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Editorial

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About the Journal

The Gavesana Journal of Management is a bi-annual refereed journal of the Vignana Jyothi Institute of Management. Its objective is to disseminate knowledge of contemporary issues related to management and development. The journal seeks to serve as a platform for intellectuals to share the rapid strides made in contemporary research. The Research Journal has been registered with the Registrar of Newspapers for India (RNI) vide No. 108534/2010 dated 1/3/2011.

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Editorial

EDITORIAL

Human Resource function (HR), in any organization, has to be that of a strategic or business partner, by developing the talent in the entity through job rotation, job enrichment etc., involving expert teams, business leaders and line management. Such a partnership is a long-term relationship to achieve objectives common to the partners, as also the organization's financial success. In the process, the HR employees, as partners, should perform their assigned roles, and also support the activities of those in other functional areas. This needs a strategic plan which dovetails the HR Vision and Mission into that of the organization.

HR, as a Strategic Partner - increases employee productivity and thus the organization's profitability; enhances competency and talent management; uses the technology and knowledge to formulate, implement and review strategies; copes with the changes in the business environment arising from unforeseen business situations, and globalization; and serves the internal and external customers well. This is done through efficient and effective delivery of human resource services. For this, the HR needs to spend more time in the organization's planning, design and development. It must become part of the business team, involved in planning at the highest level. HR Managers and HR professionals are strategically suited to provide the necessary leadership in change management, which is a challenging task.

The Human Resource Information System (HRIS) has to be effectively used to handle daily administrative HR tasks. Employees can make use of the self-service facility online, to support business strategy development and implementation, which saves time and costs. There should be an HR Head who understands well the strategic partnership/relationship between organizational strategy and human resources. He should be an expert in all HR functions. Someone from within the organization can be groomed for this role.

Research has shown that the HR function will be effective in achieving the business objectives when it assumes the role of a strategic business partner. The top management should ensure this. The administrative reactive approach in people management can no longer support the organization in a competitive business environment. If the HR function is decentralized fully, the line managers and supervisors will eventually put the blame on HR when problems arise. If this happens, it interferes with the effective use of line managers' and supervisors' time in the operations of the organization on daily basis. The line managers and supervisors need to be supported to make them more proficient in managing their subordinates in the performance of daily tasks. Complete participation of HR people in strategy development and implementation promotes HR as a strategic partner. The HR Manager and HR professionals should contribute to business decisions; develop business acumen to understand how a profitable business is run; be customer-centric; and learn how to link HR practices to the organizational business strategy.

The expectations from HR as Strategic Partner include: recruiting the right employees; align corporate values to the recruitment strategy; well-developed competencies of the workforce, and their relevance to organizational core business; participative culture where HR initiatives fully support the overall strategic plan; discard ineffective HR practices that do not contribute to the success of your organization. HR management requires continuous improvement i.e., Kaizen to ensure and retain its relevance as strategic partner. For this, capable and committed people are needed at every level, supported by senior management. Change has to be managed well to avoid or minimize disruption in the organization's activities, and for its success.

The effectiveness of the HR people as a strategic partner is also dependent upon the corporate policies and practices, structure, types of activities carried out, location, effective communication, leadership and motivating employees to keep moving in the right direction as per plan. Every aspect of HR has to be reviewed in the process of implementing the necessary changes and reorganization. Having the right is crucial to help them succeed and engage their full attention with the view to ensure HR truly becomes strategic partner. The HR Scorecard shows whether the organization is making good progress on making HR as strategic partner. The competitive advantage of the organization can be enhanced by aligning the HR strategies to the overall business plan. To ensure that HR truly becomes a strategic business partner, adequate financial backing is necessary. One needs to take measures to eliminate or minimize risks to HR, and it should be ensured that HR plays a meaningful role and not necessarily a major role, particularly during financial crises. It cannot also be a trial and error approach.

In fact, in a business landscape that is changing fast, there is an imminent need for HR to be an active strategic partner. By aligning itself with strategic plans of the business, it needs to foster a stronger relation between the executive team and the workforce. Externally, it can make valuable contribution to branding and the tone of communication. By leveraging customised, more personalised metrics and deep analytics, it can vastly improve organizational learning, training and improve decision-making. Consequently, the human capital program will lend more impact, thereby encouraging and enhancing collaboration between various functions across the organization. HR can no longer be just a functional arm, a distant participant, but will have to assume the role of strategic partner, integral to organizational well-being and growth.

Dr. Ch. S. Durga Prasad

Revisiting the Idea called Marketing

Prof. A. V. Ramana Acharyulu *

Abstract

For the past couple of decades, a debate emerged in different corners of the management world, both in corporate sectors and in academia, challenging the existing marketing theories and concepts and questioning the need to redefine the marketing theory. The relevance of 4Ps in the emerging e-commerce and digital marketing scenarios and differing understanding of the present day marketing functions, as well as emergence of various related and unrelated theories reignited the debate in many forums time again. The tumultuous growth of internet and mobile applications and the emergence and evolution of both e-commerce and m-commerce as the game changers of marketing of goods, services and technologies made it essential to work towards identifying and building a new marketing theory.

The paper attempts to make a brief revisit on the idea of marketing and put forward the perspectives of marketing as the idea emerged and became an essential and integral part of modern management theory. The paper intends to chronicle developments in marketing and overlapping ideas that touch upon marketing and sales and finding a core underlying thread that help build a better understanding of the developments and weave together a contemporary framework or understanding of the theory of marketing, so as to help develop, if possible, a new theory of marketing.

Keywords: 4Ps, Marketing, Convergence, Confluence, Value Chains, Supply Chains, In-bound marketing, Out-bound marketing, 4s web marketing mix.

Introduction

For the past couple of decades, a debate emerged in different corners of the management world, both in corporate sectors and in academia, challenging the existing marketing theories and concepts and questioning the need to redefine the marketing theory. As early as 2006, the author was party to a very intrinsic and cryptic discussion on the relevance of 4Ps in the then emerging e-commerce and digital marketing scenarios with a global corporate executive, who was then attempting to redefine how commodity markets and branded consumer goods are popularised in countries such as Vietnam, Cambodia, and Malaysia. The Corporate leader was probing the relevance of marketing mix in 2006, when, the then influence of internet and e-commerce was very nebulous and at best, linking the suppliers with manufacturers and marketers with real-time email-based communication solutions and offer spot currency values through google, his thinking appeared somewhat confusing but tilted towards abandoning the idea of 4Ps (Shapiro, 1985) to breaking the time and geography barriers using the internet as a tool and thus create a new set of tools for market entry and leadership. The author, working as a marketing teacher, tried to reinforce the relevance of marketing mix, despite acknowledging that the advantage of the net and communication tools was emerging as a new tool in the hands of a hardcore marketer. The debate at that time remained inconclusive, with an overall opinion tilted to continue to depend on the marketing mix as a core pinning of the marketing theory. The work of Constantinides in offering a 4s model of web marketing mix (Constantinides, 2002) was yet to become a core discussion basis as internet and e-commerce was still at a pioneering stage and theorization has not yet become popular (even though a large amount of work was already done by that time in America and Europe on the impact of internet on businesses in general and marketing in particular). Between those moments in 2006 and today in 2018, the tumultuous growth of internet and mobile applications and the emergence and evolution of both e-commerce and m-commerce as the game changers of marketing of goods, services and technologies made it essential to reopen the above discussion and see if the time has come now, to work towards identifying and building a new marketing theory.

When in early 2018 an initiative to organize a research workshop of practitioners and academicians to work on the theme of building a new marketing theory based on the recent developments and emerging trends came up,

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the author felt the necessity to undertake a brief revisit on the idea of marketing and put forward the perspectives of marketing as an idea as an essential and integral part of modern management theory and check if the classical marketing theories still hold good. In this brief essay, it is attempted to offer a snapshot view of marketing as a discipline and identify few ideas that are simmering around the core concepts of marketing and influencing it to enlarge the framework of understanding and strengthen it to move into future. For business organizations caught up in the flux between brick and mortar, and click and consume, it becomes timely exercise to identify the underlying philosophies that are holding and, if possible, using them, to develop a basis for a new theory of marketing.

The Flow of the Essay

The study and the development of the essay sought to address the following aspects – to help appreciate the evolution of the concept called marketing. It was attempted, to put together a sketch of historical perspective on the evolution of marketing as an idea and to understand how marketing emerged as a discipline. Along the lines, an attempt was made to look at Indian evolution of marketing discipline and the present times where one confronts the brick and mortar marketing organizations with the current slew of click and consume mode of offerings, pulverizing businesses into mega million and billion dollar propositions. In the process, an attempt was made to look at few metaphors that reflect forces driving today's world, and how it receives and accepts marketing as an essential element of present living; including living in and on social media, gadgets becoming part and parcel of body functions and communication appendages. It is hoped that such a kaleidoscopic presentation would help gleans through the life as an intrinsic weave of social behavior tempered by the marketing push using theories and technologies that influence human behavior – to the mutual advantage of all.

Marketing as an Idea

History of marketing ideas has been traced to ancient Greeks, through the Medieval ages to the present times. Of all the developments, listed below are some of the social systems shaping fulfilling material needs through ages, across the globe, documented and studied by various historians and travellers, with different civilizations noting these during different eras.

From economic history perspective, world over, the trade and business evolved from Greek and Roman and Indus civilization eras onwards, to highlight economic thought, in a nutshell, as below.

Economic history from marketing point of view:

- Barter systems or reciprocal social systems as the first recorded ways of introducing marketing theories;

- Harvesting, assembling and storing as a specific series of livelihood activity and initiating the concepts of making goods for others' use are the beginning of economic activity in different civilizations and communities in different parts of the world;

- State/empire/ kingdom/ community leaders taking the role of centralized authority for redistribution of production to all;

- House-holding (stocking for self or family use);

- Trading (stocking and sharing for gains); and finally,

- Market as a mechanism distinct from social order – building institutions for order in production and sales.

From a different perspective, reflecting from marketing discipline point of view, we may say the history can be delineated into six timelines, of course, open to debate and differences from a strict chronological historians' point of view (Wikipedia, 2018).

Marketing History

- Evolution of markets and trade – 10th to 16th century;

- Production orientation era and industrial revolution – 18th and 19th century;

- Branding and trademarks – 1850s to 1900s;

- Sales orientation era – late 19th century to early 20th century;

- Marketing orientation era – 1950s onwards; and

- Flux of ideas starting with societal marketing – from 1969 to 2010s.

While the evolution of marketing may be described as above, two major pointers to the evolution of marketing as a discipline may be highlighted as below. The first, practitioners or business leaders as the pioneers and standing at the forefront of creation and practice of marketing approaches and strategies inasmuch as developing and implementing business strategies. Pioneers such as Henry Ford may even be referred to as one of the first marketing strategists who led the ideology of marketing driven organization. Theodore Levitt describes his approach of driving the car sales by identifying the sweet-spot of price at which an article could be sold and build all the costs around it (Levitt, 1960, 2004). It is very interesting to note that almost two decades before Porter proclaimed that "operational efficiency is not strategy" (Porter, 1996). The fact was emphasized by Ford and brought to the notice of all by Levitt, to offer a highly necessary boost to the then emerging marketing discipline and theory.

Secondly, theoreticians pursuing marketing ideology and as a discipline – have worked together with practitioners most of the time, putting forward frameworks that firmed up the theoretical underpinnings practitioners shaped. Mintzberg, while discussing the idea of crafting strategy as similar to a potter's work, is an apt example of how theoreticians worked on the practitioners' reflections. As some of the pioneering management gurus went ahead describing the cause of marketing - Drucker, Kotler, Levitt and many other early 20th century theoreticians who were supported and supplanted by Ford, Lee Iacocca, Alfred Sloan, and in later years people like Bill Gates, as they plunged into the domain of creating and stabilizing successful business models, establishing business conduct – they all toiled with creation of universally accepted marketing models and approaches, that are followed in all walks of business domains and sectors thereafter, providing a wherewithal to every business enterprise across the corners of globe, as biblical as much as any other gospel for an acceptable mode of seeking business success and market acceptance.

There were times when theoreticians worked hand in hand, when they worked at cross purposes but many a time, it is not the theorizing per se, but a keenly held challenge as to what will succeed and hold the business and push it to the next realm of business pursuit and realization of a dream of market domination, profitability and control, that continued to motivate and inspire people to work on marketing ideas to demonstrate to the world, "what leads to the next break-through". However, it is important at this juncture, to examine what the theoreticians worked on, while the practitioners chronicled the experiences of pushing the boundaries of the then existing theory, when they developed and defined what new worked. An attempt has been made to categorize these periods too (Oxford College of Marketing, 2018).

History of Marketing Discipline

- Era 1 – founding of the marketing thought – 1900s to 1920s;

- Era 2 – formalizing the field – 1920s to 1950;

- Era 3 – segregation, identification and acknowledging of the paradigm shift between marketing, management and sciences – 1950s to 1980s;

- Era 4 – the fragmentation of disciplines within management and marketing and compartmentalization of functions within these two inseparable and intertwined ideologies – leading to fragmented views – 1980s to 2010s;
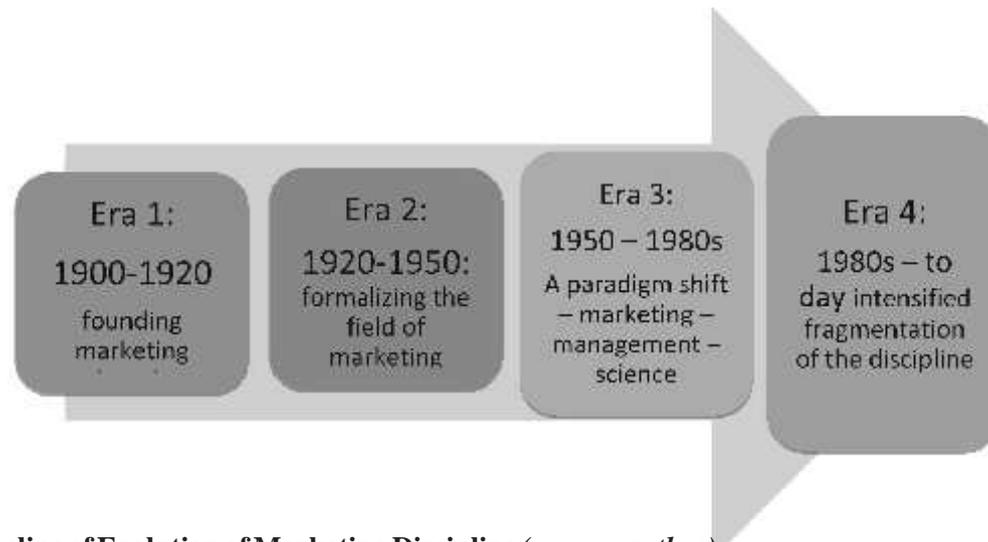
Figure 1: Timeline of Evolution of Marketing Discipline *(source: author)*

As the marketing discipline evolved, and the practitioners and theoreticians who worked together moved away, leading to another dimension within these two sets of thought leaders emerged; those who are building business strategy; and those who are crafting marketing strategy – just as the silos of departments of theoreticians started getting built within the portals of the academies (a term, author chose to describe – the universities and business schools that are at the forefront of developing business management professionals across the world, and offer them as MBAs in different disciplines); and across business organizations too. A case was deftly made about these and accepted by theoreticians as well as practitioners alike, as may be noted from the 4s web-marketing mix article of Constantinides *(ibid)*. He states, and author quotes from the same, hereunder.

