A learning campaign can create an impact by conducting a series of knowledge assets (micro-learning) over a period of time, to create lasting behavioural change. This research aims at finding the most engaging ways to lure in learners and engage them in their development during the COVID period. The primary source of data collection was carried out through designing a self-administered survey from 226 working professionals. This is an exploratory research which brings forth the different factors that contributes towards improving the engagement of learners, by analysing their learning preferences in a digital platform.

**Keywords:** Learning Campaigns, Learning Preferences, Employee Engagements, Influencing Factors, Motivation, Rewards and Recognition.

## INTRODUCTION

A specialized function of Learning and Development is a way of empowerment and value creation for employees by enhancing their skill, knowledge, and competency to induce better business performance. In order to survive competitively in the dynamic working environment, the organization should possess

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productive (efficient and effective) employees, as the organizations with a greater business and market knowledge pose a competitive edge over others in the cadre. Learning and Development should be indispensable in order to increase the productivity and to be sustainable in the industry. It is for consistently engaging the employees in a cycle of self-assessment and rectification, since the skills get outdated over a period of time. In Deloitte's Human Capital Trends 2019 survey, a majority of 86% of the professional respondents reported that their opportunity to learn is one of the major contributors towards joining in an organization. With recent conditions having changes in working environment, technological resources, skill requirements, business models and evolving work requirements, there is an increased demand for learning and development of employees. It can be integrated as an everyday learning module that reflects the common technologies people use, to upskill themselves with personalized learning materials, in preferred mediums having a strong review system prevalent in a dynamic social platform. This process is implemented using suitable techniques and curriculum including self-assessments, individual training, team training, and coaching. It can be catalyzed by applying the nudge theory to motivate the employees for initiating the process. Ebbinghaus' Forgetting Curve puts forth that 40% of the information delivered will be forgotten within 40 minutes of delivery. A learning campaign with repetitive information delivery over a period, helps to maximize retention and thereby, increasing productivity. Implementing a learning and development process with optimum proportion of innovation and technology can develop the employee engagement to a greater extent by nurturing the talent possessed and improvise on them.

## Literature Review

Learning preferences indicates the way of improvising and personalising teaching methods that motivates learners to culminate knowledge, by pursuing their preferred choice to do the same (Loo, 2004). It is an individual's preference or inclination towards one method of learning. There are 12 learning preferences widely recognised which includes reading printed material, narrating major term papers, group participation, team projects participation, case study, multiple choice tests, presentations, theoretical knowledge accumulation, practical application, problem-solving exercises, research on the topic, and exercising creativity in learning. The study showed how people with different learning styles had different learning preferences. However, the most preferred style of learning from the study were found to be solving problems and practical application of learning. The least preferred mode was narrating major term papers and presenting to the audience.

It was studied that there is a relationship between Jungian psychological personality types and their learning or coaching preferences (Bargar & Hoover, 1984). 'Sensing' personality preferred more practical mode of learning; 'Intuitive' personality preferred to deal with global concepts and open instructional mode; 'Thinking' personality preferred learning that is logically organised; 'Feeling' personality preferred more personal support and approval mechanisms; and the 'Extroverts' preferred group activities. Smith puts forth that the learning preferences of individuals varies as a function of inbuilt characteristic of their individual cognitive style (Sadler-Smith et al., 2000).



In Senge's bestselling book, *The Fifth Discipline: The Art and Practice of the Learning Organization* (Senge, 1990), he coined the term learning organization. Learning organization contributes to various prospects ranging from pedagogy (Hofstetter, 1967) to organizational studies (Kolb et al., 1971). There are different ways in which an organization aids in the learning process of an individual. In certain cases, the employees need to work in order to gain knowledge and to learn, that is learning is done parallelly with work, as the organization functions as a facilitator to create a learning environment. In another case, the organization stores what the individual learns, as an organization memory, which can be utilized further for work purposes in the future. The organization serves as a learning entity. It is important to integrate these two in the learning culture, in order for the organization to be successful.

The concept of a flipped classroom is being put into practice to convert the traditional thinking process into a higher-level thinking process, and to ensure that learning and development is done through learner-centric system (Lin, 2019). The pace at which every individual learns varies from one another, which proves that the traditional method of coaching is ineffective. Since the study materials are readily available at the learner's disposal in a flipped classroom, it makes it easier for people with differences, to cope up in the learning process. It also offers personalized learning individually, to gain momentum towards the developmental goal, making the impressions deeply engrained. Kolb introduced the concept of experiential learning on the basis of Dewey, Lewin, Vygotsky, and Piaget's theories, stating that with greater experience comes greater knowledge (Lin, 2019). By inculcating this culture, the learning of individuals becomes voluntary and autonomous.

The journey of learning should start with experience gained, whereby the learners reflect on the experience leading to discussions on the experience. Finally, the conceptualization occurs where they consider the concept in depth and experiment on it to find any alternative viable option (Kolb, 1984). By following this module, learners inculcate the habit of being more creative and pro-active, improving their innovative skills by the nudge the learners get as they learn by being practical.

## Research Methodology

A leading research pointed out that selling learning resources and services internally is as important as marketing it externally, as that is the best practice for the employees to develop an emotional connect for better engagement (Leslie & Holloway, 2006). This research was structured to analyse the various factors that contributes in improving the engagement level of employees for learning through digital media. Primary data collection was done through a survey using convenient sampling. The sample size for the survey was 226 and focused majorly on working professionals. In this study, the data was analysed quantitatively using IBM SPSS (Statistical Package for Social Sciences). The statistical analyses comprise simple frequency tests, chi-square tests, one-way ANOVA tests and independent samples t-tests. Chi-square test is used to analyse the association among categorical variables. One-way ANOVA tests and independent samples

t-tests are used to find out the significant differences in the mean scores of dependent variables (learning preferences) based on the independent variables such as gender, and age of the respondents. Further, the effectiveness of independent variables including teaching strategies that could be carried out using technology only (technological aspects) and the strategies that could be carried out both using technology and in-person (non-technological aspects) on the dependent variables namely course satisfaction is measured using independent sample t-test. The scope of the study is limited to understanding the factors influencing the engagement of employees in learning campaigns.

## Results

The survey was focused towards working professionals, who had access to learning and development tools in their organisation. The respondents' pool had predominantly millennials. 54% of the respondents are males and 46% are females, with less significant difference in the gender perspective. A majority of respondents of about 62% preferred to be trained on their technical skills front rather than the soft skills.

### ***Rewards and Recognition through Integration with Performance***

#### ***Review Process***

The test results indicate that there is a significant difference at 5% level, among the groups of male and female, in their preference for integrating rewards with performance review process. The dependant variable is learning preferences of employees, and independent variable is rewards and recognition through integration with performance review process. In the analysis table below, lower mean value represents higher preference for the particular gender, with 1 having the highest preference on a Likert scale of 1 to 5.

Table 1

*Independent Sample t-test on Expectation of Reward through Integration with Performance Review Process based on Gender*

<b>Expectation of Rewards and Recognition through Integration with Performance Review Process</b>	<b>Gender</b>	<b>N</b>	<b>Mean</b>	<b>Std dev</b>	<b>t-value</b>	<b>Sig</b>
	Female	107	1.5	0.769	<b>2.542</b>	<b>0.012*</b>
	Male	119	1.81	1.011		
	<b>Total</b>	<b>226</b>	<b>1.66</b>	<b>0.915</b>		

\* $p < .05$

For learners to be completely engaged in the task, there needs to be a suspension element, like in the movies, where their suspension of disbelief will engage them throughout the period of the movie. Once that engagement is attained, it cannot be taken away, until there is any inconsistency in the data shared (Herrington et al., 2003). Similarly, integrating learning with performance review and providing incentives or bonuses, will act as the suspension element in their learning process resulting in an increased engagement.

### ***Type of Learning Preferred***

The chi-square test analysis proves that there is an association at 10% significance level, between the age group and the Just-In-Time (JIT) learning method. The observed chi-square value of 7.823 is slightly higher than the expected value of 7.815, when the degrees of freedom is 3.

Table 2

*Chi-Square Test for Preferred Mode of Learning as Just-In-Time Method based on the Age Groups of the Respondents*

Age group (in years)	Just-In-Time learning		Total	Chi-square value	P value
	Yes	No			
Under 23 years	23 (45.1%) [19.2%]	28 (54.9%) [26.4%]	51	7.823	0.050
Ages 23-38	91 (58.7%) [75.8%]	64 (41.3%) [60.4%]	155		
Ages 39-54	5 (33.3%) [4.2%]	10 (66.7%) [9.4%]	15		
Ages 55-73	1 (20%) [0.8%]	4 (80%) [3.8%]	5		
<b>Total</b>	<b>120</b>	<b>106</b>	<b>226</b>		

Note. 1. The value within ( ) refers to Column Percentage.

2. The value within [ ] refers to Row Percentage.

From the cross-tabulation analysis, it is observed that JIT learning is mostly preferred by the people who are between the age group 23-38 years. It is observed that 58.7% of millennials have preferred JIT learning attributing to their increased work pressure. The younger generation prefer this as they struggle to manage time investment in upskilling themselves.

Just-in-time learning as explained in the book, *Rethinking education in the age of technology* (Collins & Halverson, 2018), is the approach to learn and develop skills while performing any tasks at work parallelly, and not dedicating a separate schedule for learning. We were taught the traditional way of learning, by learning theoretically in the school for the first 15 to 20 years of our lives, and thereafter struggle when the time comes to apply the knowledge gained in practical practices. It is important to put into practice immediately, whatever is learnt, as a way of retaining the knowledge through experience. Just-in-time serves this purpose in terms of skill-based learning, to find the information required whenever needed, not just in classrooms.

### ***Practical Application through Scenarios and Simulations***

There is a significant difference at 5% level, between and within the age groups in relation to their interest in conducting scenario and simulation experiments as a way of implementing their learning practically. The dependant variable is learning preferences of employees, and independent variable is learning practically through scenarios and simulations.

Table 3

*One Way ANOVA Test on Preference for Learning Practically through Scenarios and Simulations based on the Age Groups of the Respondents*

	Age Groups	N	Mean	Std dev	F-value	Sig
<b>Learning through Scenarios and Simulations as a Highly Rated Expectation among Learners</b>	Under 23 years	51	1.78	1.172	<b>2.807</b>	<b>0.040*</b>
	23-38 years	155	1.43	0.918		
	39-54 years	15	2.07	1.624		
	55-73 years	5	1.6	1.342		
<b>Total</b>		<b>226</b>	<b>1.55</b>	<b>1.058</b>		

\* $p < .05$

In the analysis table, it is observed that the scenarios and simulations are preferred mostly by millennials (23-38 years) that is closely followed by the other age groups. This is because the younger generation learn and acquire more knowledge by visualisation than by theoretical impartation.

In scenario-based learning similar to that in the dramas, the fundamentals of characters, conditions and other parameters of the learning process are set. Once that initial process is fixed, the learners will accept the basis of the simulated world created, where they are engaged with the storyline, after which the result or output of the story can be made flexible as per the trainee's requirements. Creating a Learners Experience Platforms (LXP) in the place of Learning Management Systems (LMS), is vital to engage the learners in their journey.

### **Gamification**

The chi-square test analysis proves that there is an association between the age group of respondents and the gamification strategy at 1% significance level. The expected chi-square value is 12.838, whereas the observed value is at 16.317, when the degrees of freedom is 3.

Table 4

*Chi-Square Test for Motivation of Learners through Gamification based on the Age Groups of the Respondents*

Age group (in years)	Gamification		Total	Chi-square value	P value
	Yes	No			
Under 23 years	34 (66.7%) [30.6%]	17 (33.3%) [14.8%]	51	16.317	0.001**
Ages 23-38	74 (47.7%) [66.7%]	81 (52.3%) [70.4%]	155		
Ages 39-54	3 (20%) [2.7%]	12 (80%) [10.4%]	15		
Ages 55-73	0 (0%) [0%]	5 (100%) [4.3%]	5		
<b>Total</b>	<b>111</b>	<b>115</b>	<b>226</b>		

- Note. 1. The value within ( ) refers to Column Percentage.  
 2. The value within [ ] refers to Row Percentage.  
 3. \*\* $p < .01$

It is observed that only the generation Z (38 and below 38 years) prefer gamification as a medium for learning and development. Millennials and generation X (ages 39-54) are hesitant, but the seniors (Ages 55-73) do not prefer gamification, as the mean value is 0. From the cross-tab analysis, it is found that the preference on gamification decrease as the age group increases.

According to Maheu-Cadotte et al. (2018), serious games are the ways in which learning is done through organising games in an interacting way, so as to engage the learners, thereby imparting the learning process. The process is carried out with the help of active design elements like points, difficulty adaptation and storytelling. Serious games help in improving the engagement of the learners in subjective experiences through creating competitions, leader boards and badges for the top performers in their cadre (Maheu-Cadotte et al., 2018). Thus, one could conclude that the younger generation prefer teaching with more essence of gamification strategy.

### ***Impact of Technological Aspects for Facilitating Learning on the Course Satisfaction***

Technological aspect for accessibility has a significant impact at 5% level, on the course satisfaction for learners. Whereas, the non-technological aspect is barely significant at 5% level. The dependant variable is course satisfaction of employees, and independent variables are the technological and non-technological aspects involved in the learning process.

Here, the technological aspects include micro learning videos and easy accessibility of the learning modules in all mobile platforms. The non-technological aspects include gamification, personalised learning content, learning through scenarios and simulations, motivation through skill badges, cheer cards, autonomy, recommendations, and engaging instructors.

Table 5

*Independent Sample T-test between Variables of Technological Aspects and the Course Satisfaction for the Learners*

<b>Variables</b>	<b>Course Satisfaction</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>t-value</b>	<b>p value</b>
Technological Aspect	Yes	179	1.7821	0.93917	63.606	0.017*
	No	47	2.2234	1.1316		
Non-Technological Aspect	Yes	179	1.955	0.67295	67.986	0.159
	No	47	2.1227	0.72934		

\* $p < .05$

The employees who have high accessibility in terms of technological aspect, have reported that they are highly satisfied with the course, having a p-value of 0.017. Whereas, there was no significant difference in course satisfaction with the inclusion of non-technological elements, as the p-value is at 0.159.

Despite the various attempts taken in engaging the employees, it is of utmost importance to ensure they don't have any technical difficulties or interruptions during the course. It is inevitable to avoid glitches in any course that is structured digitally. For which, the organisations should train employees about how to overcome any such shortcomings in the working environment.

## CONCLUSION

This study provides pointers on the most important factors that contributes towards carrying out a successful learning program and engaging the employees in their upskilling process. There is no significant difference between the number of male and female respondents, which gives us an unbiased analysis. The corporates are satisfied with the courses offered in the e-learning platforms and yet not many accesses it, which suggests that more importance should be given in promoting the page and optimise it to make it more user-friendly. This reinstates the purpose of this research to improve employee engagement in digital platforms. In this fast pacing world, the younger generation find the need to learn as they work parallelly, and they prefer unconventional modes like a social media platform and gamification to learn more about the learning and development initiatives, over the traditional mailers. With an increase in age, the respondent's preference towards gamification decreases. The learners want to understand about the practical application of their learning in every-day work. Apart from all of the enhancements done in non-technological aspect, it is of utmost importance to pay heed to the technological aspects that contributes in improving the course satisfaction. Cognitive load theory suggests that, by imparting the instructional learnings and educating about how to navigate in that environment removes the cognitive load that interrupts learning (Clarke et al., 2005). A navigating video can be put in place to remove the cognitive load and help the employees have a seamless experience by imparting a fruitful learning journey (Sitzmann, et al., 2010).

Implementing a learning and development process with optimum proportion of innovation and technology can improve the employee engagement to a greater extent by nurturing the talent possessed and improvising the talent to increase the relative productivity.

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# Sustainable Marketing – Are Companies going the Extra Mile?

Pavithra Rajkumar<sup>1</sup>

## ABSTRACT

With global warming and fast-depleting resources, there is a growing need for companies to introspect on their manufacturing and other processes and take swift action for environmental protection. In an effort to protect the planet and transform business thinking, sustainable marketing practices is mooted as the possible solution. There has been a shift in focus from profit and customer to society and environment when defining a company's goals. Societal and environmental concerns cannot be overlooked in a business' quest for success. Companies have realized that sustaining themselves through sustainability practices is the only way forward. In addition to the ever-changing business scenario, disruption of business activities as a result of unprecedented situations like the present Covid pandemic has also made companies rework their marketing strategies. This paper delves into the concept of sustainability marketing and showcases various sustainability practices of companies.

**Keywords:** Sustainability, Market Positioning, Stakeholder Orientation, Market Practices

## INTRODUCTION

Businesses around the world struggle to keep pace with ever-changing business and economic scenario and try to stay painstakingly ahead of competition and in the process pay scant regard to the ravages done to the environment. As a result, ecosystems have suffered huge damage and have forced the business world and society to take stock and make informed changes that would remedy past action. A paradigm shift has become the need of the hour and traditional marketing has undergone substantial change in favor of a more eco-friendly and socially conscious process. Traditional marketing creates, communicates and

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delivers offers to customers, stakeholders and the general public, while Sustainable marketing aims to provide customer satisfaction without compromising on the needs of society and also the general environment. Sustainable marketing focuses on the customers' needs and stresses that equal importance should be given to the environment and society at large (BooLaky, 2019). While traditional marketing's objectives were twofold – customer and society, sustainable marketing goes beyond and calls for a threefold approach namely - people, environment and profit which are of equal importance.