"…applying the marketing mix model in traditional markets implies that the four P parameters of the model delimit four distinct, well-defined and independent management processes. Despite the consistent effort by many physical businesses to deal with the 4Ps in an integrated manner, the drafting but mainly the implementation of the P policies remains largely the task of various departments and persons within the organization. Even more significant though is the fact that the physical customer is typically experiencing the individual effects of each of the 4Ps in diverse occasions, times and places, even in cases that companies take great pains to fully integrate their marketing activities internally."

The observation became a common-place, over the last four-five decades across the globe, as a result, an unrecognized but influential rift commenced within business management professionals and created citadels of exclusivity. This was perpetuated by the business schools too, which increasingly continued to emphasizing the narrow knowledge fields; and companies' continued love with specialization and skill based fragmentation of organization structures further propelled the thinking into the present times.

As a result, we note business schools and universities becoming known for a very specific field of area within business management, and also within marketing, organizations built around on one specific area of management function and leadership being driven, predominantly from that perspective and other disciplines getting relegated to secondary importance, even at the cost of business leadership or market leadership and/or profitability and consequent positions in the global and/local markets, and people offering theories around their seemingly compromised positions and situations.

Conflict in Creating Marketing Knowledge

Does it mean, we reached a crossroads with regard to practice oriented research or research oriented practice? Simply stated, whither research in marketing (by theoreticians)? Or whither innovation in marketing (by practitioners)? The author doesn't go into the physical inventory making of what new ideas are brought forward and what theories became more popular and how they offer a staple for conferences and seminars; rather, to identify if there has been an alternative to the quintessential 4Ps and C model, or do we continue to depend on it, to draw the

inspiration to develop new business models, new marketing models and claim the secrets of success to them, as a caveat.

The conflict among the clusters of professionals designated to belong to different functional disciplines led to a plethora of articles, each claiming the sudden discovery of importance and significance of that specific function in a specific case of a business enterprise and that it has a role beyond the traditional marketing concept, gained traction, from early 2000s onwards as the experiments and disruptions through internet and other technologies became more and more prominent. The present day literature is engulfed by and resulted in ideologies that are focusing on everything besides 4Ps and C during the currently volatile but fastest business era since the civilizations are chronicled – the internet era! Between 2002 and 2018, it appears, the attention moved away from the 4S web-based marketing mix to a range of other theories, that swayed the world with a plethora of organizations brining a confluence of technologies with markets, marketing functions and products all in one go, severely denting the core idea of 4Ps but, addressing a much deeper and wider understanding of the basic framework of Constantinide. Some of them are refer to a new understanding of consumers and co-opting them (Prahalad, 2000), others discussing defining markets (Roth, 2007), and still few others raising the issues of design thinking (Kolko, 2015) in the context of internet driven computer operated and/or mobile phone operated e-commerce operations.

The Boon or Bane?

The evolution of marketing discipline in the recent years shows that the research increasingly moved from managerial focus of the role of marketing discipline in business development and/or customer development to analytical focus, tending to derive meaning from metrics to reconfirm the conundrum of over-emphasis of marketing researchers on analysis. It leads us to revisit the marketing myopia once again. It is noteworthy that Levitt argued about marketing myopia already thirty years ago, makes it even more interesting to stop a while and examine what was stressed by Levitt even in early 1980s[11].

Stated in a simpler and staggered manner, as organizations moved from manufacturing focus to customer focus, the sway was initially on to strengthen the core marketing mix, but soon the focus turned to each of the four Ps at an independent level, focusing on product; price; promotion; and distribution as independent functions. The trend further moved away from marketing strategy, and instead focused on sales pitch, communication pitch, advertising pitch, brand pitch, and later on, retail pitch. Simultaneously, other functional departments aggressively moved to build supply chain pitch, logistics pitch and customization pitch so as to bring the importance back to the operations side – if not the manufacturing side of the business. While the tussle for organizational importance and control went on a pendular motion between operations and marketing supplements, technology, information technology and digitization pulled the attention away, by developing and deploying aggregator strategy, co-creation strategy and metrics strategy, to drive business management orientation away from product and customer to service and supply-chains, using the telescopic growth of technology, information, communication and data driven business solutions and organization models. There appeared a time, between 2008 and 2014, when marketers started losing focus on customer and competition at a macroeconomic level to redefining them almost at individual level, by segregating each transaction of each individual customer to every individual product and service being sought for and consumed off. And interestingly, those who are leading this new revolution are not marketing researchers nor marketing strategists, but those who started looking at the business, customer and competition, from technology point of view and entrepreneurial point of view and from bits and bytes point of view, and from a virtual business point of view- thus kick-starting a silent but big-bang disruption (Downes, 2014), leading to a revolution in managerial thinking, not just in marketing thinking. One may note the not so subtle emphasis on a management concept called big-bang disruption so away from the concept called disruptive innovation (Christensen, 2013) regarding which a separate discussion is noteworthy.

Part II

Where does India stand in terms of marketing evolution?

A cursory view of evolution of marketing in India was provided by Gurucharan Das (2000 and 2012), Nandan Nilekani (2010) and Rama Bijapurkar (2013). The way multinational firms made their way to India from pre-

independence years to the early independent India and how the middle class slowly emerged as the game changer for products and their brands that entered India and got accepted soon by them and make the firms sit up and notice the distinctly different results that socioeconomic based segmentation can offer to change the prospects of small aspiring companies to think and grow big was vividly described by these and few other works, that chronicled India's economic growth and along with it, the way marketing profession grew.

Phase 1: The Early Years of Independence – The 50s Through 70s

The essaying of the entry and growth of Vicks Vaporab through Richardson Hindustan and in later years, as Procter and Gamble, gives us an insight as to how the then protective regimes of Indian government gave very limited scope for multinational as well as domestic companies. Vicks, Milkmaid, Surf and Det on one-side and Amul, Dhara, Campco, Nirma as well as Vimal had to stand the scrutiny of the highest functionary of Indian government, Prime Minister of the country, to find a foothold in Indian households – (both Indian and multinational brands, private and cooperative brands are clubbed together here, because, in 60s and 70s till even today, very few customers - say, housewives have an idea of who owns which brand, unless there is a controversy erupts and a brand becomes a publicly debated news, and here we are looking at the evolution of marketing and not the organizations per se).

Glossy Feminas and Illustrated Weeklies were the bastions of advertisements and brand leadership is supposed to be created by winning over Bombayites (now, Mumbaikars) before they become even available in other metros and state capitals. Marketing research is limited to what few good advertising agencies do in collaboration with one or two marketing research agencies located either in Bombay or in Baroda, with captive audiences from these two cities, and almost every decision on any of the 4Ps is done with a highly restrictive perspective by firms, which are required to base themselves in Bombay alone, or at best, in Delhi, to survive and sustain. Thus, making marketing a highly captively held profession and loosely administered profession within a business organization. Once a brand is cleared of all licences and manufacturing commences, it is the sales and distribution wing of the marketing department that takes over, where, how much and when to be made available to customers. It was not uncommon to find advertisements of many consumer items and durables in the highly valued newspapers and magazines and also in snippets of advertising movies in cinema halls, which, however, are not available in most of the cities and towns, for a long long time thereafter. The point that's being made is, marketing tended to be a function that used to be performed through every other function, such as sales and distribution and advertising etc.

Phase 2: The Glittering 80s and 90s: The MBA Era Dawns in India

The concept of business management education remained mainly elite till early 1980s, when slowly people started recognizing the Indian Institutions of Management and few other business schools-primarily established by the government, to serve the needs of Indian corporate houses and multinationals with home grown talent as the three pioneering IIMs focused on private enterprises, public sector enterprises covering western, eastern and southern India, with aggressive marketing of the talent coming from these institutions during 70s and 80s. Despite such a scenario, availability and accessibility of MBAs to most of the corporates remained elusive, till the first steps of promoting private and self-financed institutions to offer management education in early 80s started. Different industrial houses, some highly pioneering universities and few enterprising educational institutions took to open their postgraduate programs in management and supplemented the promotion of the graduates to businesses, by way of creating placement services at the academic institutions and bringing the corporates to the doorsteps of the graduates. As a result, all growth-oriented private and public sector enterprises witnessed entry of young fresh and result-oriented graduates taking over business functions in the organizations and pulverise them to perform. Two areas that witnessed managerial shakeup were marketing and finance, leading them to soon take up senior and top management positions and give a push to develop businesses, push to market development and also drive product design, development and manufacture. A highly impactful development took place as the IITs of the country became the feedstock providers of young brilliant engineering graduates to move towards management education and thus giving a push to almost all business functions of a manufacturing and marketing organization, in almost every sector and industry. The sudden impact is a sort of marketing explosion and splurge of brands among a range of sectors-both in manufactured goods and services. If the evolution of management education was happening silently, in a highly restrictive and close jacketed economy, the hopes of wider and larger roles for management professionals

started to grow big, with limited opening up of technology centric businesses - both services and goods, started to happen in mid 80s. The 1991-92 economic reforms gave a big push to the innovative and creative ways of Indian management professionals, even as the flood of global corporate houses to enter India gave a bigger pull for MBAs.

The result is, a large pool of professionals with basic knowledge and tools to develop marketing arms of companies, and even a bigger pool of aggressive sales professionals, willing to close the last mile for businesses to link up to customers who are more than eager to lap up brands that are built around or brands that are adopted to Indian tastes and likes. The 80s and 90s, thus provided a wherewithal for Indian companies to move into marketing in real sense and fit the theoretical frameworks of marketing discipline.

The 2000s - Globalization of Indian Marketing Prowess

The era of LPG, or globalized Indian economy, gave rise to a new found market freedom, bereft all red tape (almost, even though still a little few vestiges remain, they can be counted as negligible), with golden quadrilateral road network covering the entire country, satellite driven telecommunication and television reaching millions of Indian households in far and nooks of the panorama of India, and armed with all marketing strategies, businesses have gone all-out in invading homes with their wares and services, attempting at experimenting with every format, model and strategy that every B-School in the country and world taught them, in proving and disproving most of the marketing strategies that are eschewed by American and European marketing gurus, without saying in as many words, but proving that there is an Indian way, rather than an American way! One can say, that the birth of myriads of firms and brands leading the globe with a plethora of Indian examples took birth in this chaotic but hurried engulfment of thousands of highly motivated innovative managerial and marketing professionals, who have pursued the so-called marketing discipline to the book.

The decade was tumultuous, as well as eye opening! While the marketing prowess of Indian management professionals is unleashed during the 2000s, the emergence of a totally different breed of professionals, both within the country and across the globe was not lost sight of!

The Dawn of 2010s – The Internet Knit India

It was mentioned that telecommunications and television made inroads into Indian homes using the digital technologies and Indian government opened up its skies literally to flood the country with mobile revolution on one side and entertainment revolution on the other side, dominating all other forms of communication media. While it is side-tracking to talk about the evolution of these industries during 80s till 2016 in this country, it is worth mentioning that they played a role in testing out every single idea, concept and model that has been floated anywhere in the world, to see if they apply to Indian Scenarios. The learning curve of Indian businesses had been faster, swifter and sharper to assimilate and adapt and innovate to offer meaningful results and insights for firms to move to build and consolidate on the gains for their business models.

Today, in less than eight years from 2010, after a slow disruptive way of entry into the businesses, internet-based e-commerce and its corollary, mobile commerce have become the two inseparable tools for Indian businesses to reach to the vast diaspora of this country to offer any product or service, without worrying about the SECs and Demographies and geographies, so to say! It also lead to the creation and acceptance of a different breed of professionals, who are neither MBAs nor technocrats, but better called technopreneurs - who are adept in creating and building business without looking at marketing discipline, without studying the business strategy and policy and bring in a new approach, a new service and a new way of making goods and services reach to the specific customer who needs them, as soon as the same is spelt out by an individual, either through a computer or a mobile, better called device, and make their delivery and consumption happen. When we spoke of the shifts from customer orientation and competition orientation to aggregation orientation and logistics orientation, these are being made possible - not by marketing professionals or theoreticians, but by the technopreneurs, who are redefining the roles of organizations, business models and even understanding of, marketing and its theories.

Part III

Moving Towards an Understanding of the Revisited Idea Called "Marketing" in 2018

Impending Stares – Over Simplified – Under Stated

The challenge to revisiting the idea of marketing in the present circumstances is to put forth an idea in the context of global and Indian milieu of marketing as a profession, and as such needs to address multiple layers and overlays that help us to understand the core kernel of marketing. These are presented below as 3Cs, somewhat articulated in a contextual link:

C1: Conflicts – among customer groups, producers and marketers and market institutions;

C2: Convergence – of technologies, products, formats and producers and products; and

C3: Confluence- of producers and consumers, markets and marketers, technologies and applications leading the path for a new understanding and definition of marketing, requires clarification of the interlacing roles of each of these sets of players and modicums and documenting the same becomes the need of the hour. The challenge of interlacing of producers as consumers and vice versa, in the hands of aggregators and technological solution providers, distinctly delineating the concepts of supply chains and suppliers as the precursors of the business development and delivery to producers as the consumers, requires a larger scripting of how the technopreneurs of the current generation are driving the confluence.
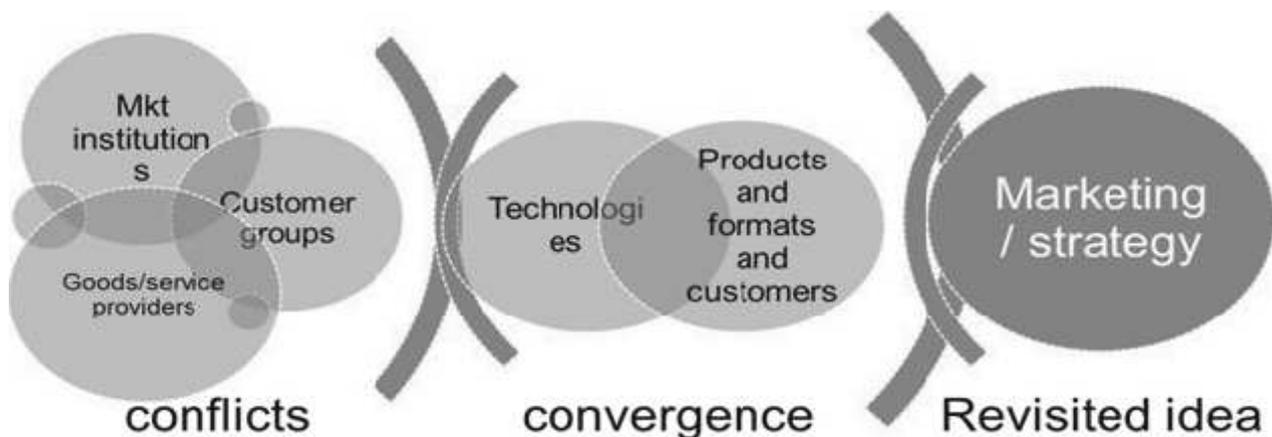
Figure 2: The Mapping of 3Cs Towards Revisited Idea of Marketing

Figure 2 on 3Cs leads us to discuss the same, to offer a perspective-which will, hopefully help to relate the 3Cs to each other and to this essay. The first C deals with the challenges of implicit and explicit conflicts between markets and institutions-undermining the importance of and significance of customer groups and the fact that the businesses exist only because they are supposed to meet the needs of the customers; instead, the over-emphasis of relation between market institutions and marketers so as to build a hold on customer groups and/or market results in a new set of myths - albeit analogic to what Levitt cautioned marketers in 1960s.

Today, the term market institutions no longer refers to the traditional, conventional, government promoted, organizations that physically controlled the prices and stocks-of producers as well as traders. Today, the larger than life role being performed by aggregators, e-commerce players, logistics service providers takes the soul of market institutions into the hands of those who, by way of providing technological solutions, offer to both producers and consumers, a bridge through the e-commerce/m-commerce tend to exert and exercise power of ruling the supply end prices as well as customer-end prices and delivery, with both parties, mainly being forced to become helpless while seeking the services of these aggregators and 3pl/4pl solution providers. A case in point can be Uber or Food-Panda

or Urban-Clap, that reduce a customer to a faceless mobile number or email ID on one side and create a one-sided service-oriented contract, with no or little avenues for the customers to even decipher the thin line between producers and suppliers with consumers, and pushing themselves to wall, while the role of a market institution is to be played. The arbitration/dispute resolution becomes highly skewed into the hands of the newly created hegemonies of market service providers, who are neither marketers nor market institutions. A new genre of business institutions emerged in the process, who thrive on creating and resolving conflicts, in the name of offering technology solutions using the internet and mobile platforms, luring the supply side as well as the consumer side with hitherto unheard convenience, choice and comfort, while tending to propel the consumption as highly customized marketing solutions are offered on these ubiquitous platforms.

The basis is the Convergence, the second C. Two decades earlier, i.e., in early 2000s, the term convergence meant, bringing together telephone, television and internet, to offer meaningful, on-demand communication services. The prophecy was fulfilled very soon, and evolved much beyond, during the evolution of 2g, 3g and 4g telecommunication services and by the time 5g becomes mass offered service, it changes further. It is attempted here, using the word, to convey the impeding convergence of technologies to merge the roles of producer-suppliers into those of consumers. If the nineties and early 2000s shifted the focus of operations professionals and marketing professionals to relook at their operations and recognize their mutual dependence through supply-chains, subsequent years witnessed the emergence of inbound marketing, owing to Groupons (Gupta *et al,* 2011) and likes in early 2000s. It was further refined by Just-eats, and has been made a near perfected business model, when taxi services aggregation took a global level rivalry between Uber and several country level players, including Ola in India (Saju *et al,* 2015). The essence of the competition that has emerged was mainly one for control over suppliers and supplies, assuming that the product concept remained unchanged. However, the technological advances helped the strategists of the aggregators even to tweak the product form, SKU, price and consumption quantum, making it near difficult to suppliers to command a stand nor seek a bargaining position. Similar is the status of consumers, in choosing what they would like to buy and obtain the same. When aggregators get the control of suppliers and customers both, they tend to converge the role of market institutions too, and that is being galvanized by technologies and the applications and coding!

The Un-Spelt and Unmet Challenge – Recognizing the Core of the Idea called "Marketing"

The agonizing, as yet recognized convulsions are related to making present day aggregators, nay marketers recognize the fact that they are into marketing, in offering markets and customers to the producers/suppliers. The inbound marketing is at the core of the success of e-commerce and e-commerce is the future and present day marketing job too! As such, making sure that understanding the job of marketing today is in making the producer-consumer connect is meaningful and devoid of exploitative trends that the old-time market institutions professed and practices; that the overall business strategy of the current day marketers is one which integrates marketing with business model and that recognizing the borderless nature of technology makes it possible for every player in the business value chain to equally access and tap the same to their advantage rather than remain captive in any one player, say, the producer or the marketer of the distributor or the end user, makes it a new way of understanding of the business value chain end-to-end; that becomes the idea of marketing for this current era. No guesses are made here on how long this era will continue, but recognizing that the producer-supplier and consumer remain equally valued in the game of business flourishment remains unchanged, irrespective of the times and controllers. This premise may help in making fresh attempts in understanding what marketing is.

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Does Proactive Green Logistics Management Improve Business Performance? A Study of Indian Logistics Enterprises

Mr. Rambabu Pentyala *

Abstract

Sustainability is a subject of growing interest in business and environmental management. Many previous studies have emphasized the trade-off between economic activities such as manufacturing and its effect on the environment. Moreover, previous studies have mainly focused on manufacturing enterprises; however, no study yet covers the logistics sector. This study fills these gaps by testing the causal relationship between proactive green management and the sustainable performance of logistics enterprise in India. In addition, when compared with previous literature that discusses the partial relationship between environmental variables and firm performance, this study synthesizes the factors of green awareness and green strategy that may influence green logistics management in a total systematic Structural Equation Model (SEM). SEM has an advantage in examining the causal relationship between green logistics practice and its business performance. The result shows that green logistics practice has a positive impact on sustainable business performance. This impact is composed of both a positive financial and environmental performance, while the relationship between green awareness and business performance and the influence of green strategy on business performance is not significant.

Keywords: Green logistics management, Structural equation model (SEM), Business performance, Indian logistics enterprises.

Introduction:

As the global economy integrates countries across the world, the paradigm shift from manufacturing to assembling has emphasized the importance of logistics. In the era of cooperative business by assembling, businesses have functioned with many partners. Thus, logistics has been widely used to describe integrated practice among the networks of transportation, storage, and handling of products as they move from material source through the supply chain system to the final point of sale or consumption, which is the key determinant of business performance (Choi, 2011). As Zhou *et al*. (2008) indicated, environmental issues are increasingly important; research on both the macro- and micro-level touch on the environmental issues in many ways. He *et al*. (2009) also suggested the importance of energy savings in the transportation of products. Prior to the 1980s, the environmental initiatives for logistics enterprises were typically temporary and passive in response to government regulations. Recently, public concern began to increase over environmental issues, and new international standards were introduced, including ISO: 14001 and ISO: 26000, in order to accredit enterprises' green practices (Lee, 2009). As Murphy and Poist (1995) indicated in their survey studies, 61% of US firms had formal or written environmental strategies. Thus, if the enterprises plan to extract more value by adopting green management, they must make environmental management a strategic element of their business performance.

Green logistics is a relatively young but rapidly evolving subject. In fact, Aronsson and Brodin (2003) found that only 2.2 % of papers related to logistics addressed environmental issues. Even if many enterprises set off the green awareness movement by adopting Corporate Social Responsibility (CSR) programs into their business plans, they would still lack the integrated practice regarding the green logistics network. With the increasing volume of integrated practices on green logistics, now is the time to answer the question whether there is a trade-off between green logistics practice and business performance. Will firms who pay more attention to the practice of green logistics attract more business and achieve greater environmental performance? This question is not new, and similar efforts have been made to empirically examine the relationship between green management practices on business performance (Huang and Shih, 2010 and Chang and Fong, 2010). This paper shall extend this approach to the field of logistics enterprises as the network manager of all manufacturing processes.

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Previous studies have suffered from some limitations as follows. First, previous literature has highlighted only a partial relationship between green management and its performance. For instance, some studies have analyzed a direct relationship between environmental management and environmental performance (Szymanski and Tiwari, 2004 and Zhu and Sarkis, 2004). Other studies have tested the causality between environmental management and financial performance (Wanger *et al.*, 2002 and Wanger, 2005). This paper integrates these two factors into a more comprehensive model. It considers the total effect between the environmental and business variables, as well as their performance. Environmental (green) awareness and a proactive green strategy were integrated into the model to test the relationship between these physical and practical issues of green management and its sustainable performance. The discussion about the sustainable performance includes information about the financial performance as well as the environmental performance.

Second, while previous studies mainly focused on manufacturing enterprises with general environmental variables, no studies have researched the logistics sector with special green logistics management variables. This paper fills this gap to analyze the relationship between green logistics management and its performance in the logistics sectors of India which is the largest logistics market worldwide.

Third, most studies are based on the regression analysis in their methodological approaches. Even if this direct causality explains the role of green issues easily and clearly, it still lacks the integrated multi-dimensional or step-wise implication of the empirical results. Therefore, the paper introduces the Structural Equation Model (SEM) to correct this methodological bias.

Literature Review:

The more field-oriented empirical question is whether improved environmental management could lead to better business performance. A large body of literature has been devoted to empirically test the link between green management and business performance. However, a general consensus has not been reached (Zeng *et al.*, 2010). Some authors argue that proactive environmental management is simply a tool to help enterprises form better business performance, resulting in these two input and output variables, which create a positive relationship (Huang and Shih, 2010; Wu *et al.*, 2010; Zeng *et al.*, 2010). By placing more emphasis on environmental management, enterprises may reduce costs and increase revenues (Ambec and Lanoie, 2008). Other studies, however, conclude that environmental practices and initiatives involve higher costs and fewer benefits, and they may even create a negative relationship between environmental management and business performance (Cordeiro and Sarkis, 1997; Link and Naveh, 2006 and Wanger, 2005).

As shown in Table 1, recent studies on the relationship between green management and business performance have made conclusions that have contradicting implications on each other. The conclusions may come from the different set of variables and/or the methodological bias as shown in Table 1. Most studies have employed a multiple regression analysis to test the relationship; one disadvantage of the multiple regression analysis is that it can only provide partial information. In addition, all studies have focused on environmental management in general, especially in manufacturing industries. None of the studies have touched on the green logistics issues in manufacturing or the role of logistics enterprises.

Table: 1. Comparisons on the Previous Literature

Authors	Study Object	Green Variables	Performance Variables	Method	Relationship between Findings
Hart and Ahuja (1996)	127 US ?rms in SIC	Emission reduction data	ROA, ROE, ROS	Regression	Positive relationship
Russo and Fouts (1997)	243 US ?rms	Environmental ratings, compliance, waste reduction	ROA	Regression	Positive relationship
Cordeiro and Sarkis (1997)	523 US ?rms in SIC	Toxic release inventory, re-cycled on-site	Industry analyst earnings	Regression	Negative relationship
Christmann (2000)	88 US chemical companies	Pollution prevention technology	Cost advantage	Regression	Positive relationship
King and Lenox (2002)	614 US. Manufacturing firms	Total emissions, pollution reduction, waste treatment	ROA, Tobin's q	Regression	Positive relationship
Wanger et al. (2002)	37 European ?rms	Environmental index SO_2 emissions, NOx emissions and COD emissions	ROS, ROE, ROCE	Simultaneous equations	Negative relations hip
Melnyk et al. (2003)	1222 Manufacturing ?rms	State of the environmental management	Corporate performance index	Regression	Positive relationship
Menguc and Ozanne (2005)	140 Australian Manufacturing ?rms	Higher natural environment orientation (NEO)	Market share, sales growth, pro?t	Path analysis	Positive relationship
Wanger (2005)	European Manufacturing sector	Energy, water, SO_2, NOx, COD	ROCE, ROE, ROS	Regression	Negative relations hip
Link and Naveh (2006)	77 Israel ISO 14001 certi?ed organizations	ISO 14001 policie s, emission, use of recycled m aterials	Gross pro?t margin	Regression	No relationship
Wahba (2008)	156 Egyptian ?rms	ISO 14001 certi?cation	Tobin's q	Correlation and regression	Positive relationship
Wu et al. (2010)	238 Taiwan IT firms	Decrease of consumption for hazardous materials and environmental accidents	Operational cost and training cost	Regression	Positive relationship
Huang and Shih (2010)	332 Taiwan Manufacturing firms	Environmental k nowledge	Environmental performance, financial perfor mance	SEM	Positive relationship
Zeng et al. (2010)	125 Indian Manufacturing ?irms	Cleaner production	Saving, Profit, brand	SEM	Positive relationship

To synthesize all of these approaches, the SEM has been used to analyze the causal relationship between green logistics management and the business performance of logistics enterprises in India. SEM is a technique that involves multiple regression analysis, path analysis, and Con?rmatory Factor Analysis (CFA) (Hussey and Eagan, 2007). SEM uses both structure equations and measurement equations. The structure equations depict the relationship among the latent variables, which shows the qualitative relationship between exogenous and endogenous variables in the multiple regression analysis. The measurement equations map the relationship between the latent variables and observable variables using a CFA (Chen and Li, 2010).

Hypotheses and Model: Based on the comparison of previous research studies as shown in Table 1, we shall discuss the various research hypotheses and models.

Enterprise Size Hypothesis: Lopez-Gamero *et al*. (2009) found that larger firms are more likely to integrate environmental strategies into their business practices than smaller firms. The firm size may reflect the legitimacy principle or the scale of the enterprise that is visible to the public. A large enterprise may be either seen as a sector leader, or it is likely to have a greater environmental risk (Chen *et al.*, 2006). Aragon-Correa *et al*. (2008) also indicated that size is a relevant factor to creating proactive environmental strategy, but size is not a determining condition to developing environmental management. Therefore, in this study, the following hypotheses have been proposed.

> $H1_a$: Enterprise size has a positive effect on environmental (green) logistics awareness.

> $H1_b$: Enterprise size has a positive influence on proactive environmental (green) logistics strategy.

Green Awareness and Green Strategy Hypothesis: If an enterprise has green logistics awareness, then it is easy to understand that the enterprise may also need a proactive green logistics strategy and green logistics practices. As some authors have indicated, green awareness is the key element of a green strategy. Lopez-Gamero *et al*. (2010) found that if the environmental strategies are driven from green awareness, and are not driven from legislation, then their effect on environmental management is significantly positive. Hart and Ahuja (1996) demonstrated that firms that have an early awareness may be opting for more advanced environmental strategies that build on low emissions. Sarkis (2006) indicated that enterprises that develop an early strategy in pollution-reducing processing equipment benefit from a higher profit growth than later followers. This implies that firms implemented green awareness into better environmental programs and strategies will have better environmental performance. These concepts lead to the formulation of the following hypotheses:

$H2_a$: There is a positive relationship between green logistics awareness and green logistics strategy.

$H2_b$: Green logistics awareness has a positive effect on green logistics management.