Figure 1

*Three-Fold Approach of Sustainability*



Author's Contribution

## Objectives of Study

1. To understand the meaning and concept of sustainable marketing.
2. To emphasize the need for immediate intervention for societal and environmental protection.
3. To highlight the sustainable practices of various companies

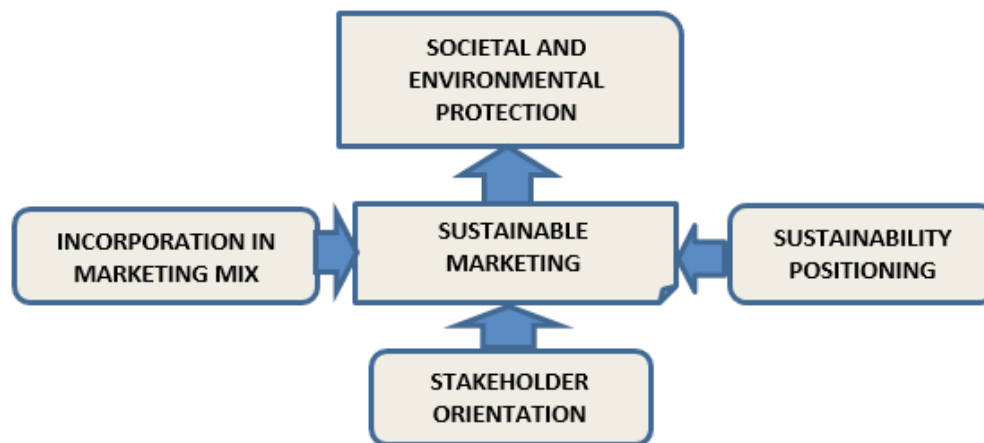
## Method

This paper delves into the concept of sustainable marketing and the dire need for societal and environmental protective measures. Efforts taken by companies are meager in relation to what is required. This paper is an attempt to make businesses understand the over-arching importance of sustainability practices as a definite step towards survival. The paper theoretically investigates the steps involved in sustainable

marketing like incorporating sustainability in marketing mix, stakeholder orientation, and sustainable positioning. The paper briefly reviews the available literature on sustainable marketing, then focuses on the importance of sustainable marketing and outlines the need for further research in this field.

Figure 2

*Framework of Sustainable Marketing*



Author's Contribution

## Review of Literature

When determining what products to produce, companies have to take decisions regarding the resources required to manufacture these products and also pay attention to the effects on environment, pollution and ecological damage (Fuller, 1999). Adoption of sustainable strategies is vital for continued existence of companies in an ever-changing business world. Constant review of products and making adequate changes to product portfolio with the intention of providing environmentally friendly products should be as important as consumer satisfaction to every company (Ercis & Turk, 2017).

Sustainable marketing should focus all its efforts towards preservation and protection of environment and society and create a culture of sustainability. These efforts while satisfying customers' needs and investors' demand for profitability will also distribute costs fairly. Sustainable marketing should strive to achieve social development and should be 'an initiator and trigger of a sustainable society (Meler & Dragan, 2014).

The thrust on sustainability should be made when a company develops its marketing strategy and the company should focus on sustainability in both its marketing practices and marketing mix (Kumar et al.,

2012). The company should evolve a holistic approach whereby sustainability is incorporated not just in marketing, but in its everyday activities as well (Reutlinger, 2012).

However, businesses at times suffer from marketing myopia where they are more product focused instead of being customer focused. Levitt (1984) is of the view that this focus on product and not customer may create confusion in consumers and may be detrimental to a company's growth. The product should be designed according to consumers' needs and desires and if this is overlooked, it would result in a steep decline in a company's fortunes (Levitt, 1984). Thus, this near-sighted approach should be avoided and the company should focus on sustainability goals of environment, society and customer. All stakeholders namely investors, suppliers, customers, public and government should be given equal importance. Constant review and analysis of stakeholders' needs and expectations is required to excel in the market and stay ahead of competitors (Tripathy et al., 2014).

Since sustainable marketing has a major thrust on environment, the need to invest in ecological capital may drive up business costs to a great extent. The fact that this may affect a company's competitiveness has resulted in a public policy debate. Businesses thus face the daunting task of economizing on costs and making eco-friendly products without slacking in the competition for market share.

### ***Incorporation of Sustainability in Marketing Mix***

Sustainability is a new approach that does not form part of traditional marketing. This paradigm shift necessitates a breakaway from traditional marketing strategies. To bring about sustainability in products and services, sustainability should be insisted upon right from production, distribution, pricing and promotion of products and services. Incorporation of sustainability in marketing mix is a great step forward for companies that would reap numerous benefits in the future.

A sustainable marketing mix would result in efficiency in use of resources (Ercis & Turk, 2017) and have minimal negative impact on society and environment. Trivedi et al. (2018) have identified innovation, commitment, collaboration and communication as key business strategies that would greatly benefit a business. Martin and Schouten (2012) argue that connecting prices to social and environmental issues, identifying growth opportunities, increasing price competitiveness by combining them with ecological impact, identifying a price level acceptable by consumers, and incorporating social and environmental costs in price could be the possible way forward.

### ***Customer to Stakeholder Orientation***

Sustainability has also led to marketers to pay attention to not just the customers but also other players in the field and attention has moved from customer to stakeholder orientation (Kumar et al., 2012). Typically, stakeholders of a company are its investors, suppliers, employees and others who have vested interests in

the business. The trend of sustainability has resulted in strong focus on these market players involved in business operations. Efforts of a business in relation to environment have direct impact on its stakeholders. Stakeholders' interests should be given importance when taking business decisions. Business transformation engaging multiple stakeholders should be the marketing strategy that should be the key focus of a business and at the same time the interests of consumers should not be compromised.

### ***Sustainable Positioning***

Growing numbers of companies are emphasizing on marketing sustainability practices to differentiate themselves from competition in an effort to augment their reputation and corporate standing. Jones, Clarke-Hill, Comfort, and Hillier aptly state that the “accent is on integrating sustainability thinking into the core brand”. Positioning itself as an eco-friendly brand with strong focus on sustainability practices would help the business enhance its brand value and give it a strong competitive advantage. Charter et al. (2002) argue that companies may falter in their attempts to gain advantage over competition which may ultimately result in more harm than good. This would have the end effect of significantly affecting their reputation. Kotler terms a sustainable company as a business that can face the whirlwinds of a dynamic market with courage and in the process make key changes in strategy – to give up exploitation and surge towards renewal and conservation.

### ***Sustainability Practices of Companies***

Leading brand Nestlé realizing the need to address environmental concerns has now shifted focus to environmental protection and is making changes in its packaging (committing to make 100% reusable and recyclable packaging). Pledging to save the planet, it is making efforts in carbon reduction by partnering with Danimer Scientific and is in the process of developing a marine biodegradable and recyclable bottle to package its goods (Ernest-Jones, 2019).

McDonalds, the frontline leader in the fast food industry has long faced a lot of flak for contributing to obesity and destructing consumer health by marketing foods containing excess salt and fat. McDonalds has also been criticized for environmental damage caused by its global operations and its laxity in solid waste management and product packaging. McDonalds decided to face this by diversifying into health foods like salads, grilled chicken, fruits and low-fat milk. The company changed tack regarding the accountability spheres of ethical, economic and environmental concerns. It replaced its artery clogging trans-fat oil with healthier cooking oil without changing the taste of its French fries. It came up with a scorecard for its suppliers rating their energy and water use and solid waste management. This has resulted in McDonalds being consistently featured in Dow Jones Sustainability Indices for its commitment and sustainability practices (Kotler & Armstrong, 2010).

Nike has incorporated environmental friendly practices in its product lifecycle right from research and design – where it excludes hazardous materials at the designing stage, manufacturing – using scraps and used products in new materials, retail – using recycled cardboard boxes, consumers – ‘reuse a shoe’ scheme and finally downcycling – recycling shoe material into sports surfaces (Charter et al., 2002)

Coca-Cola is looking at contour bottles (made from bioplastics, recycled aluminium and corn) to help reduce packaging waste. Coke has set up a new recycling plant to produce reusable plastic and has also installed HFC-free coolers that use less energy (Kotler, 2010).

Unilever has helped its suppliers of raw materials develop sustainable farming practices that have minimal environmental and social impact. Cleaner Planet Plan is an initiative of Unilever which aims to reduce environmental damage by designing and manufacturing sustainable products. Since Unilever’s laundry products contribute to greenhouse gas and water footprint at the consumer level, the company has started educating the consumer on better laundry habits (Kotler, 2010).

Electronic companies have long been criticized by environmental activists for using toxic materials like arsenic, mercury and polyvinyl chloride (PVC) in their products. Companies like Nokia and Samsung have taken serious note of this and have started producing toxin-free phones. As a result of the thrust on sustainable practices, Hewlett-Packard came up with the first PVC-free printer and Philips with the first PVC-free television. Similarly, reuse and recycle of parts of mainframe computers is a laudable practice of IBM (Kotler, 2010).

Smart cities development in collaboration with the US Government by Intel, Nutritional Profiling System started by Nestle, Pepsico’s plan to adopt UN Business Ambition for 1.5 Degree C and Sustainable Living Plan by Unilever are some of the environment friendly initiatives undertaken by big corporations (Trivedi et al., 2018). Amazon has signed The Climate Pledge committing to reduce carbon emission and is encouraging others to join the initiative as well.