$H2_c$: Green logistics awareness has a positive effect on business performance.

$H3_a$: Proactive green logistics strategy has a positive influence on green logistics management.

$H3_b$: Proactive green logistics strategy has a positive influence on business performance.

Green Logistics Management Hypothesis: As previously discussed, extensive literature has examined the relationship between green management and business performance; however, these studies have yielded no conclusive results. Some authors have showed a positive relationship between these concepts (Wu *et al.*, 2010; Zeng et al., 2010). Other authors have showed a negative relationship (Cordeiro and Sarkis, 1997 and Wanger, 2005). Although the results are mixed, research that has demonstrated a positive relationship between" green management (not green logistics)" and performance is found to be predominant. It is interesting to note that all studies published after the year 2005 (see Table 1) showed the positive relationship. Thus, as the green issues become increasingly critical, green management is a key element to help an enterprise extract more value. In the light of these reasons, the following hypothesis has been proposed.

H_4: Green logistics management has a positive impact on the business performance.

Insights into these hypotheses provide us with a basis to make inferences on the relationship among those variables, as shown in Figure 1.
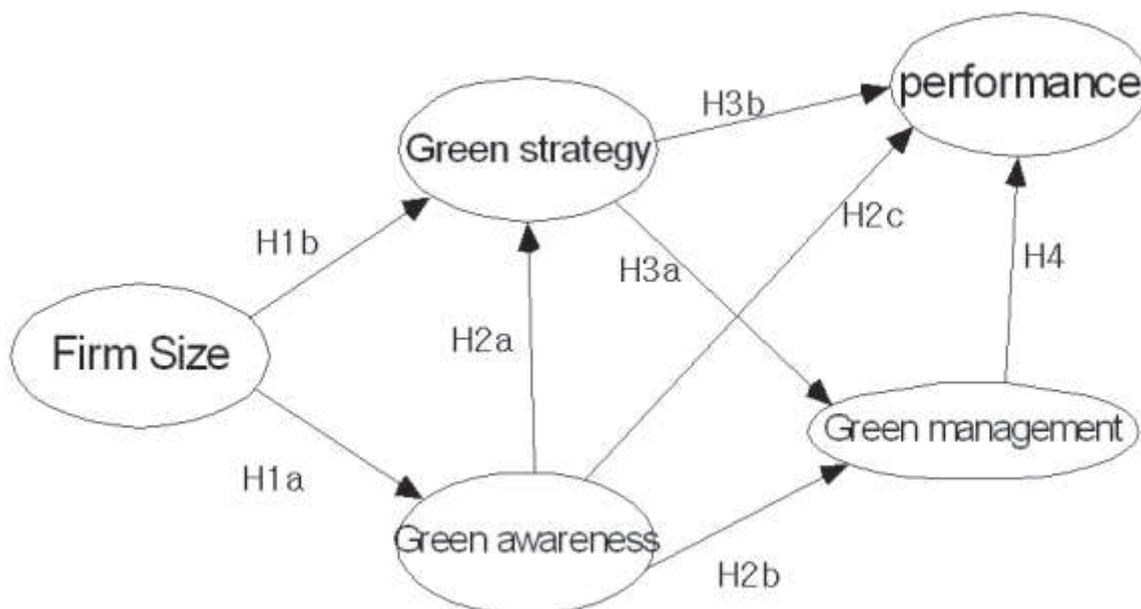
Figure: 1. Research Hypotheses and Structural Model

Methodology: In this section, we will discuss the sample and data collection, measurement of variables, and methods for the structural model.

Sample and Data Collection: The sample and data was collected via internet questionnaires; the first self internet questionnaire website in India has been used. The respondent was asked to focus the staff, section chief, and manager of the logistics enterprise. This questionnaire started in May 2010, and it was completed in September 2010. A total of 137 copies of the questionnaires were collected and 98 copies of the questionnaires provided all of the information required (these questionnaires came from different areas of India). The 98 logistics enterprises represent the various kinds of operational areas: 19.2% are in the integrated logistics sector, 13.7% are in the transportation sector, 14.3% are in the storage sector, 6.0% are in the packing sector, 6.6% are in the loading and unloading sector, 7.7% are in the logistics information sector, 5.5% are in the delivery sector, and the rest are in the manufacturing sector. The small- and medium-sized enterprises account for 79.6%, large-sized enterprise account for 20.4%.

Measurement of the Latent Variables:

1) Enterprise Size: The enterprise size was considered as a control variable to test our hypotheses, which predict that the business size has a positive effect on green logistics awareness and strategy. In this study, the firm's number of employees, capital sum, and gross sales of 2009 were selected to measure firm size as Choi *et al.* (2010) suggested. Table 2 shows the frequency and measures of enterprise size in this paper.

Table: 2. Enterprise Size Measures and Frequency

Size measure		Frequency	Percent (%)	Question measure
CapitalSum*	5 million below	52	53.1	1
	5-50 million	31	31.6	2
	Over 50100 million	8	8.2	3
	Over 100 million	7	7.1	4
GrossSales*	5 million below	41	41.8	1
	5-50 million	36	36.7	2
	Over 50100 million	10	10.2	3
	Over 100 million	11	11.2	4
Employees	50 below	41	41.8	1
	50-300	37	37.8	2
	300	20	20.4	3

*Measured in RMB

2) Green Logistics Awareness: Following the guidance of authors such as López-Gamero *et al.* (2010), 6 items (a1-a6) are used to measure green logistics awareness in terms of self-perception of the firms' managers including awareness of the government's green policies, mindfulness of being green mind, knowledge about being green, the behavior of staff, green standardization, and green training. Each item is measured on a 7-point Likert response scale (1=strongly disagree, 7=strongly agree).

3) Green Logistics Strategy: Zhu *et al.* (2005) emphasized green logistics "strategy." In this study, 9 items (s1-s9) are used to measure the green logistics strategy of firms. Some of the items included strategies on standardization, infrastructure, emissions reduction, technological management, and sustainability; they were measured using a 7-point Likert scale also.

4) Green Logistics Management: Green logistics management refers to detailed environmental logistics practices on different types of logistics process. Although many previous studies used various variables for environmental management, no studies have suggested measures for green logistics management. In this study, 20 detailed items are selected in relation to the different logistics processes. These items included information sharing (m1-m3), packing (m4-m6), warehousing (m7-m9), distribution (m10-m12), loading and unloading (m13-m14), logistics networking (m15-m17), and emissions reduction (m18-m20). We used a 7-point Likert scale to measure the items too.

5) Business Performance: Previous studies focused only on environmental performance (Szymanski and Tiwari, 2004 and Zhu and Sarkis, 2004) or only on financial performance (Wanger *et al.*, 2002; Wanger, 2005 and Zeng *et al.*, 2010). In this paper, both items are integrated including environmental performance (green image gain and green service level-up) and financial performance (sales increase and energy cost reduction) to represent sustainable performance.

All the details in the questionnaire items for the proxy variables can be found in Appendix 1. Table 3 shows the descriptive statistics and correlations of the five latent variables. Since each of the correlations of the five variables is smaller than the corresponding calculated Cronbach's coefficients in Table 4, the composite index of variables is acceptable for further analysis (Lopez-Gamero *et al.*, 2009).

Table: 3. Descriptive Statistics and Correlations of Latent Variables

	Mean	Std. Dev.	Awareness	Strategy	Management	Performance	Size
Awareness	4.099	1.500	1.000				
Strategy	4.235	1.496	0.922	1.000			
Management	4.459	1.407	0.879	0.949	1.000		
Performance	4.273	1.534	0.828	0.882	0.913	1.000	
Size	1.796	0.770	0.070	0.089	0.130	0.143	1.000

Results And Discussions

Reliability and Validity: The proposed model must be statistically reliable and valid, so it can reflect reality, and we must ensure that the statistical results are meaningful. A positive result for the reliability test implies that the proposed method reflects similar results when tested again under the same conditions. For the reliability test, we used the Cronbach's coefficient, which is the most commonly used criterion to measure reliability. Validity refers to the extent to which items reveal true information. A CFA is one of the most effective tools to test the validity (Zeng *et al.*, 2010). SPSS 17.0 and Amos 17.0 were used to test the reliability and validity, respectively. The results were demonstrated in Table 4. For the reliability, the Cronbach's coefficients are bigger than suggested, 0.7, and for the validity test, the CFA measures, such as χ^2/df (p), GFI (Goodness-of-Fit Index), NFI (Normalized Fit Index), CFI (Comparative Fit Index), and RMSEA (Root Mean Square Error of Approximation) are all better than the recommended criteria. This indicates that the reliability and validity of the data are good. The Cronbach's coefficients and the confirmatory factor loadings of each item can be found in Appendix 1.

**Table: 4. Reliability and Validity Test by the Cronbach's and CFA**

	Cronbach's Coefficients	χ^2/df (p)	GFI	NFI	CFI	RMSEA
Green awareness	0.952	1.627(0.11)	0.962	0.982	0.993	0.080
Green strategy	0.974	1.303(0.18)	0.956	0.983	0.996	0.056
Green management	0.984	1.628(0.10)	0.962	0.984	0.994	0.080
Business performance	0.965	1.915(0.15)	0.980	0.992	0.996	0.077
Recommended criteria	>0.7	<3(>0.05)	>0.9	>0.9	>0.9	<0.08

Hypotheses Test Results: The Amos 17.0 package was employed to run our structural equation modeling using the Maximum Likelihood (ML) approach. The overall fitness of the SEM is evaluated using the same set of goodness of fit indices used for the CFA; $\chi^2/df = 2.029$, GFI, NFI, and CFI are all bigger than 0.9, which suggests that the SEM fits the data adequately. All of the SEM modeling and path coefficients are shown in Figure 2 and Table 5. The results show that $H1_a$ and $H1_b$ are rejected; thus, there is no significant relationship between enterprise size and green awareness or size and green strategy. For green awareness, the results indicate that green awareness has a significant positive relationship ($p < 0.01$) with green strategy, thus supporting $H2_a$; but has no relations with green practices. Also there is no relationship between green awareness and business performance, so we must reject $H2_b$ and $H2_c$. For the green strategy, the results show that the green strategy has a significant positive effect on green management ($p < 0.01$), accepting $H3_a$, but it has no significant impact on business performance, rejecting $H3_b$. Finally, there is a significant positive relationship between green management and business performance ($p < 0.01$); thus, we must accept H4.

Table: 5. Results of the Hypotheses Test

Path Relationship			Path Coefficient	S.E.	C.R.	P	Hypotheses	Results
Awareness	<---	size	0.077	0.224	0.703	0.482	$H1_a$	reject
Strategy	<---	size	0.052	0.078	1.316	0.188	$H1_b$	reject
Strategy	<---	awareness	0.957	0.077	12.05	***	$H2_a$	accept
Management	<---	awareness	-0.233	0.173	-1.241	0.215	$H2_b$	reject
Performance	<---	awareness	0.117	0.24	0.483	0.629	$H2_c$	reject
Management	<---	strategy	1.194	0.195	5.78	***	$H3_a$	accept
Performance	<---	strategy	-0.351	0.472	-0.753	0.452	$H3_b$	reject
Performance	<---	management	1.184	0.332	3.829	***	H_4	accept

Note: *** means $p < 0.01$.
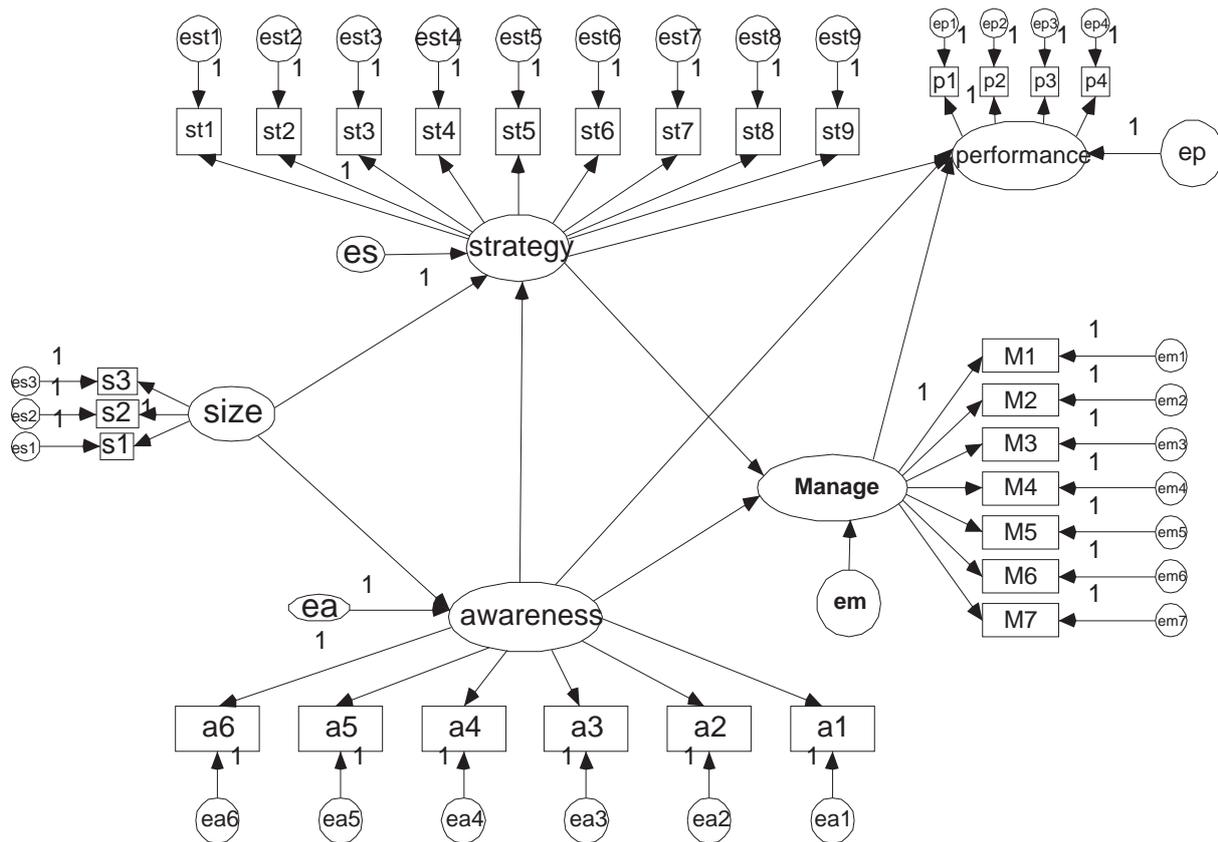
Note: means $p < 0.01$

Figure - 2: **Path Coefficients in a Structural Equation Model**

Discussion and Managerial Implications

Discussions of *H1*

As for the issues of size, the results show that $H1_a$ and $H1_b$ were not supported. These results indicate that the enterprise size does not play a significant role on the green logistics awareness, enterprise size, and logistics green strategy. This result is different from previous studies. Lopez-Gamero *et al.* (2009, 2010) found that larger firms tend to integrate the environmental strategy into their consideration better than smaller firms. Moore and Manring (2009) also suggest that larger enterprises are more likely to find that their reputation suffers if they do not perform well on social measures, and these firms act accordingly. The results, however, indicate that green issues are not yet considered to be strategic elements of logistics enterprises in business practices in India. Green leadership could be emphasized in large logistics enterprises in India, but their leadership may not be compensated for corresponding performance.

Discussions of *H_2* and *H_3*: As for the green awareness and strategy, the results indicate that green logistics awareness has a significant effect on green logistics strategy ($H2_a$). However, it has no significant impact on green logistics management ($H2_b$). The green logistics strategy has a significant effect on green logistics management, which confirms $H3_a$; however, it has no significant effect directly on business performance, which rejects $H3_b$. These results indicate that green awareness does not have a direct effect on green management. However, it has an indirect effect on green management through its effect on green strategy. The empirical results imply that green awareness only cannot lead to field-oriented green practices in the enterprise, so the government should promote official environmental strategies or policies to the logistics enterprise to improve green logistics management. These implications agree with studies by Hitchens *et al.* (2003) and Lopez-Gamero *et al.* (2010) in that green awareness by the governance legislation has a positive effect on environmental strategy. However, Hart and Ahuja (1996)

demonstrated a different view that firms with early awareness may be opting for more advanced environmental management, which results in low emissions. Sarkis (2006) indicated that an early strategy for pollution-reducing processing equipment offers more benefits with a higher profit growth than companies which are later planners. However, the findings in Table 5 indicate that the green strategy did not show a direct effect on business performance, but an indirect effect via its effect on green management. It implies that planning or strategies only cannot bring environmental benefits. The only factor that directly influences the business performance is the practice of green management.

Discussions of H_4: The results show that there is a significant positive relationship between green logistics management and business performance. Thus, we can confirm H_4. The findings coincide with Rao and Holt (2005) and Wu *et al.* (2010); however, they disagree with Cordeiro and Sarkis (1997). Rao and Holt (2005) suggest that the enterprise with green supply chains may achieve a substantial cost savings, enhance sales, and exploit new market opportunities, which results in a better business performance. Wanger (2005) also demonstrates that high levels of environmental performance are only possible if the enterprise's green management has a proactive technological pollution orientation. The results in Table 5 imply that from the empirical evidence of the logistics enterprises in India, it is necessary to adopt green practices as the key element in their business model to extract more value and enjoy better business competitiveness. These results also imply that the role of government promotion policies for green logistics is much more important for logistics enterprises to mold their strategies via their awareness (Choi and Lee, 2009).

Conclusion: Previous studies about green management and its performance have focused mainly on manufacturing enterprises, and they have only focused on the partial relationship between the dichotomy of the business and the environment. This study aims to contribute to current literature by introducing a synthetic model that is based on structural equation modeling to test the causal relationship between green logistics management and business performance of the logistics sector in India. As a global factory, the role of the logistics network of India becomes more and more important. Thus, the synthetic analysis of diverse facets of green logistics related issues shall shed light on the paradigm for the logistics enterprises as well as the government promotion policies about the competition between green or sustainable logistics.

In this paper, the researcher found that there are no significant roles of enterprise size in either the green awareness or green strategy. Thus, even large enterprises cannot utilize the economies of scale or leading advantages in logistics management. The result indicates that green awareness has a significant positive relationship with the green strategy, but has no relationship to green management and business performance; this suggests that green awareness only cannot lead to detailed green practices in the enterprise. It implies that the Indian logistics enterprises are generally in the initial stage of green logistics because even though they are aware of the importance of green logistics, they are eager to apply these ideas to their business practices. Therefore, the government must promote the official environmental strategy or planned policy for the logistics industry. Also, the results show that the green strategy has a significant positive effect on green management, and there is a significant positive relationship between green management and business performance as well. It shows the spirit of strong pragmatism among the Indian enterprises, suggesting that the green practices are the key element for the logistics enterprises to extract more value and to enjoy better business competitiveness.

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Impact of Global Financial Crisis on the Indian Economy:
Analysis of the Channels of Transmission

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Abstract

The Global Financial Crisis (2008) was considered as one of the worst since the Great Depression of 1929 and one of the very few that had originated in the developed world in the recent times, which shook the financial fabric of the global economy. Due to the higher inter linkages among all the nations, the spill over effects were experienced by all the nations, including India. This study revolves around the analysis of the impact of the Global Financial Crisis on the Indian economy, and more so, a look into the channels of transmission of the shocks. The period of analysis is taken from 2000 to 2015 and the frequency of the variables chosen is monthly. The econometric models namely Vector Auto Regression (VAR), Impulse Response Function (IRF) and Variance Decomposition have been used for the analysis. The conclusions obtained from the current study show a significant impact of the crisis on the Indian Economy, on the real as well as the financial sector. The channel of transmission of the shocks was from the real sector to the financial sector. Another important finding shows that the crisis had a relatively subdued impact on the Indian Economy due to the lower level of financial integration with the rest of the world accompanied by the rigorous policy measures implemented at the time of crisis.

Keywords: Global Financial Crisis, Indian Economy, Transmission Channels, VAR model.

Introduction

"I exaggerate only a bit when I say I felt like an early Christian who had wandered into a convention of half-starved lions," was quoted by Raghuram Rajan, former Chief Economist in the International Monetary Fund and currently the Governor of the Reserve Bank of India, in his award-winning book, *Fault lines*. This was the feeling he experienced after presenting a paper at the meet which takes place every year at Jackson Hole, Wyoming and is attended by the top Central Bankers, Private Sector Analysts, Economists, and Financial Journalists to debate on a set of topical papers commissioned for the event by the host, Federal Reserve Bank of Kansas City. The major reason for him being termed as a Cassandra is that during the meet that was meant to discuss the greatness of the era with Alan Greenspan as the Federal Reserve Chairman, Rajan had pointed out to the flaws in the development of the financial system and hinted towards a possible impending doom looming over the financial system of the entire world. He had predicted that if the US continued its policies in the same way as they were with the asset prices soaring high then the nation, neigh the world would suffer from a global financial turmoil. As he had mentioned in Fault Lines that a broken watch shows right time twice a day, the statements made by this Cassandra gained importance post 2007, on the onslaught of the Global Financial Crisis that had its roots in the US. This crisis had a worldwide impact and is considered to be one of the worst since the Great Depression of 1929. Another speciality of the Global Financial Crisis (2008) is that it is one of the very few that marks its origin in the developed world and had spread to the rest of the world thereon. The use of the complex derivatives coupled with the greed of the bankers in the US proved costly not only for them but for the entire world.

Literature Review

India too had to bear the brunt of this crisis. There were large fluctuations in all the sectors of the Indian Economy as they clearly reflected the after effects of the crisis. But India was relatively safeguarded as compared to a majority of the nations (Mohanty, 2009). A vast sea of literature is produced with respect to the crisis and its impacts on various nations (Gardo and Martin, 2010; Dolphin and Chappel, 2010 and Blanchard, Faruqee and Das, 2010). There are a large amount of studies being done with respect to India as well (Mohan, (2009), Mohanty, (2010), Bajpai, (2010), etc.) explain the causes of the crisis its impact on India and the policy stances taken at that point of time. Specific studies with respect to the impacts on different sectors have been carried out by Mathew (2012) on the external sector, Chittedi (2010) on the financial sector, especially pertaining to the stock market volatility and Rajesh and

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Bordoloi (2012) with respect to the aggregate demand framework. Studies were also being undertaken in the analysis of the channels of transmission (Kumar, 2009) explaining the three distinct channels of transmission of the shocks of the crisis on Indian economy being the financial channel, the exports channel and the exchange rate channel. These studies in myriad areas provide a large scope for the current study.

Objectives of Study

The present study tries to analyze the impact of the Global Financial Crisis on the Indian Economy. It also lays an emphasis on the channels of transmission of the shocks of the crisis. The objectives of the study can be stated as follows:

- To look into the genesis of the Global Financial Crisis.

- To analyze the impact of the crisis on the Indian Economy.

- To study the movement of the real and the financial variables in the pre-crisis, crisis and the post-crisis periods.

- To study various channels of transmission of the crisis with specific reference to the real and the financial variables.

Global Financial Crisis and Impact on India

The Global Financial Crisis (2008) that created financial and economic instability all over the world had its roots beginning from the late 1990s when the Bush government proclaimed their vision for providing an American dream to every citizen residing in the US. The unconventional monetary policies of the US Fed were the major instigators for the crisis. Adding to them were the 3 following factors.

- A very large asset price bubble that was created by the rise in the housing prices from the beginning of this millennium.

- The subprime mortgage lending that increased the size of the bubble.

- Inappropriately skewed financial sector spurs that added to the boom.

HOW WAS THE INDIAN ECONOMY IMPACTED?

Impact on stock market and FIIs

The first impact was felt on the stock markets where the S&P BSE Sensex fell from the highs of 21,000 in January 2008 to around 9,000 by November 2008. There was a loss of around Rs. 10,00,000 cr of investor wealth during the crisis period. All this can be attributed to the Foreign Institutional Investments (FIIs) that were highly volatile from 2007 to 2009. When India was having almost a Goldilocks economy during the period 2002-2007, it witnessed large capital inflows in the form of FIIs. The FIIs increased from 3.5% of the GDP in 2005 to 9.3% in 2007. The onset of crisis that created a credit crunch in the entire world economy forced a majority of the FIIs to withdraw their investments from India in the context of requirement of liquidity. This had led to the large amount of capital outflows which impacted India's Forex reserves as well as the stock markets.

Figure 1 : S&P BSE Sensex

Source: Yahoo Finance

Figure 2 : Foreign Institutional Investments (Net Inflows)
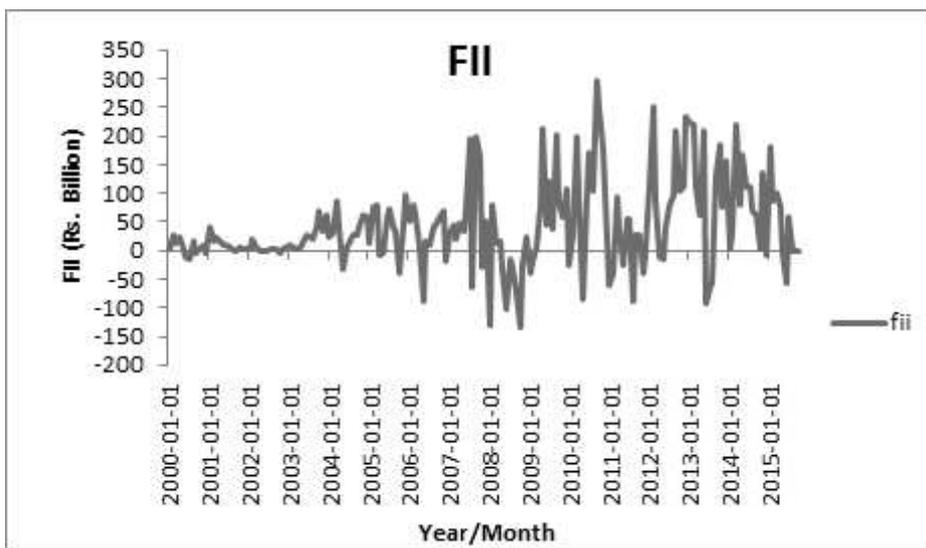
Source: RBI, Handbook of Statistics

Impact on the Indian Banking System

The Indian banking system was less affected as compared to the developed world mainly because of the relatively low presence of the foreign banks in the Indian economy as well as minimal exposure to the complex derivatives, the US mortgage market or stressed assets. The public sector banks as well as the private sector banks were well capitalized and regulated and the average Capital Risk-weighted Assets Ratio (CRAR) of the banks was 12.6% at the time of the crisis which was higher than the required minimum of 9%.

Impact on the Real Sector

The impact on the real sector was lagged but short lived. The GDP growth rate which averaged around 8.8% during the honeymoon period was reduced to 6.7%. The WPI inflation which was stable hovering around 5% increased to

12.8% by August 2008. From a disaggregate viewpoint, the agricultural growth rate reduced from 4.9% in 2005-06 to 1.6% in 2008-09. The industrial growth declined from 8.1% in the previous year to 4.82% in 2008. The services sector that contributes more than 50% of the GDP showed a decline in the growth. The manufacturing sector showed a decline from 9.8% in the pre-crisis period to 4.0% in the crisis period. The exports were sluggish that had a large impact on the export-led sectors like fabrics, gems and jewellery, leathers, etc. The exports showed a decline in absolute terms in the 5 months of October 2008-February 2009. The export growth declined from the peak of 40% in the pre-crisis period to (-) 15% in the second quarter of 2008-09 and it sank further to (-) 22% in the fourth quarter. The Savings-Investment gap widened to (-7)% in 2008-09. The fiscal deficit had widened to 3.5% of the GDP during the second quarter of 2008 and was estimated to be 6.8% for the financial year 2008-09.