### ***Sustainability during Times of Disruption***

Sustainable marketing practices during times of disruption like the recent Covid scenario is also a case in point. Nike has launched a campaign waiving the fees for Nike Training Club app and has asked customers to “play inside, play for the world.” Cottonelle, one of the world’s largest toilet paper producers, eased customers’ concerns by urging them not engage in panic buying with the slogan “Stock up on generosity.” Ford credit payment relief program has been started by Ford to support customers facing financial hardships during the pandemic. Companies have donated millions to food rescue organizations and local food banks to help fight food insecurity. Paid sick leave, childcare support, enhanced safety and security measures are a few efforts made by companies during the Covid pandemic.

## Discussion and Conclusion

Sustainable Marketing thus is the new mantra that will help a business position themselves as an enduring frontrunner and help in differentiating itself from competition. No business can overlook the importance of sustainability and it will have to incorporate sustainability in its marketing mix and marketing strategy. The decision on the scope and magnitude of various sustainable practices will vary based on the company's size, its culture and the industry in which it works. Sustainable marketing gains vital importance during unprecedented times like the Covid pandemic as the only strategy to tide over the crisis. Living up to expectations of society, one of the objectives of sustainability, should be the goal of all businesses during times of disruption. Sustainable Marketing could be a great force to reckon with as it has the potential to bring about substantial changes in society as it makes businesses rethink their traditional views. Transformation of business strategy encompassing all stakeholders and not just the customers should be the new norm for all businesses. Major business corporations around the world realizing the vital role played by sustainability practices have embarked wholeheartedly in its pursuit introducing a number of sustainability practices in their business. This should be imbibed by all businesses (both small and medium) and if that happens, it would be a path-breaking development for the future of sustainability. Environment, people, and lastly profit should become the policy of every business. If sustainable practices are incorporated in all aspects of a business, it will definitely spearhead the success of an enterprise and make it a sustainable business and its ultimate impact would be a sustainable world.

This paper has focused on only a few steps towards sustainable marketing and realizes that sustainability is a wide area requiring a lot of future research. Empirical research that could build an easily adaptable business model for sustainability is a possible step forward.

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# Drivers of Green Product Purchase Intention

Susan Mathew<sup>1</sup>

Vinod R R<sup>2</sup>

## ABSTRACT

Competition in the retail space has forced existing players to carve out unique strategies so as to increase their sales. Accordingly, companies have paid more emphasis to understand the consumer's perception of green products. Moreover, a growing demand is seen to exist for green products. Therefore, it is important to examine whether green corporate image has any influence on the consumer's purchase intention. Accordingly, a survey has been conducted among 200 respondents and the data are analysed. Results report that eco-label, green advertising, green product value, green corporate perception and green packaging strongly influence purchase intention. Among these, green product value seem to have the highest impact as compared to the rest of the variables. Surprisingly, green advertising seem to have had the lowest impact. Therefore, it is important that managers need to take a judicious call while deciding strategies rather than relying blindly on advertising.

**Keywords:** Business Strategies, Eco-Labeling, Green Advertising, Green Corporate Perception, Green Packaging, Green Product Value, Green Purchase Intention.

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## INTRODUCTION

Of late, studies on environmental issues have caught high attention both in the academic and policy level circles. Furthermore, from a management perspective, the depth of such studies has been widened to examine the organisations' eco-friendly behaviour.

Without doubt, it can be said that organisations around the globe are coming out with eco-friendly products with the fundamental objective of reducing their carbon footprint. Indian companies are not an exception to this. The reason being consumers and stakeholders are very much aware of the potential threats<sup>1</sup> that can negatively affect the natural harmony of nature. Studies indicate that the growing demand for green products is because customers prefer to be associated with companies which are environmentally conscious.

As a result, to garner a higher market share, organisations are trying their best to position their products as eco-friendly. However, the literature seems to be inconclusive. On one hand, a few studies have reported that firm's eco-friendly strategies significantly influences green purchasing behaviour (Ajzen, 1991; Sonderskov & Daugbjerg, 2011; Chan, 2004; Van Dam & Van Trijp, 1994; Rashid, et al., 2009). On the other hand, a few other studies reported otherwise (Grunert & Juhl, 1995). However, to the best of our knowledge, only a handful of studies have tried to examine the drivers of green products purchase intention.

Accordingly, this study address the question whether the perception of green products leads to purchase intention. For this, data has been collected by administering a validated structured questionnaire. Results from the study indicate that all the variables are statistically significant and the model is free from autocorrelation, and the residuals are normally distributed. The findings suggest that all variables have a positive influence on green purchase intention. Findings from this study will help marketers to identify the factors influencing green purchase behaviour in the first stage and further ensure a better conversion rate by increasing actual purchases.

The paper is divided into seven sections. The review of literature is described in the second section. Variables used in this study and methodology are described in the third section. The analysis and interpretation is reported in the fourth section. The implications for managers are described in the sixth section. The conclusion and scope for future research are summarised in the last section.

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1 These include unexpected climate change, ozone layer depletion, issues regarding air, water, and sound pollution, soil pollution and noise pollution.

## Literature Review

In this section, studies on green purchase behaviour have been reviewed and are described in two parts. In the first part, the review of international studies is summarised. In the subsequent section, the review of national-level studies is being described.

### ***Review of International Level Studies***

A study among Portuguese consumers revealed that they unanimously support eco-friendly policies, but however this support does not always translate into action. While this is true for the general population, there exists a minor population of distinct green consumers who prefer to buy products that has less environmental impact (DoPaco et al., 2009).

Another study was conducted to test green consumer behaviour in Egypt. The main aim was to examine whether the cognitive and attitudinal factors differ across gender. The results indicated that men showed more environmental concern and had a more positive outlook toward eco-friendly purchases, than women (Litvine & Wüstenhagen, 2011).

Shen (2012) in a study conducted in China, reported that consumers are very much aware of environmental issues and give more importance to environmental conservation than convenience. Furthermore, they don't mind paying a premium to buy green products, because such products will not harm the environment. This conforms with findings from existing studies (Laroche et al., 2001).

Thus, to sum up, findings from the above studies confirm the application of the "*Theory of Planned Behaviour*" (TPB) (Ajzen, 1991). In other words, findings indicate that consumers who are better concerned about environmental impact will be interested in purchasing green products (Kautish et al., 2019). Recently, a handful of studies also have analyzed the implication of TPB framework on an emerging and circular economy. For this, some studies have extended/exapnded the existing framework to include additional vairables (Sharma & Foropon, 2019; Yadav & Pathak, 2017) Results suggest that features/characteristics of the product is one of most important factor influencing the decision making process.

### ***Review of National-Level Studies***

Findings from national-level studies also do not seem to contradict the above statement. A study on consumers' behaviour towards eco-friendly products was conducted in Coimbatore, Tamil Nadu (Geetha & Naidu, 2014). The results indicate that a majority of consumers are aware of environmental problems. Further, this awareness has enhanced the acceptance level among consumers to opt for green products.

On similar lines, determinants of green purchase behaviour were examined in the paper industry, in a study conducted in Pondicherry. Results indicate attitude and personal influence as the major factors that positively influence green purchase behaviour (Kumar & Ghodeswar, 2015).

A study was conducted to explore the impact of consumers' buying behaviour towards green products in Kancheepuram, Tamil Nadu (Agyeman, 2014). Consumers' buying behaviour was taken as the dependent variable and regressed on a set of explanatory variables *viz.*, price, environmental concerns, quality, brand name, convenience, durability and packaging. The results indicate that consumers have a positive attitude towards purchasing eco-friendly products. However, while purchasing, factors *viz.*, price, quality and environmental concerns seem to be statistically significant. A few other studies also have reported that Indian consumers are ready to pay a premium for purchasing green products (Sonderskov & Daugbjerg, 2011).

The impact of demographic variables on green purchase behaviour was also studied (Pillai, 2013). This study tried to compare the demographic variables to the impact of environmental concerns and green purchase decisions in Salem. Findings indicate that concern for the environment is universal. However, demographic variables do not seem to have any influence on environmental concern. On the other hand, when it comes to purchase decisions, demographic variables *viz.*, occupation and marital status seem to have an influence. Furthermore, this study reported that gender does seem to influence the green purchase behaviour which is against the findings from most of the international level studies.

In summary, it is clear that a lot of studies have been conducted both, at an international and the national level.

### ***Variables Used in the Study***

For ease of understanding, in this section the variable definition (Table 1) is followed by a description of the hypothesis.

#### ***Green Purchase Intention (GPI)***

Buying behaviour of consumers has been constantly changing. This can be because of many reasons *viz.*, (a) product price, (b) perceived benefits, (c) and choice of alternatives. Technology has certainly accelerated the buying process. Studies report that (i) price, (ii) environmental concerns and (iii) quality positively influence the customers' purchase intentions (Agyeman, 2014). Further, literature also suggests that attitude towards environmental products is one of the factors that influences green purchasing behavior (Cheah & Phau, 2011).

As reported in the Theory of Planned Behaviour, (Ajzen, 1991) ‘intention’<sup>1</sup> is the predecessor of ‘actual behaviour’. Prior studies have defined green purchase intention as the eagerness to buy a product because of his/her interest to protect the environment (Chen & Chang, 2012). Similarly, it can also be defined as a preference or willingness to buy eco-friendly products over others (Rashid et al., 2009). Following these studies, we have also defined green purchase intention as the intention to buy green products over others.

### ***Green Corporate Perception (GCP)***

Of late, many firms/corporates have showcased themselves as green companies. Such companies take proactive measures to protect the environment and ensure sustainability (Okada et al., 2010). In other words, these firms create an image in the minds of the consumers based on the environmental philosophies they have been practising. Prior studies have reported that consumers seem to prefer buying the products offered by green companies as compared to others (Barber, 2010; D’Souza, 2004). For this study, following (D’Souza, 2004), we define green corporate perception as the perception about the firm/corporate as a socially responsible unit which is more concerned about the environment. Accordingly, we posit the following hypothesis –

**H1: Green corporate perception has a positive influence on green purchase intention.**

### ***Eco-Label (EL)***

Quite often companies use environmental certifications as an important tool to differentiate their products from its counterparts. Studies have reported that customers are not bothered about the high price for certified products (Aguilar & Vlosky, 2007). Presently, companies are mandated to have necessary eco-labels as part of their packaging. One of the main reasons is to assist the consumer to buy products which cause less harm to the environment. Studies have also supported that eco-label has been effective in guiding consumers and firms/corporates. As for consumers, it helps to take wise decisions (Nguyen & Du, 2010; Rahbar & Wahid, 2011; Kianpour et al., 2014; Testa et al., 2015), for consumable durables (Irfan et al., 2014; Koos, 2011), while for a corporate, the information enables to clearly segment and target the consumers (D’Souza et al., 2006) with the products and/or services they prefer to buy.

Lot of studies have examined the linkage between eco-label and green purchase intention (Vlosky et al., 1999; D’Souza, 2004). The term eco-label has been defined in several ways. These include (i) it is a logo and is used as an informational tool (Tang et al., 2004); (ii) a source for consumers to know the manufacturer’s credentials (Rex & Baumann, 2007); (iii) a source to access the environmental attributes of the product (Sonderskov & Daugbjerg, 2011); (iv) a tool to minimise information asymmetry among

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<sup>1</sup> Indicators include (i) how hard people are willing to try, and/or (ii) how much of an effort they are planning to exert in order to execute the behaviour. The stronger the intention, the more likely that it will turn out to be the actual behaviour performed.

buyers and sellers (Irfan et al., 2014); (v) a tool to differentiate green products from other products (Rahbar & Wahid, 2011). Accordingly, for this study, we define eco-label as a facilitator to help consumers buy products which are environmentally safe. Accordingly, we posit the following hypothesis –

**H2: Eco-label has a positive influence on the Green purchase intention.**

### ***Green Advertising (GA)***

Studies have reported the role of green advertising in connecting consumers' hearts and minds (Kane et al., 2012). It also provides useful insights to corporates to devise cost-effective strategies (Chan, 2004). Green advertising is different from corporate environmental advertising. The former focuses more on the attributes of the product and its positive effect on the environment (Chan, 2004), while the latter demonstrates the concerns of a corporate and its commitment towards a cleaner, greener and healthier environment (Davis, 1994). For this study, we define green advertising as an activity to direct the consumers' attention to a positive impact that can be created by buying the product. Prior works have reported that green advertising positively influences green purchase intention (Chan, 2004). Accordingly, we posit the following hypothesis –

**H3: Green Advertising has a positive influence on Green Purchase Intention.**

### ***Green Packaging (GP)***

This is perceived as an interface between businesses and consumers and can attract the attention of the customers (Van Dam & Van Triip, 1994). Prior studies have reported the importance of green packaging (Rokka & Uusitalo, 2008; Barber, 2010), and the impact of green marketing strategies (Juwaheer et al., 2012) on green purchase intentions. Following the works of (Van Dam & Van Triip, 1994), we define green packaging as the extent to which consumers can recognise the methods adopted for the packaging of goods, which has the least impact on the environment. Studies have reported a positive relation between green packaging and green purchase intention. Accordingly, we posit the following hypothesis –

**H4 Green Packaging positively influences Green Purchase Intention.**

### ***Green Product Value (GPV)***

Prior studies have defined green perceived product value as the evaluation of the net benefit from a product or service. The net benefit is the difference between the expectation and actual. Studies have reported a positive relation between appearance consciousness and green purchase intention (Kim & Chung, 2011). However, a few other studies report otherwise (Bhaskaran et al., 2006). Some of the reasons cited for the negative relationship are (i) false claims made by the organisations in the advertisements (Bhaskaran et al.,

2006), (ii) too expensive as compared to traditional products (D'Souza, 2004; Okada et al., 2010; Royne et al., 2011; Sonderskov & Daugbjerg, 2011), and (iii) a high level of scepticism (Chen & Chang, 2012). Accordingly, we posit the following hypothesis –

**H5: Green Product Value positively influences Green Purchase Intention.**

Table 1

*Variable Definitions*

Variable Name	Definition	Source	Expected sign
Green Purchase Intention	The intention to buy green products over others.	Rashid et al. (2009)	+
Green Corporate Perception	Perception about the firm/corporate as a socially responsible unit which is more concerned about the environment.	D'Souza (2004)	+
Eco-Label	A facilitator to help the consumers to buy products which are environmentally safe.	Sonderskov and Daugbjerg (2011)	+
Green Advertising	Activity to direct consumers' attention to the positive impact that can be created by buying the product.	Chan (2004)	+
Green Product Value	The value that consumers attribute to the product based on one's expectations and needs.	Kim and Chung (2011)	+
Green Packaging	The extent to which consumers are able to recognise the methods adopted for packaging of goods that have the least impact on the environment.	Van Dam and Van Triip (1994)	+

## Research Method

For this descriptive study, two hundred responses were collected using a validated questionnaire. For this study, respondents are those who are aware of the concept of green products and are independent in their choice of purchases. They were asked to rate the statements on a five point Likert scale. The data so obtained has been analysed using SPSS. In order to understand the interdependent relationships

among the variables, factor analysis has been employed. Further, to identify the influence of variables on green purchase intention, the multiple regression technique has been used. Here, the five variables viz., *Green Corporate Perception (GCP)*, *Eco-Label (EL)*, *Green Advertising (GA)*, *Green Packaging (GP)*, and *Green Product Value (GPV)* are regressed on the dependent variable *Green Purchase Intention (GPI)*. The functional form is reported below.

$$GPI = f \{ \beta_0 GCP + \beta_1 EL + \beta_2 GA + \beta_3 GP + \beta_4 GPV + \varepsilon \} \dots \dots \dots (1)$$

## Results

The process of factor analysis for the perception of green products involved six runs. All variables in this study were subjected to principle component analysis with Varimax rotation using the criterion of Eigenvalue greater than 1.00. The result of factor analysis is summarised in Table 2, below. It is found that no autocorrelation exists between variables as Bartlett's Test of Sphericity is significant ( $p < .05$ ). Moreover, it also confirms that the factor analysis is appropriate and its results can be used for further analysis. In addition, Kaiser-Meyer-Olkin (KMO) test results also seem to be insignificant ( $p > .05$ ). This confirms that the sample used is adequate to proceed with further analysis.

Table 2

### Factor Analysis

Items	1	2	3	4	5	6
<b>Factor 1: Green Packaging</b>						
Material used is recyclable	<b>0.807</b>	0.146	0.157	0.082	0.077	0.164
Its packaging is reusable	<b>0.656</b>	0.177	0.23	-0.053	0.076	0.129
Its packaging is recyclable	<b>0.786</b>	0.147	0.166	0.167	0.055	0.13
Its packaging is made from recyclable materials	<b>0.794</b>	0.097	0.201	0.131	0.117	0.021
The product has no excessive packaging	<b>0.713</b>	0.157	-0.012	0.032	0.196	0.129



Items	1	2	3	4	5	6
<b>Factor 2: Green Purchase Intention</b>						
Prefer green products over others	0.283	<b>0.501</b>	0.315	0.441	0.098	0.065
Will buy if green version of this product is available	0.159	<b>0.733</b>	0.108	0.172	0.183	0.202
Shall buy green products as they are less harmful	0.236	<b>0.78</b>	0.235	0.146	0.031	0.051
Will not hesitate in switching brands for environmental reasons	0.166	<b>0.807</b>	0.15	0.086	0.142	0.084
<b>Factor 3: Green Product Value</b>						
Green products provide value for money	0.09	0.103	<b>0.785</b>	0.209	-0.03	0.063
The products's environmental performance meets my expectations	0.129	0.418	<b>0.596</b>	0.009	0.157	0.218
The product has more environmental concerns than other products	0.247	-0.101	0.285	0.123	0.598	-0.18
It is environmental friendly	0.322	0.29	<b>0.622</b>	0.127	0.286	0.089
Marginal benefits are more as compared to other products	0.276	0.155	<b>0.727</b>	0.1	0.269	0.041
<b>Factor 4: Eco-Label</b>						
Overall, I am satisfied with the information currently available on the Eco-label of the products I purchase	0.203	0.124	0.074	<b>0.821</b>	0.01	-0.01
Information given on Eco-labels are clear and easily understandable	0.035	0.122	0.207	<b>0.731</b>	0.212	0.014
Eco-label gives accurate information	-0.017	0.122	0.045	<b>0.756</b>	0.117	0.271