Figure 3 : India's GDP Growth Rate
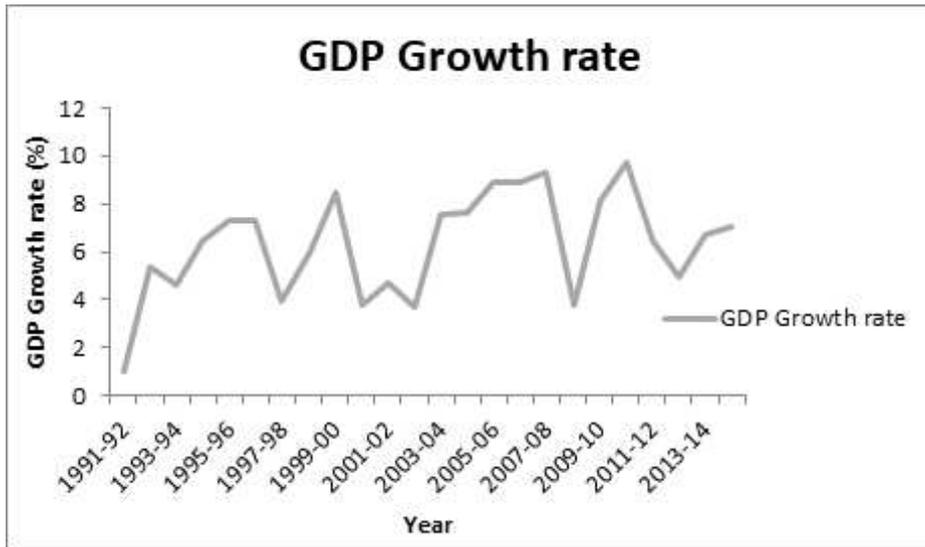
Source: RBI, Handbook of Statistics

Figure 4 : Index of Industrial Production of India (Growth Rate)
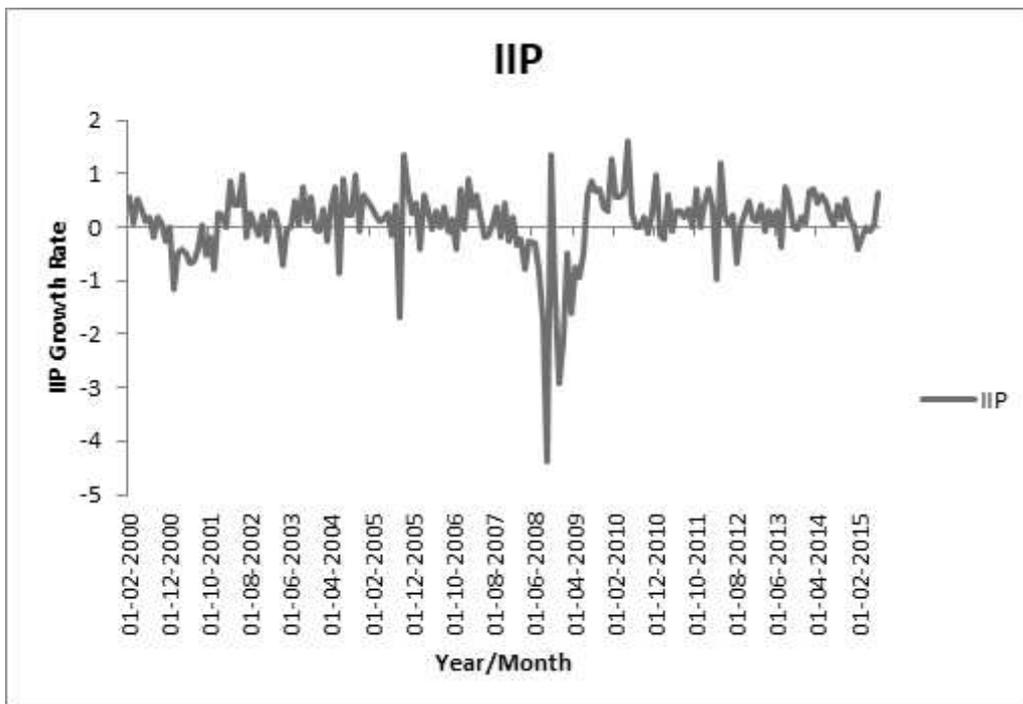
Source: RBI, Handbook of Statistics

Figure 5 : Inflation in India based on Wholesale Price Index
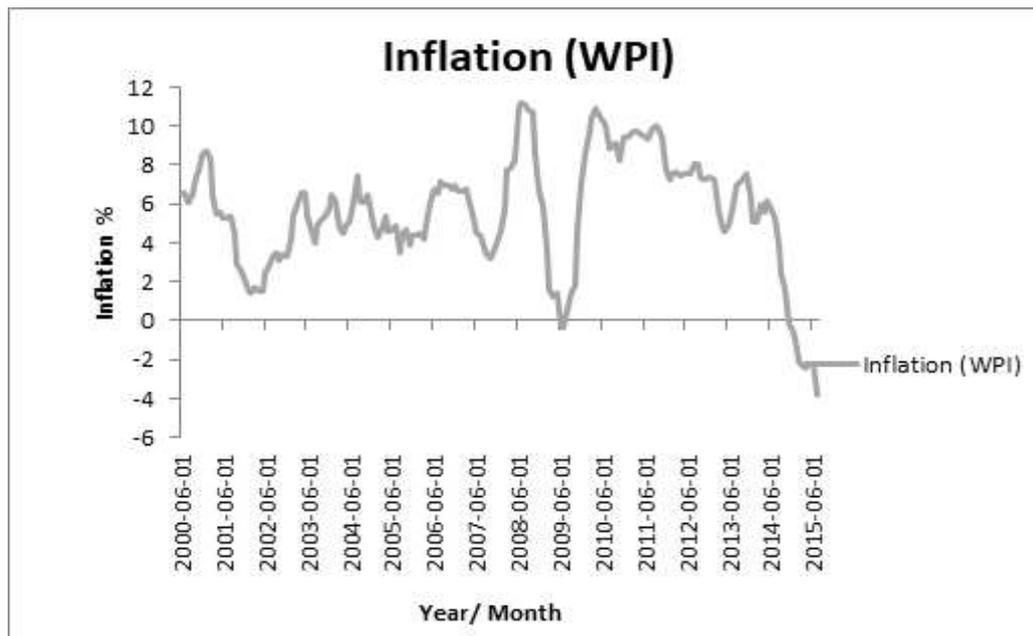
Source: RBI, Handbook of Statistics

Data

The data used for empirical estimation is a monthly data for the time period January 2000 to July 2015. The variables chosen for the study can be classified into various groups depending on the requirement in the study.

The time spans chosen for them are relevant in Indian context and based on the financial year endings. These time spans are:

- Pre-crisis period (January 2000 to March 2007)

- Crisis period (April 2007 to March 2010)

- Post-crisis period (April 2010 to July 2015)

Since the data chosen are a monthly time series data, there can be a problem of seasonality. So the time series variables are seasonally adjusted in order to deliver better results. Since all the variables have different units of measurement and some of them range in very high denominations, all of them have been converted to the natural logarithmic forms to scale them down on to the same and comparable level of measurement. The variables are named as follows:

Financial Variables

S&P BSE Sensex (Index) - **ln*BSE***

Foreign Institutional Investments (Net Inflows, Rs. Billion)-**ln*FII***

Nominal Exchange Rate (Rs./$)-**ln*ExR***

New York Stock Exchange (Index) -**ln*NYSE***

Real Variables

Index of Industrial Production (Index, Base year 2004-05) - **ln*IIP***

Inflation based on Wholesale Price Index (All Commodities, Percentage, Base year 2004-05)-**ln*WPI***

Real Effective Exchange Rate (Trade-weighted Index, Base Year 2004-05)-**ln*REER***

Oil Prices ($/Barrel) - **ln*OIL***

US Industrial Production (Index, Base year 2012) - **ln*USIP***

Apart from the variables mentioned above, some series of dummy variables are also created in order to check the impact during different time frames. The dummy variables are named as follows:

dum- where the value for the crisis period is chosen as 1 and 0 otherwise

dum1- where the value for the post-crisis period is chosen as 1 and 0 otherwise

dum2- where the value for the crisis period is chosen as 0 and 1 otherwise

The datasets have been taken from Reserve Bank of India, Handbook of Statistics (2015-16), Yahoo Finance, and Federal Reserve Economic Database.

Econometric Methodology

This section deals with various techniques and methods used for analysis. These include the Unit Root test (ADF), Vector Auto Regression (VAR) Analysis and the Impulse Response Function (IRF).

Empirical Findings and Analysis

The empirical estimation of this study investigates the analysis the impact of the Global Financial Crisis (2007-08) on the Indian Economy the channels of transmission of the shocks and the study of linkages between the real and financial variables of the Indian Economy in the pre-crisis, crisis and the post crisis periods.

We seek to validate the hypotheses regarding the subdued impact of the crisis on the Indian Economy and the shocks were transmitted through the financial variables onto the real side factors.

The empirical analysis has been undertaken using the Econometric Software. Before venturing into the study, the Stationarity checks have been run on all the variables.

Table 1: Augmented Dickey-Fuller Test Results

Variable	Levels	1st Difference	Inferences
	I(0)	I(1)	Stationary at
BSE	-3.178***	-13.455*	1st Difference
ExR	-0.8395	-12.371*	1st Difference
FII	-9.887*		Levels
NYSE	-2.581	-12.079*	1st Difference
IIP	-1.407	-10.219*	1st Difference
WPI	0.158	-7.052*	1st Difference
REER	-4.347*		Levels
OIL	-3.123	-6.742*	1st Difference
USIP	-2.925	-3.599**	1st Difference

Source: Author's Calculation

-values significant at 1%, 5% and 10% level of significance *, **, ***

Critical -values: 1%=-4.009, 5%=-3.4347, 10%=-3.1413

The results of the Augmented Dickey-Fuller test (ADF) indicate that FII and REER are stationary at levels whereas the others are stationary at first difference.

The VAR technique has been used to analyze the impact of the crisis on the real and the financial sectors of the Indian Economy. The results portray a significant impact of the crisis been exhibited on the Indian economy, but as hypothesised, it is subdued.

In the present analysis, the variables that have been chosen to see the effect on the financial sector are BSE Sensex (lnBSE), NYSE (lnNYSE), IIP (lnIIP), Inflation based on WPI (lnWPI), FII (lnFII), Exchange Rate (lnExR) and DUMMY (dum). All the variables have been seasonally adjusted to deliver better results. The time period chosen for this particular model is January 2000 to March 2010, i.e., the pre-crisis and the crisis period. The dummy variable has been chosen to differentiate the pre-crisis period from the crisis period. The variable dum assumes the value 0 in the pre-crisis period and in the crisis period when the financial sector was impacted, it assumes the value 1.

The variable as expected with a negative sign rightly captures the fallout of the crisis on the Indian economy with a significant t-statistic of [-2.47], albeit with a lower co-efficient (-0.06) which highlights the minimal impact.

Table 2: Inter-dynamics BSE Till Crisis

	ln*BSE*	ln*WPI*	ln*ExR*	ln*FII*	ln*IIP*	ln*NYSE*
ln*BSE*	1,2	2	1			2
ln*WPI*	1	1,2	1,2			
ln*ExR*	1,2		1,2	1,2		1,2
ln*FII*					2	
ln*IIP*		2			1,2	
ln*NYSE*	1,2		1	1,2		1

Source: Author's Calculation

Similar results can be observed in the analysis of the impact on the real sector where the variables chosen are IIP (lnIIP), Inflation based on WPI (lnWPI), Real Effective Exchange Rate (lnREER), Oil prices (lnOIL), BSE Sensex (lnBSE), US Industrial Production (lnUSIP), NYSE (lnNYSE) and DUMMY (dum). The dum variable assumes a negative sign in this model as hypothesised with a significant t-statistic [-3.18] and a lower co-efficient (-0.03) indicating a negligible impact.

Table 3: Inter-dynamics IIP Till Crisis

	ln*IIP*	ln*WPI*	ln*REER*	ln*OIL*	ln*BSE*	ln*USIP*	ln*NYSE*
ln*IIP*	1,2,6	2,3,4,5	2,3	2,5,7		2,3	7
ln*WPI*	3,4,7	1,6,7		4	1,3,6,7		2,3,6,7
ln*REER*	1,2,5	1,3,4,6	1,7	1,7	1,2	1,2	1,2
ln*OIL*	5	6		1,6	7		7
ln*BSE*	2,7	7	4,5		1,2,7	4	6,7
ln*USIP*				7	1,7	1,2,7	1,2,5,6,7
ln*NYSE*	6	3,5		2,4	1,2		1,2,5

Source: Author's Calculation

The impact on the financial sector is observed to be higher than that of the real sector. The possible reasons for this can be that the financial sector was affected by the external factors as well as the domestic variables. Since the crisis period is chosen according to the financial year (2007 April to 2010 March), the financial variables show a larger variation due to this two-sided impact.

To check for the channel of transmission of the shocks on the Indian economy, the impact variables are being included in the VAR model. These variables are obtained by their multiplication with the dum variable. The impact variables here show the impact on the dependent variables during the crisis period.

Two VAR models were run in order to check the transmission channel of the shocks. These models show that the target variable for the financial sector i.e., BSE Sensex was impacted majorly by inflation based on WPI and net inflows of FII. The t-statistics of the variables dum*lnWPI and dum*lnFII are significant with the expected signs, negative for lnWPI and positive for lnFII that are in compliance with the theory. The variable dum*lnNYSE has a very negligible impact on the target variable BSE Sensex with the t-statistic of [-0.174].

Table 4: Inter-dynamics BSE with Impact variables

	ln*BSE*	ln*WPI*	ln*ExR*	ln*FII*	ln*IIP*	ln*NYSE*
ln*BSE*	1					1
ln*WPI*		1	1			
ln*ExR*	1,2	1,2	1	1,2		
ln*FII*	1	1	2	1	1	
ln*IIP*					1,2	
ln*NYSE*						1

Source: Author's Calculation

On observing the VAR model with the target variable of the real sector, i.e., IIP, the results evidently show that during the crisis period IIP was impacted by the external factors viz. NYSE, US Industrial Production and Oil prices. The t-statistics of the impact variables dum*lnNYSE, dum*lnUSIP and dum*lnOIL are [2.755], [-2.105] and [-2.354] respectively with the expected signs that are in accordance to the theory. The domestic variables, both real and financial, have an insignificant impact on IIP during the crisis period.

Table 5 : Inter-dynamics IIP with Impact variables

|	ln*IIP*	ln*WPI*	ln*REER*	ln*OIL*	ln*BSE*	ln*USIP*	ln*NYSE*
ln*IIP*	1,2,6	2,3,5	1,2,7	7			
ln*WPI*	3,4	1	3		3	5,6	2,3,4,7,8
ln*REER*	1,2,5	1,3,4,6	1,3,4,8		1,2,8	1,2	1,7,8
ln*OIL*		1,3		1	3,8	6	8
ln*BSE*	2,4,7	1,2,7	8		1,2	4	6,8
ln*USIP*	5,6		1,5	8	1	1,7	1,3,6
ln*NYSE*	2	1,2		4	1,2	3	1,4

Source: Author's Calculation

On the other hand, IIP has a significant impact on the other domestic variables, especially WPI. In turn,dum*lnWPI has a noteworthy impact on BSE Sensex. Also FII, which is impacted by WPI through the interest rate channel, affects the BSE Sensex, i.e., dum*lnFII, has a significant effect on BSE Sensex with the positive sign as expected and a t-statistic of [5.18].

The results obtained from the VAR analysis show that though there is a clear impact of the NYSE on the BSE Sensex, with a t-statistic of [2.65] in the overall time frame chosen for the study, the impact of the shocks during the period of crisis is subdued, which is shown through the impact variable dum*lnNYSE. But a significant impact of the external variables on the Indian macro economic variables and a high dependency of BSE Sensex on the domestic variables show that the channel of transmission of the shocks was majorly from the real sector to the financial sector. This refutes one of the statements hypothesised earlier that the shocks are transmitted from the financial sector to the real sector. This also points out to the possible reason for the lag effect of the transmission of the shocks. Though the signs of distress in the Lehmann Brother and other major Wall Street firms and its impact on the US stock markets were witnessed during the period September-October 2007, the Indian macroeconomic and financial variables began to show the signs of the distress during January-February 2008.

This clearly indicates the real linkages in the diffusion of the shocks on the Indian economy. The flow chart below shows the channel of transmission based on the current study.

Figure 6 : Channel of Transmission
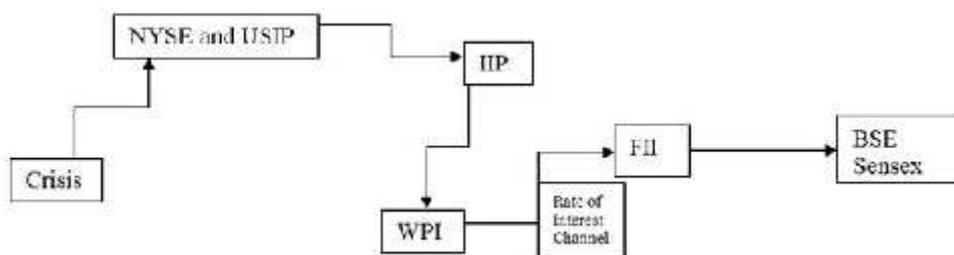
Another significant finding is with regards to the recovery of the Indian Economy from the crisis. A dummy variable, dum1, is taken as an exogenous variable. The two models with the real and financial target variables- IIP and BSE Sensex, have the optimal lag lengths of 12 & 1 respectively, obtained using the AIC. The t-values obtained for dum1 in both the models for IIP [1.34] and BSE [1.42] Sensex are found to be insignificant, though with the expected positive signs. This result shows that though the Indian Economy came out of the crisis, the recovery was slow which is in contrast to the studies done earlier in this regard.

Table 6: Inter-dynamics (BSE crisis and beyond)

	ln*IIP*	ln*WPI*	ln*REER*	ln*OIL*	ln*BSE*	ln*USIP*	ln**NYSE**
ln*IIP*	4,9,10,11	2,4,6,7,8,9,10,11,12	1,2,3,5,10	4	1,2,7	1,2,3,4,6,8	
ln*WPI*	3,10	3,5,7,8,10,12	1,2,5,9	1,10	8,9,10	2,3,4,5,6,12	
ln*REER*	2,3,5,6,7,8,9, 10, 11, 12	1,2,5,8,11	1,2,6,9,10	2,8	1,7,9	1,2,4,8,11	4,9
ln*OIL*	2,11	1,7,9,10,12	1,2,3,4,8,9	1,7,9,12		1,2,3,4,5,7,9,10,12	
ln*BSE*	1,2,3,7,11	2,4	3,6,7,10	12	1,7	1,2,5,8,9,11,12	
ln*USIP*	1,2,4,5,7	4,8,10	1,5,12	11	2,3,9	3,4,5	
ln*NYSE*	4,10	2,6,7,8,11,12	2,5,10	2,6,8,12	7,8,11	1,2,3,6,9,11,12	

Source: Author's Calculation

Table 7 : Inter-dynamics (IIP crisis and beyond)

	ln*BSE*	ln*WPI*	ln*ExR*	ln*FII*	ln*IIP*	ln*NYSE*
ln*BSE*	1				1	1
ln*WPI*		1			1	
ln*ExR*	1		1		1	
ln*FII*				1	1	1
ln*IIP*	1		1		1	
ln*NYSE*					1	1

Source: Author's Calculation

A VAR model has been run to see the linkages of domestic financial and real variables and the external variables specifically during the pre- and the post-crisis periods, using BSE Sensex as the target variable. The dummy variable, dum2, has been used in this models that assumes the values 0 in the crisis period and 1 in the pre-crisis and post-crisis periods. The impact variables dum2*lnIIP, dum2*lnFII and dum2*lnExR have significant *t*-statistics of [2.27], [2.23] and [-4.04] respectively with the expected signs when BSE Sensex is the dependent variable. The impact variable dum2*lnNYSE has a very insignificant t-statistics [0.402] with respect to BSE

Sensex.

Table 8: Inter-dynamics (BSE crisis and Beyond)

|	ln*BSE*	ln*WPI*	ln*ExR*	ln*FII*	ln*IIP*	ln*NYSE*
ln*BSE*	1,2	1	1,3,5	4,5	1	
ln*WPI*	3	1,3,6	1,2,3,6	4,5	3	2
ln*ExR*	3,5		1,3,5,6	5,6	1	5,6
ln*FII*	1,3	3	44	3,4,5	1,3	3
ln*IIP*	5,6		1,3,4,5	3	1,2,5	
ln*NYSE*	1		1,4	1,2,3	1	1

Source: Author's Calculation

This portrays that the stock markets in India are not financially integrated even in the pre-crisis and the post-crisis period and the major impact on the variable is due to the domestic macroeconomic and financial variables viz. the IIP, Exchange Rate and FII. This is one of the major reasons for the relatively subdued impact of the crisis on India. The credit for this goes to the policy initiatives taken by the then Governor of the Reserve Bank of India, Y.V. Reddy not only during the crisis period but even before that. The policy initiatives implemented then helped India to maintain strong macroeconomic fundamentals providing a cushion during the period of crisis.

The Impulse Response Function (IRF) Analysis for both the VAR models using both the target variables BSE and IIP are as given below.

Response to Cholesky One S.D. Innovations ± 2 S.E.
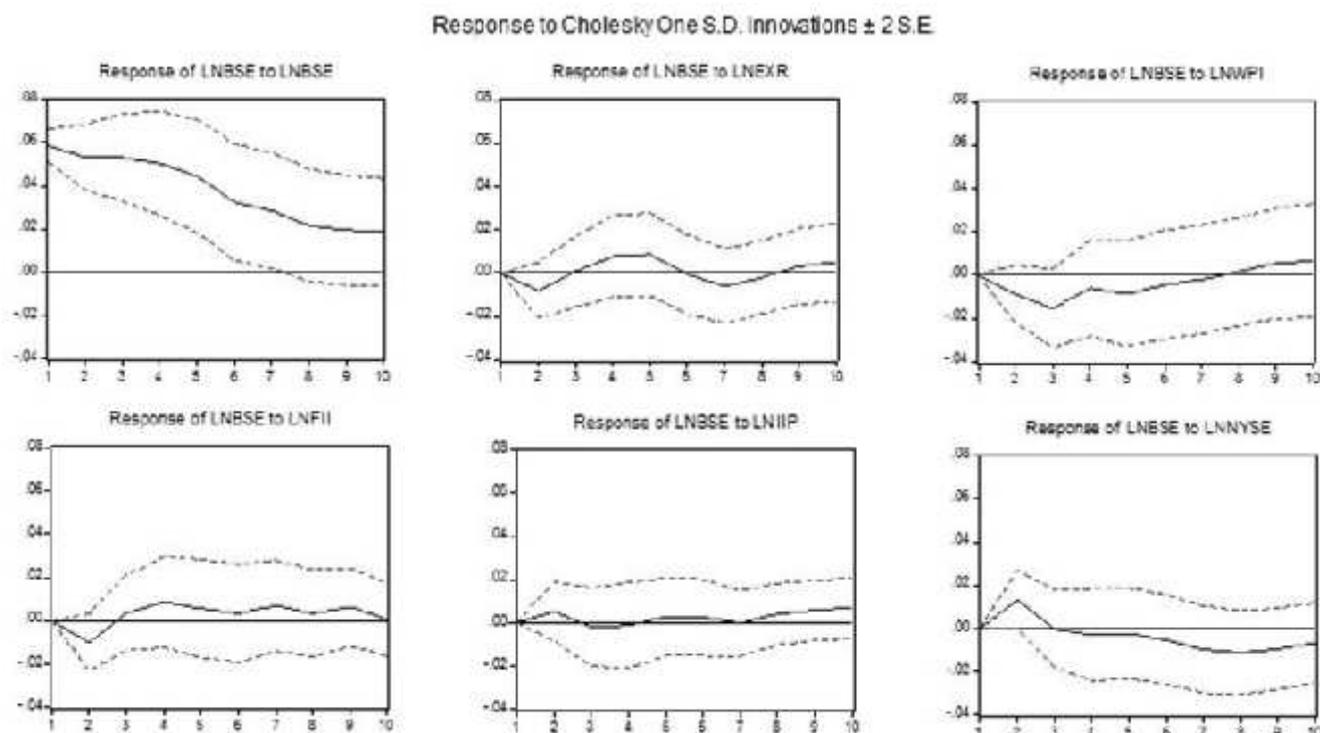
Source: Author's Calculation

**Figure 8: IRF- Response of BSE (Crisis Period)**
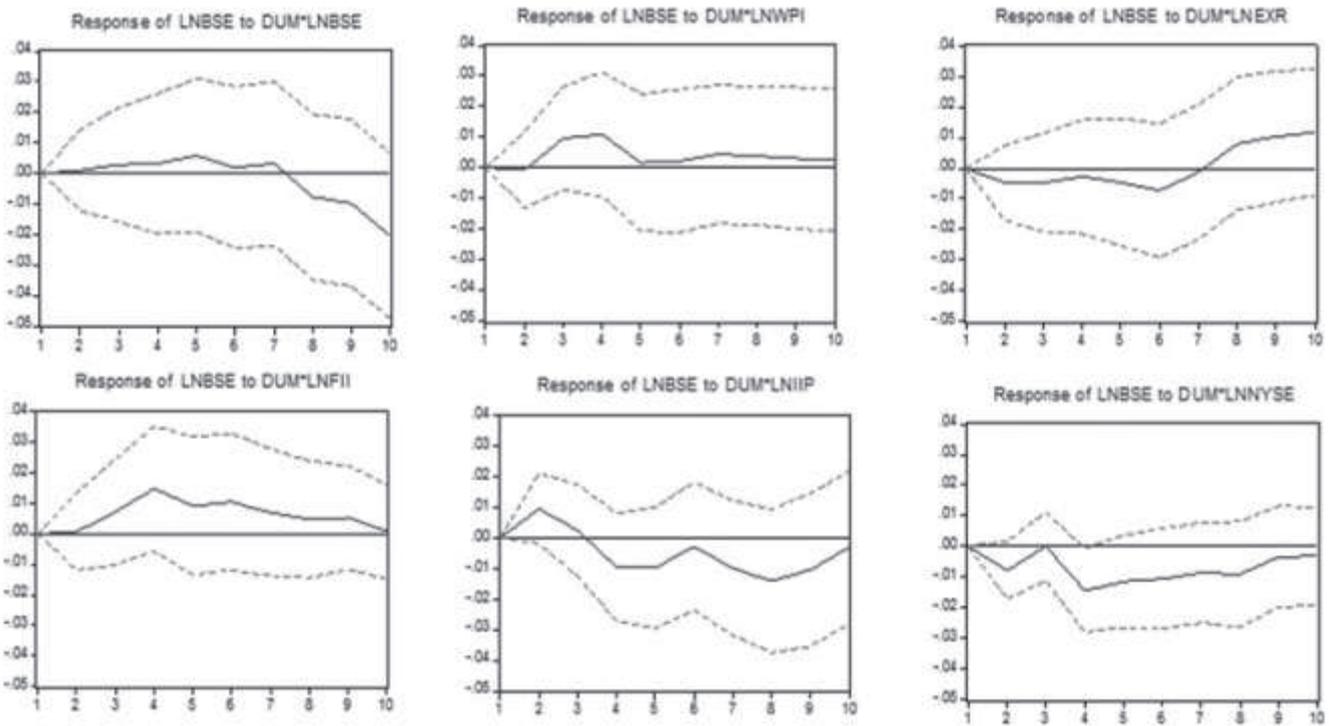
Source: Author's Calculation

The time period taken for these models is pre-crisis and the crisis period, i.e., from 2000 January till 2010 March. The dummy variable incorporated assumes the value 1 during the crisis period which helps to analyze the impact on the target variable during the crisis period separately.

The IRF Figures 7 and 8, with BSE as the target variable, show that the domestic financial variable is being impacted by NYSE during the entire period of study but had a subdued impact for a shock to NYSE during the crisis period. BSE is majorly impacted by a shock to its own lagged values. Another important observation from the figures is that BSE responded quickly to the shocks in Exchange Rate whereas it had a lag of two to three months for its response to the innovations in the other domestic variables of FII and WPI. Also, BSE reacted to the shocks in other variables than its own shocks during the crisis period.

Figure 9: IRF- Response of IIP (Till Crisis)
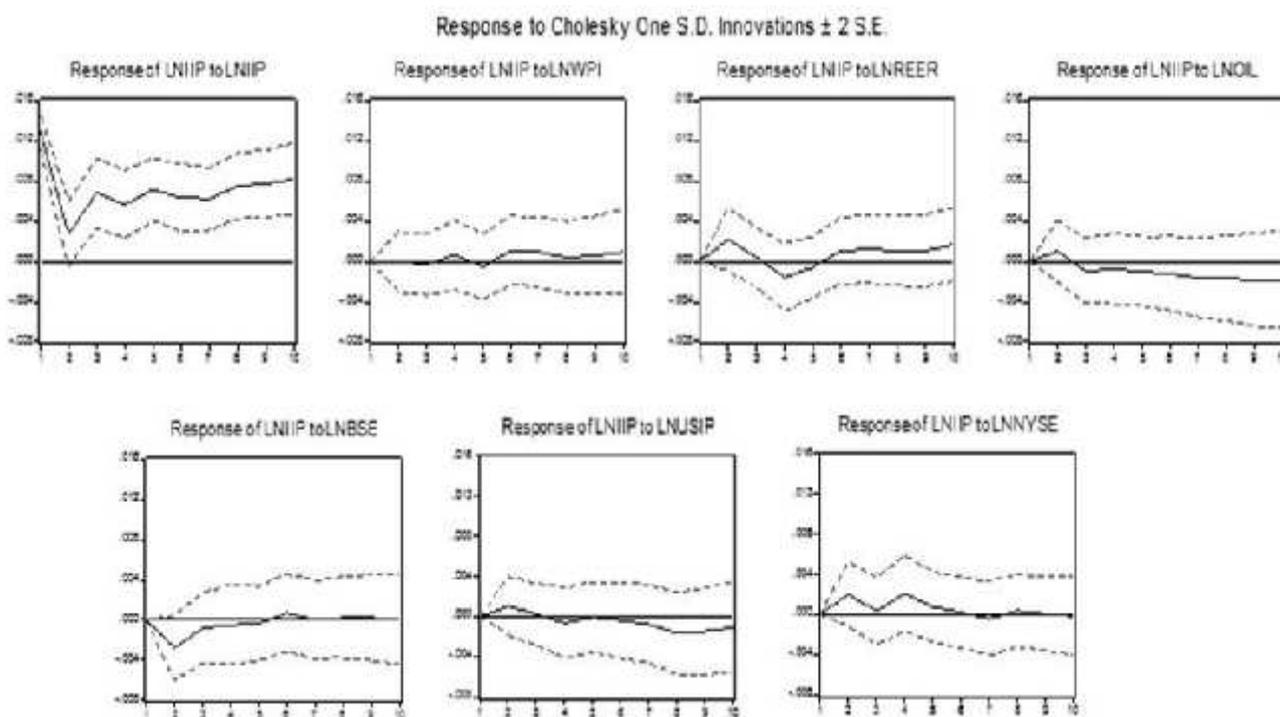
Source: Author's Calculation