Items	1	2	3	4	5	6
<b>Factor 5: Green Corporate Perception</b>						
Companies should place higher priority on environmental protection than on increasing their own profitability	0.103	0.208	0.16	0.194	<b>0.822</b>	0.229
Companies should focus on planet, people and then only profit	0.168	0.365	0.047	0.085	<b>0.786</b>	0.199
<b>Factor 6: Green Advertisements</b>						
Green advertisements are always trustworthy	0.076	0.205	0.023	-0.065	0.13	<b>0.748</b>
Green advertisements are attractive	0.177	0.059	0.075	0.136	0.077	<b>0.826</b>
Contents of green advertising are relevant	0.272	0.045	0.186	0.285	-0.03	<b>0.61</b>
Eigen values	7.627	1.907	1.581	1.492	1.274	1.108
% of Variance explained	34.668	8.669	7.188	6.78	5.791	5.035
Total variance explained	68.131					
Kaiser-Meyer-Olkin (KMO)	0.838					
Bartlett's Test of Sphericity	2174.00					
Significance (sig)	0.000***					

\*\*\*  $p < .001$

As mentioned earlier, to identify the influence of variables on green purchase intention, multiple regression analysis is used. The results are reported in Table 3. The analysis revealed that 44.5 % of variances in *Green Purchase Intention* could be explained by the independent variables. The results are also significant (p-value <.05).

Table 3

*Regression Analysis*

Variables	Beta values
(constant)	
Green product value	0.275***
Green advertisement	0.122**
Green packaging	0.18***
Eco-label	0.178***
Green corporate perception	0.172***
F- value	31.162***
R-Sqaure	0.445
Durbin Watson	1.637

Note. Dependent variable: Green pruchase intention; Independent variables: (i) Green product value, (ii) Green advertisement, (iii) Green packaging, (iii) Eco-label; (iv) Green corporate perception.

\*\*\*  $p < .001$ , \*\*  $p < .01$

Among all the variables, *Green Product Value* ( $\beta = 0.275$ ) seems to have had the most significant effect, whereas *Green Advertising* ( $\beta = 0.122$ ) showed the least significance on *Green Purchase Intention*. Results seem to conform to (Chen & Chang, 2012; Litvine & Wüstenhagen, 2011). Thus to enhance the role of green advertising, organisations must ensure that the contents of the advertisements are appealing to the audience.

Further, the results reported that *Green Packaging* ( $\beta = 0.180$ ), followed by *Eco-Label* ( $\beta = 0.178$ ) and *Green Corporate Perception* ( $\beta = 0.172$ ) seem to have a positive influence on purchase intention. The finding conforms to (Barnes, 2011; Rokka & Uusitalo, 2008; Aguilar & Vlosky, 2007; D'Souza, 2004; Noblet et al., 2006; Sonderskov & Daugbjerg, 2011).

## Managerial Implications

As packaging seems to have a greater influence on green purchase intention, we believe managers must focus on using the right kind of packaging that is durable and of good quality. Similarly, it was reported

that eco-labelling positively influences green purchasing intention. In other words, consumers can easily understand the accurate information from eco-labels, thus helping them to make informed decisions. Therefore, we believe that the use of eco-labelling can certainly be an effective tool to enhance product and/or brand awareness. Further, it can also act as an enabler to reduce the information asymmetry between sellers and buyers. Accordingly, managers must effectively use eco-labels as a promotional tool to enhance the purchasing behavior. In other words, they must highlight the information provided in the eco-label on packaging and/or advertising the product. Finally, it is also found that green corporate perception positively influences green purchase intention. Accordingly, firms/corporate must develop or establish an eco-friendly image in the minds of consumers. The public relations department must develop appropriate strategies to communicate that the firm/corporate is truly committed to environmental issues. Finally, managers must not forget their role. In this competitive environment, to be a market maker, managers must focus on offering quality products at an affordable price. Technology will certainly act as an enabler to a certain extent. However, managers must ensure that their actions to protect the environment are at par or surpass the consumers' expectations. After all, reading the consumer's mind is always a challenging task.

## CONCLUSION AND DIRECTION FOR FURTHER RESEARCH

The study tries to examine the factors that influence green purchase intention. The findings confirm that Green Product Value has the highest influence, while green advertising has a lower impact on influencing the green purchase intention. In this competitive environment, to be a market maker, managers must focus on offering quality products at an affordable price. For this study, we have taken green products in general as the object of the study. However, future studies can focus on a specific type of products such as (i) energy-efficient consumer durables, (ii) green buildings etc. We certainly believe that the results might provide deeper insights to such specific sectors, which can be the future course of study.

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# Leadership Pioneering Sustainable Initiative - A Case Study of Cochin International Airport Ltd

Rahul Dixit<sup>1</sup>

## INTRODUCTION

A key pillar for humanity to thrive and its wellbeing is access to energy which leads to economic developments. As all the energy resources have their environment impacts like the burning of fossil fuels releases carbon dioxide and other greenhouse gases. Therefore, a balance must be achieved between these forces to ensure a path towards sustainability (Ritchie & Roser, 2018).

The sources of energy have been distributed in two main subdivisions renewable and non-renewable resources. Non – renewable resources such as Coal, Oil, Natural Gas, etc have been primary form of energy sources. The major portion around 80% of energy transformed today comes from the burning of fossil fuels which happens to be coal, oil, and gas (WWF, 2011). Coal which varies much in quality according to its calorific values tends to be a secondary choice when compared to oil due to higher emissions and smoke content. OPEC nations and large multinationals such as ExxonMobil, Saudi Aramco, etc control the supplies of oil and its other derivatives. But due to high demand and shortening abundance the price fluctuations in oil impact economies heavily which in turn has led to weighing other alternatives.

### ***Pollution***

The major problem which is caused by fossil fuels air, water pollution, and land degradation therefore globally a need to decarbonize the economy is realised. The burning of these non-renewable resources of energy is polluting the air in major cities all over the world. It is reported by the World Health Organization that approximately nine out of ten people are breathing polluted air. And air pollution is resulting in the death of 7 million people each year (World Health Organization, 2018).

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## ***Land Degradation and Water Pollution***

Due to extensive transporting and unearthing activities employed with fossil fuels such as oil, gas, and natural gas, etc. possess a huge threat. In the past due to natural gas leaks in the pipeline has leads to lead many casualties. But activities such as drilling, fracking, and mining for fossil fuels are detrimental as they offload a large percentage of acids and wastewater into the water bodies hence polluting to an extent where it can't be consumed. Oil spills and leaks have caused a great degree of harm to freshwater and the ocean ecosystem. As these leaks and spills contain heavy metals and radioactive elements often living organisms exposed to them go through physical harms and their demise ultimately causes an imbalance in the environment (Denchak, 2018).

## ***Emissions & Global Warming***

The Burning of fossil fuels results in high gas emissions like carbon dioxide as the main component but other poisonous gases such as sulphur dioxide, carbon monoxide, and nitrogen oxide are also released which are also harmful to the environment. As carbon dioxide is a greater threat as its higher volume in the atmosphere results in global warming and the greenhouse effect. All this results in the depletion of the O-Zone layer which is very crucial for our existence. In the 2018 United Nations Climate Change Conference the Intergovernmental Panel on Climate Change (IPCC) published its report stating a target of limiting global warming to 1.5 rather than 2 degrees Celsius (Intergovernmental Panel on Climate Change (IPCC), 2018). This must be achieved through initiatives like Carbon Tax, Green New Deal, etc and they need to be exercise holistically by each nation and placing it as their top priority. Governments and organizations all over the globe have been looking into other sources of energy such as Renewable Resources to minimize and eliminate their dependence on the Non-Renewable Resources at the Paris Climate agreement (United Nations Climate Change, 2015). All the above factors have a cascading effect on the environment resulting in an avoidance of fossil fuels and a constant search for other energy alternatives which are cleaner and cost-friendly.

## ***Renewable Energy – Solar Power***

The shortfall of fossil fuels calls for a transition towards the other resources of energy such as non-renewable resources. Non-Renewable resources constitute solar, wind, geothermal, biomass and hydropower, etc. Of all the natural resources solar is the most abundant in the term of availability and accessibility of further technological developments in this field has made it a feasible option. Majorly solar energy is harnessed by using photovoltaics (use of semi-conductors) or concentrated solar power (CSP) (concentrating sunlight on a small area using mirrors).

Traces of the use of solar energy can be backtracked to 1800s but only after the energy crisis of 1973 and 1979 the focus shifted back to renewable resources such as solar (Butti & Perlin, 1980). In the initial phases, solar was mainly used in cooking and heating as the appropriate advances on the technological side weren't there present at that moment.

## ***Global Foot-Print***

Renewable Resources of energy has been a primary point of focus of the developed economies as they realized early that a shift is inevitable. Looking at the total renewable power capacity China tops the list followed by the United States, Brazil, Germany, and India (REN 21, 2019). If the generation capacity is seen at the regional level Asia has the highest percentage share of 42% (919GW) followed by Europe 24% (512 GW) and North America 16% (348 GW). Whereas growth in renewable capacity by the end of 2017 is recorded to be around 8.3% which tend to Hydro 53% wind 23% and solar 18% and it is reported that 85% of the new capacity installed is composed of wind and solar (International Renewable Energy Agency (IRENA), 2018). As most of the nations have embraced the power of solar energy and opening their ways to tapping more into Solar Photovoltaics and CSP to reduce cost and increase efficiency as sustainability has become an imperative of today's transformational age.

In 2017 Globally solar developments saw a 50% growth. Countries Iceland, Sweden, Costa Rica have been forerunner in this domain. China being the biggest polluter came forward at the Paris agreement after the U.S withdraw and has become the largest investor in renewable energy to curb it down (The Guardian, 2017). So globally solar power and renewable energy have a positive outlook.

## ***India's Growth and Initiatives***

India is the fastest-growing economy has a huge potential as it has 5000 trillion kWh energy descending upon it yearly, by 2018 the capacity of India was 20 GW (Ministry of New and Renewable Energy, 2019). The geography of the country also aids in an added advantage when it comes to harnessing solar energy.

One main reason solar has penetrated rapidly is that most rural parts of India were still not electrified and looking for cost-effective and portable options. Street Lighting, pumps, lanterns, cookers, and home lighting all had an instant application as there was an inherent need for an energy solution. If we look at the cumulative capacity number installed Street Lights 121634, Home 619428. Lanterns 913380, Pumps 7495, and Cookers 664000 (EAI, 2017). India also has the world's sixth-largest photovoltaic power stations with a capacity of 648 MW in Kumuthi, Tamil Nadu. Recently India was named as the lowest cost producer of solar power globally by International Renewable Energy Agency (IRENA) at \$793 per KW among the G20 countries the low cost has been associated with improved asset utilization and modules

sourced from china at an economical cost. As India has seen massive advancements in the renewable energy sector it was ranked 4<sup>th</sup> on the Renewable Energy Country Attractiveness Index (RECAI) (Ernst and Young, 2019). This shows the overall potential the country possesses and its dedication to alternative and Renewable energy sources.

## **Airports**

Curbing carbon emissions has become a top priority which has led to economies and organizations to pivot towards a clean and green solution. But when we adopt a sectorial classification it showcases that energy (manufacturing, construction industries, and fugitive emissions) tops the list followed by transport (domestic aviation, road, rail, and other types of transports) (Ritchie & Roser, 2017). Due to this fact, the aviation sector has been facing the heat because of its high carbon footprint and greenhouse gas emissions. This has caused a worldwide urgency for airports and airlines to come up with a solution.

Although airports are mostly accounted for noise pollution and aircraft emissions weren't accounted for in the Kyoto protocol. Apart from the aircraft emissions the other on-ground operations, fleet conversions and power generation, etc are the areas where work can be done to increase the efficiency and dependency on conventional energy sources, therefore, bring the carbon footprint down.

It's not only emissions but in a recent event the Atlanta airport lost power due to a fire accident and around 1000 flights were cancelled causing an immense loss for the carriers and airport itself. If the airport had its self-sustaining power source, a situation like this wouldn't have happened in the first place. The use of Renewable Resources will provide the kind of autonomy to airports where they will be able to control their costs and empowering them to become more sustainable in the long run.

Airports are also the major hubs of cities which have continuous operations and require a vast amount of electrical energy plus the profit margins are also very thin. As most of the times, the increased costs are further passed on to customers in terms of fare charges. An On-site power generation system which is renewables and dependable will not only help the airport administration, but value generated can be passed on to the customers.

Globally many airports have taken an initiative to move for a cleaner and greener resource. Many airports opted for Airport carbon accreditation Programme with the sole aim of curtailing emissions and a step towards cleaner energy. Currently, it is helping around 200 airports in reducing its carbon footprint (WSP, 2018). Like Heathrow Airport has taken a path where at 2050 it visions to be a certified zero-carbon airport.

Solar and wind seem to be the best solutions due to the vast spaces of land at the disposal of the airports in their respective regions. The Gatwick and Birmingham have installed wide solar arrays of 50 KW. Similarly, in the U.S airports like Indianapolis, Fresno, Minneapolis-Saint Paul, and Saint Diego have embraced solar energy with the help of supplementary solar-powered lines (Lew, 2018).

Recently Cochin Airport in Kerala received the United Nations Champion of Earth prize 2018 for being the world's first airport to be fully solar-powered. It's the first greenfield airport under PPP Model (Public Private Participation) (Cochin International Airport Limited (CIAL), 2018).

## **Cochin International Airport Ltd (CIAL)**

Cochin International Airport is located at Nedumbassery, Kochi, Kerala. It is the seventh-largest in terms of total passenger traffic in India (Express News Service, 2019). The area is 1,614,587 sq ft and it also has one of the longest runways of the country measuring 3900 m (FE Online, 2017). It is the first airport that was built on the PPP (Public-Private Partnership) model in India. The airport was commissioned in 1999. It is the first fully solar-powered airport in the world and received the highly prestigious award Champion of the Earth by the United Nations.

It is not the first airport of the city the Willingdon Island had a naval airstrip that was operated by the navy. The runway length and the other facilities weren't enough to cater to the needs of the city as the tourist potential of the state was high and lack of connectivity was posing a hurdle too. All these factors aided with the AAI (Airport Authority of India) Act 1994 which allowed the private airport to be built with the assistance of the central government paved a way towards a newer airport. The greenfield airport received a green flag and Mr. V.J Kurian headed the project. On 30<sup>th</sup> March 1994 CIAL was registered with Shri K. Karunakaran (Chief Minister of the State at that time) as the Chairman and Mr. V.J Kurain as the MD (Managing Director). The foundation stone of CIAL was laid on 21<sup>st</sup> August 1994 in presence of Shri Ghulam Nabi Azad (Union Minister of Civil Aviation at that time). The area required for the project was 1253 acres of which a portion belonged to households and local people. To overcome this problem Team CIAL (Headed by Mr. V J Kurain) came up with an acquisition package as a negotiating tool with the local people as it carried many benefits like rate settlement, rehabilitation and job offer, etc. It was widely successful and around 700 persons took the deal. This initiative was widely appreciated by the World Bank.

After the five rigorous years of work by team CIAL where the Mr. V.J Kurian handled affairs concerning administrative and environmental factors while the rest of the team was focused on the technical side of the project with the help a of team sent by NAA (National Airport Authority). It was on 25<sup>th</sup> May 1999 the airport was inaugurated by Shri K.R Narayanan (President at that time) and the first flight landed on the airport was of Air India's from Daman with a total of 203 passengers.

### ***The Solar Initiative***

The Electricity Act 1948 empowered the state boards to generate and circulate electricity, but later the Electricity Act 2003 gave an impetus to other sectors to generate their own, it was then the private in-

vestments also came in resulting in a focus on becoming self-sufficient in terms of energy generation and utilization.

The power used by CIAL for operations used to come from KSEB (Kerala State Electricity Board) and it had to pay a tariff of Rs 8.3 per unit and as CIAL's Requirements was of 48000 units which convert to Rs 4 Lakhs per day of energy usage in cost. This caught the eye of Mr. V.J Kurain and he was looking for alternatives to the above problem.

*“When we had realized that the power bill was on the higher side, we contemplated possibilities. Then the idea of tapping the green power came in. We consume around 48,000 units (kWH) a day. So, if we can produce the same, that too by strictly adhering to the green and sustainable development model of infrastructure development that we always follow, that would transcend a message to the world. Now this has become the world's first airport operates on solar power”* said Mr. V.J Kurain in an interview (Mathur & Bhaskar, 2019).

The airport's management stumbled upon sustainability as they became cost-conscious and going green seemed to be the most lucrative option. The vision to replace conventional dependence of power on state boards by generating it themselves through solar became a huge challenge. The whole initiative was divided and attained in three phases. The solar power cost back in days was too high and thus yielding unaffordable as it cost around Rs 17 per unit hence there was no alternative than dependence on fossil fuel-generated power. As time progressed and due to technology advancements by 2012 the cost had come down to Rs 8.5 per unit.

### **Solarization Process**

At first, CIAL came up with a pilot project to map the relevance and practicality of their vision. It was March 2013 when the team set up a 100 KW solar power plant and it was placed at the roof of the arrival block of the airport. It constituted 400 PV based panels and had a capacity of 250 Wp by Vikram Solar Private Limited. The area of each panel was 1.6 sq mt and they all titled at 10 degrees facing the sun. The system converted the solar ray's incident on it into DC (Direct Current) which is converted in AC using a utility grid which further can be used as a source of power. All this arrangement generated around 400 units of power every day. The next step included the scaling up of the solar model. Now the airport's Hangar facility was used where 4000 modules were installed with 250 Wp each made by Emvee Photovoltaic Power Private Limited (Kumar, 2015).

This constitutes of installing a 12 MW solar power plant. The cargo area was used for the module's installation and close to 46000 panels were placed installed by the German company Bosch. The module capacity was 256 Wp made by Renesola. The inverters used were provided by ABB India. Now CIAL was producing 50,000 kW hours and the airport became completely self-sufficient for the first time in history.

The excess power produced was sold back to KSEB. The third phase is to install adding 13.4 Mw and the resulting capacity will be 28 MW (Cochin International Airport Limited (CIAL), 2016).

The Solar Revolution at CIAL will have an expected life of 25 years which means there will be no carbon dioxide emissions for the period and it equivalent to planting 30 Lakh Tress (Sridharan, 2015).

## **Leadership**

Since the advent of the CIAL project, Mr. V J Kurain held the seat of the Managing Director and dedicated completely himself towards the successful completion of the project. He was aided with the support of the local and national authorities. Mr. V J Kurian throughout the period has demonstrated Level 5 Leadership (The Maxim) which on a hierarchal scale term as Executive – Build enduring greatness through a paradoxical combination of personal humility plus professional will (Collins, 2001). As the project was the first of its kind from the start because of PPP model. Mr. V J Kurian recalls 6 years for its completion and 6 months for the solar initiative which has received more praise, but he views both the achievements as of the same caliber.

The major obstacles faced by the team throughout this journey were raising capital, accruing land, coordination between teams, and the idea itself, etc. As the whole project had a force of disruptive innovation as being the first fully solar-powered facility has the impediments of its nature which needed new approaches to tackle. Acting as the MD Mr. V J Kurain possessing excellent leadership skills kept the whole team together working a unified vision. Under the stewardship of Mr. V J Kurain the value system was kept transparent and through hard work of the team and the leader kept producing results to reach their goal. The sole dedication and commitment to the solar vision helped in keeping a clear focus.

It was the vision of Mr. V J Kurain to internalize the local culture and architecture into the airport which brings authenticity and aesthetic value of the place. It has been a sole aim from the start to keep the cost under check the Terminal 3 cost Rs 6000 per Sq ft compared to a market standard of Rs 10000. As said by Mr. V J Kurain the solar model has helped increase the tourism factor of the state as 1 out 4 jobs are coming from the tourism sector. CIAL is the largest on-site solar plant installation for its services. It has been the astounding success that brings numerous people all around the globe to witness the phenomenal airport. As highlighted by the MD that people driving taxi's inside the airport are those whose land was accrued during the process of establishment as this whole by him was commitment towards the people of the state.

*“Ours is the only airport in the world that has been able to become fully solar-powered. We achieved this feat in 2015 and no other airport in the world has been able to replicate that ‘Cochin Model’ so far”* said Mr. V.J Kurain in an interview with NDTV.

Mr. V J Kurian takes huge pride in the model and efficiency of CIAL, where he and the team have always paid attention to both Aero and Non- Aero revenue of the airport. And through their innovative ideas the airport today has its golf course and the duty-free operations occupy a 30-45% share in the revenue. As Mr. V J Kurian has an agricultural background, he came up with the idea of planting vegetables and cultivating the miscellaneous land. They used creepers to curb the weed growth which has worked well. The best part being the solar panels are cleaned every week with water which percolates into the soil and acts as irrigation. All of the above integrates into a fully solar-powered airport first of its kind with help of a shared vision and a competent leader.

----End---

## QUESTIONS

- How does a leader's vision paves way for a change? What challenges did Mr. V J Kurian face while making this transition to a self-sustaining energy model?
- What are the next steps as a leader Mr. V J Kurain should take to build upon this success? What role he can play to drive the adoption of this new way of working to other airports and businesses?

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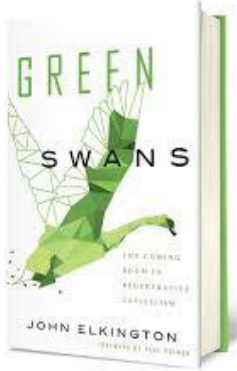


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# Green Swans: The Coming Boom in Regenerative Capitalism

Drisy Mary Sunil<sup>1</sup>

Name of the Book: Green Swans: The Coming Boom in Regenerative Capitalism	
Author : John Elkington	
Published : 7 April 2020	
Publisher : Greenleaf Book Group Press	
ISBN : 9781732439139, 1732439133	
Page count : 296	

## INTRODUCTION

Green Swan is a bible for system transformation thoughtfully put together by the, ‘God-Father of Sustainability’, John Elkington. The book grew out of the learnings of Elkington from his decades long career assisting companies to address modern challenges and set up a sustainable environment. In a recent Interview, Elkington mentions that “the book was written substantially before COVID 19 emerged as a pandemic” but the book is essentially foreseeing an “exponential decade” ahead. A period he said that distressing, universal issues “such as plastics in the ocean, obesity, chronic disease, antibiotic resistance, space debris and the climate emergency” will go in more bizarre paths than we are used to.

## Leading Highlights

The title ‘Green Swan is a deliberate acknowledgement to Nicholas Taleb’s book ‘The Black Swan’ which provided prophetic learnings about unforeseen events just before the financial crisis in 2008. A ‘Black

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Swan' can be defined as an unusual occurrence distinguished by its impactful and reflective predictability. It is degenerative in nature. 'Green Swan' on the other hand is a representation of good time to come. They are aggressive in characteristics and generate unpredictable outcomes such as profound market shifts. It is more irrepressible and regenerative in nature. Another interesting metaphor that the author uses in the book is that of an "ugly duckling." It can be new mindset or a technology or any new concept which will have an impact which we ignore but has the potential to become a Green Swan or a Black Swan. He quotes the wonderful example of the 1997 apple add that celebrated to demonstrate the perspective of ugly duckling, "the crazy ones, misfits, rebels, troublemakers, round pegs in square holes." They are the people, he, who has the capacity to change the world due to their authentic and adventurous mindsets.

The book explores the current broken system of capitalism which, according to Elkington will breakdown or crash in the near future. He predicts that a new redefined, sustainable, and socially responsible capitalistic system will emerge post the crash. Capitalism is currently the most prevailing economic system across the globe. The popularity of capitalism comes from the unmatched economic prosperity the system was able to achieve alongside industrialism. It is characterized by profit orientation, excessive competition, income inequality and establishment of control and lacks ethical and social code. The book contemplates how the unwillingness to look into the problems associated with free market to accomplish short term goals may lead to a catastrophe. Therefore, the system that exists today is quite simply not sustainable. In fact, social evils such as terrorism, war, depression and distrust are also direct or indirect result of capitalism. However, contradicting to popular belief, Elkington argues that democracy and sustainability can coexist with capitalism.

Capitalism maybe the best way to systematise an economy however it is not the ideal way to shape a moral society. Capitalistic markets do a great job of resource allocation and optimisation, catering to change and upholding freedom of speech and expression. However, they are not so concerned about solving climate change, looking in to income inequality, or the predicament of citizens whose livelihood has been taken over by trade or technology. Hence, there is a need for balancing the three key factors to a more ideal system which are: sustainability, capitalism and democracy.

Although, by its very nature capitalism is parasitic, Elkington provokes readers in to associating terms such as 'green' and 'regenerative' with a rather contradictory terms such as capitalism. He is prompting readers to look at a more on a regenerative capitalism that weighs more towards resilience than responsibility. He emphasizes multiple times the need to bring a a capitalistic structure to regeneration. "Regenerative Capitalism" is an economic system that recognizes that the current market structure is not a perfectionistic self-correcting free market, but a market that can be influenced by the most powerful forces. It maintains that the value we obtain from nature such as renewable energy, water and land comes at a cost.

Elkington presumes that the world is moving towards a historic "U- bend" which is a period of extreme perplexity and un-predictableness caused by a series of events. These events are of a larger scale than a normal economic recession. In this process, he says reputable ideologies and common understand-

ings will come under intense scrutiny and pressure to be modified and reinvent themselves. He concludes the book highlighting the need for re-invention. Economies, peoples, societies, and organisations must reinvest themselves to survive in the long run.

The book in itself is an exploration of the possibilities. The author is starting a conversation on a topic not much discussed and highlighting the importance of bringing about a sustainable system. Elkington displays optimism and a genuine enthusiasm for the implementation of change. He often narrates personal instances from his experiences that takes the readers around the world and in to a more stable and sustainable future. However, the authors inclination for self-praise at every possible occasion is likely to make the experience somewhat unsatisfying for readers.

## **CONCLUSION**

This book is an essential-read for executives in small as well as large corporations who is striving to navigate the massive shift in organisational priorities over the coming years and would like to develop their perspectives from current job requirements on to a modern renewed system. It is also a great read for MBA graduates who will be the future change agents driving business transformation across industries.



# Call for Paper: The Business Not Usual

## *The New Normal of the Market in the Post-COVID World*

*Management Matters* announces the next issue (April, 2021, Vol. 18, No. 1) with the theme-“**The Business Not Usual: The New Normal of the Market in the post-COVID world**”.

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