Figure 10: IRF- Response of IIP (Crisis Period)
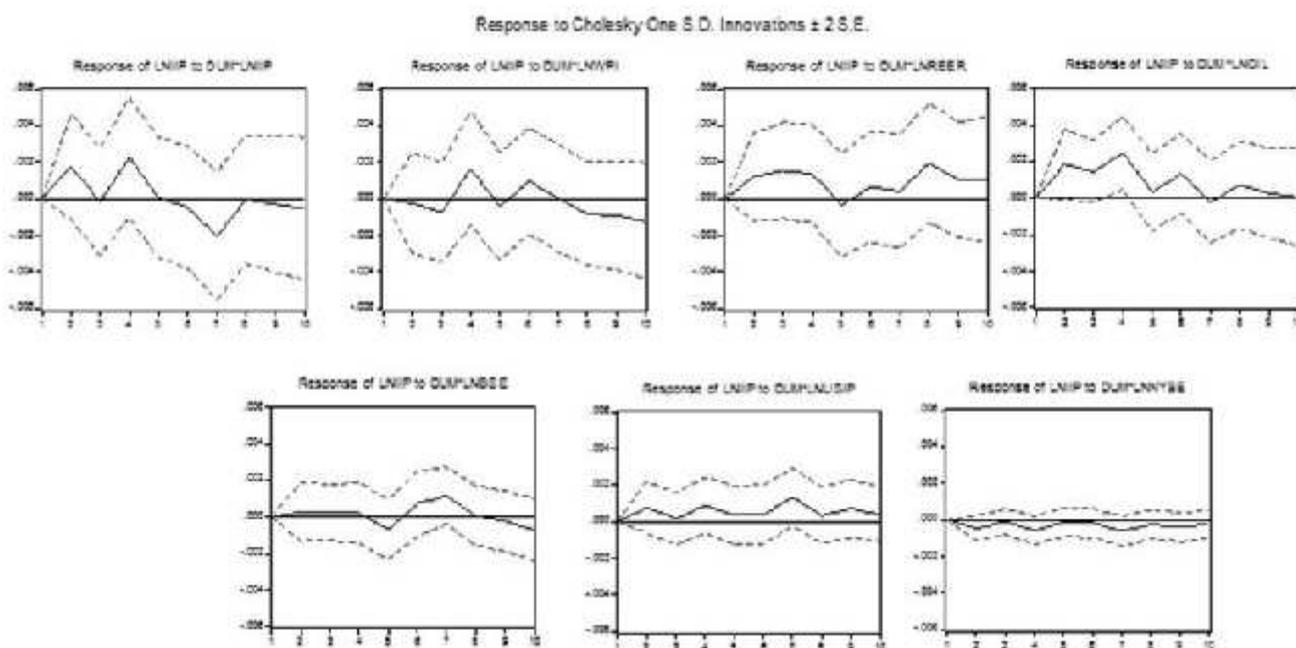
Source: Author's Calculation

      The IRF Figures 9 and 10 show that IIP reacts largely to its own shocks for the entire period of study and has lesser magnitude of response to these in the crisis period. It can also be observed that IIP responds significantly to the shocks in BSE, REER and NYSE for the entire period whereas it responds largely to the external oil shocks and REER during the period of crisis. The impact of the shocks of BSE on IIP is relatively subdued during the crisis period.

From the study of the two IRF figures, it is evident that the shocks in the domestic financial sector during the period of crisis were largely due to the shocks in the domestic macroeconomic variables rather than the external variables. This is attributed to the low level of financial integration as mentioned earlier.

Further, the study of Variance Decomposition is being carried out to see the contribution of the shocks given to each variable to the changes in the variance of the target variable. The Variance Decomposition has been run for the different time periods for the two target variables. The time periods are divided into three categories; pre-crisis, crisis and the post-crisis periods and another model has been run for the entire time period.

With regards to the target variable of the financial sector, BSE, majority of the changes in the variance of the variable are explained by its own shocks but WPI plays a significant role starting from the 5th month. The shocks in NYSE have a very negligible impact in their contribution to the changes in BSE. But when the model is divided into the different time periods, it is observed that the shocks in NYSE had a reasonable impact in the initial months for the pre-crisis and the post-crisis periods but during the crisis period, the impact was delayed which attributes to the effectiveness of the policy stances taken at that point of time. In the post-crisis period, a significant role in explaining the changes in the variance of BSE has been played by the shocks in the domestic financial variables such as Exchange Rate and FII. This explains that Indian economy has opened up financially after the crisis as compared to pre-crisis period. BSE also reacts to the shocks in the domestic macroeconomic variables in the post-crisis period. The impact of the shocks in IIP is significant in the 1st month for BSE then it reduces as time lapses. The shocks in WPI play a significant role in explaining the changes in the variance of BSE in the post-crisis period, especially after the 5th month, which is quite similar to the reaction of the variable in the entire timeframe.

In the entire time period of the study, the changes in the variance of IIP are majorly impacted by its own shocks whereas the shocks in the variables BSE, Oil prices show the impact 6th month onwards and NYSE 7th month onwards. The pre-crisis period gives a slightly different picture in which shocks in WPI playing a major role in influencing IIP after its own shocks. The shocks in other variables like the Oil prices, BSE, USIP and NYSE had some amount of impact after the 5th month with an increasing trend but not as much as that of WPI. The shocks during the period of crisis showed similar results to that of the pre-crisis period with the only difference being the prompt response of the variance of IIP to the shocks in all the variables. The impact of the shocks to WPI was delayed and the Oil prices showed a larger impact as the time progressed. This explains that the real sector in India is impacted due to the persistent shocks in the external sector. In the post crisis period the role of shocks to WPI has increased dramatically as compared to the pre-crisis and the crisis period as they explain almost half the changes in IIP from the 3rd month itself.

The current analysis shows that though the immediate impact of the US subprime crisis was observed on the financial variables, the shocks were transmitted from the real sector to the financial sector in the later stages, once the domestic macroeconomic variables were impacted by the crisis. The level of financial integration of India was less with the rest of the world till the crisis hit, whereas the domestic macroeconomic variables were more integrated with the external factors. A larger dependence of the domestic financial variables on the domestic macroeconomic variables explains the transmission of shocks from the real sector to the financial sector.

Conclusion

In conclusion, it can be stated that though the immediate impact of the US subprime crisis was observed on the financial variables of the Indian Economy, the channel of transmission of the shocks was observed to be from the real sector to the financial sector. The level of financial integration of India was less with the rest of the world till the crisis hit, but the domestic macroeconomic variables were more integrated with the external factors. A key reason for this can be the full current account convertibility and partial capital account convertibility. Also the domestic macroeconomic factors have a larger impact on the domestic financial factors which precisely explains why the channel of transmission of the shocks during the crisis was from the real sector to the financial sector. The credit for the subdued impact of the crisis on the Indian economy goes to the policy initiatives undertaken by the then Governor of RBI, Y.V. Reddy, who adopted the wait and watch policy before opening up India completely to the global financial volatilities.

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Impact of Visual Merchandising on Consumers' Purchase Intention in Organized Retail Industry of Ahmedabad City

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Abstract

Retailers in India are facing a fiercely competitive market and are finding it increasingly difficult to create a differential advantage based on product (merchandise), price, promotion, place, people and location. Therefore, at this point the store itself becomes an opportunity for market differentiation. This highlights the role of visual merchandising to present the products in a way that cause them to be sold quickly and helps the merchant create an individual retail image thereby differentiating it from other retailers. This study was conducted to explore the dimensions of visual merchandising which may affect the consumer buying behavior as well as study the effect of visual merchandising factors on purchase intention of consumers. The researchers explored the already existing dimensions of visual merchandising for designing questionnaire. The study was conducted in four malls of Ahmedabad city using structured questionnaire where in 384 samples were collected through mall-intercept method. Factor analysis was carried out using Principle Component Analysis, which deduced six factors of visual merchandising which affect consumer's purchase intention, namely: (i) Product arrangement & display; (ii) Signage; (iii) Store layout; (iv) Store ambience; (v) Window displays & mannequins; and (vi) Use of lighting. Correlation and regression tests were further carried out to check the correlation between the purchase intention of consumers and visual merchandising factors. The findings suggest that there is a greater effect of product arrangement, window displays and mannequins on the purchase intention of consumers.

Keywords: Visual Merchandising, Retail industry, Purchase intention, Store display

Introduction

According to the 16th Global Retail Development Index by management consulting firm AT Kearney India has taken the top spot in retail sales in 2017, which surpassed the $1tn-mark achieved last year and the sector is expected to double in size by 2020. The government's decision to relax FDI regulations in key areas of the retail sector has provided further boost to retail growth in India.The retail industry is one of the largest among industries, accommodating 8 % of the country's employment and accounts for more than 10 % of the country's GDP. Over the last decade, there is a dramatic shift happening from unorganized to organized retailing in Indian retail industry. The unprecedented growth of the industry is paving its way toward becoming one of the most happening places in Indian business history. The substantial growth of this sector attributes for the transformation of tastes and choices among Indian customers. The customers are found to be expecting more and more every time when they step into a store (Sharma, 2012).

Organized Retail Penetration in India was 8% in 2015 compared with that in other countries, such as 85% in the US. This indicates strong growth potential for organized retail in India. In 2020, it is estimated that organized retail penetration share would reach 24% of the overall retail market (KPMG Report, 2015). The demand drivers of online retailing are rising income levels, increased urbanization, growing aspiration levels and appetite to experiment as well as credit availability. New entrants, expansion plans of existing players, infrastructure augmentation as well as emergence of new categories are the drivers behind supply.

Retailers in India are facing a fiercely competitive market and are finding it increasingly difficult to create a differential advantage based on product (merchandise), price, promotion, place, people and location. Therefore, at this point the store itself becomes an opportunity for market differentiation. These days customers have many shopping choices, as the merchandise is available easily. Customers also make purchases on the internet as they don't have to worry about the long hours of operation, parking or getting large purchases home. So, in comparison with the past, development in technology has made retailers job more difficult. Retailers need to create an exciting

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store design with innovative merchandising techniques to make people come and visit the stores and convert the visit into a purchase. Here comes the role of visual merchandiser which creates the store design.

Visual merchandising is needed in today's organized retail industry as the primary purpose of merchandising is presentation of products in a way that cause them to be sold quickly, and at the highest possible retail margin. Secondly, the visual seduction that charms the customer results in add-on-sales. Moreover, the third role of merchandising is the creation of the merchant's individual retail image, which relates directly to the lifestyle of the community and the customer. The targeted result of the activity of visual merchandising is ongoing sales and customer loyalty (V. Gibson). Thus, it has become increasingly important to study visual merchandising in organized retail industry and help marketers understand their strategy of differentiation.

Review of Literature

Visual merchandising has been previously defined by Walters and White (1987, p. 238) as, "any activity which coordinates effective merchandise selection with effective merchandising display". The modern idea of visual merchandising was first used widely as a business tool in the retail environment, and was written about prominently in the 1990's by McGoldrick (1990) who stated that visual merchandising is about drawing shopper's attention, by developing favorable presentation and consistent arrangements of merchandise. Visual merchandising communicates the product that retailers want to sell by effective presentation of the same which creates an impact on the customers in terms of their purchase and builds a positive image of store in customer's mind. Visual merchandising has also been called as the science of shopping that tells one ways to use those tools, ways to design signs that consumers will read and ways to make sure each message is in the appropriate place. It also tells retailers how to arrange display that consumer can find comfortably and easily, so that they can reach every part of the store (Underhill, 2009).

There are many ways in which visual merchandising strategy is used to create positive store atmosphere. For example, visual merchandising can be instrumental in developing the way in which brands are perceived instore by shoppers (Kerfoot *et al.*, 2003; Davies and Ward, 2005; Kent and Stone, 2007; Park *et al.*, 2015). Positive perceptions can be created by fostering a link between the product and the brand by visually portraying that brand image to the customer (Park *et al.*, 2015). Pantano (2016) studied the importance of exterior store atmospherics with emphasis on the storefront windows on consumers' behavior, with an objective to examine consumers' store choice based on the storefront windows, with emphasis on the integration with interactive technologies. There have been changes in consumer demand along with the availability of innovations for enhancing the retail process including new interactive tools for supporting shopping experiences that may affect consumers' preferences of a certain store. The importance of Window display is an important criterion of visual merchandising was also reiterated by Mehta and Chugan. According to the authors, window display was important as it created first impression of the store on shoppers (Mehta and Chugan, 2012, 2013). Window display also attracts the customers inside the store (Bakarne, 2008). Like window display, store front is also another entry point of the customers which helps them decide whether to enter the store or not. Therefore, the arrangement of the merchandise in the store front should be impressive and should be such which motivates customers to enter (Schneider, *et al.*, 2009). Signage is also an important aspect of visual merchandising as it enables customers to purchase the product without any help of salesperson (Rook and Hoch, 1985; Mehta and Chugan, 2013).

One more visual merchandising tool Is the use of in-store signage, particularly signage that is brand related and can be used as a communication tool with shoppers, conveying appropriately the brand's image (Lea-Greenwood, 2009). In-store signage is found mainly in two forms: first type being Institutional signage, the signage that tells shoppers about where the exits are or directs them to the changing room. On the other hand, Point of Purchase (POP) signage communicates both written and visual information about the brands, prices and promotions using posters, tags and graphics (Barnes and Lea-Greenwood, 2010). Elements such as the position of a product, the promotional material and the nature of the display, in places such as windows, or on mannequins are also important visual elements in brand linkage with the store (Moore and Birtwistle, 2004; Davies andWard, 2005; Park and Lennon, 2009; and McColl and Moore, 2011). Lot of past literature has focused on the link which visual merchandising creates to store atmosphere and the influence that it has on store atmosphere creation. The experience, emerged as an extension of the store atmosphere research, encompassing atmospherics, visual

merchandising, retail branding, design and managerial practices (Lea-Greenwood, 1998; Kerfoot *et al.*, 2003; and Kent and Stone, 2007). Without visual merchandising, the total store experience could not be created. According to Wade Clarke, Perry, and Denson (2012), the tangible physical aspects of a store, like the visual merchandising aspects were even more effective when combined with the intangible store atmospheric elements.

Research in the area of visual merchandising has tried to determine exactly what elements of the practice influence shopper behavior, as well as how and why certain behaviors are impacted by visual merchandising. For instance, Mannequins as a display element have been used in retailing since the inception of the modern retail store, and are still important for exposure and presence of products in addition to playing a role in influencing shoppers to purchase the product (Levy and Weitz, 1996). Customers are able to mentally place their face on the mannequin and assess the products in a kind of mirror image (Levy and Weitz, 1996; Law *et al.*, 2012). Also impacting shopper response is the use of coordination and colour combinations that reflect the status of the store and the displays they are found in, or the brand they are representing (Wu *et al.*, 2013). Color coordination has also been found to result in significantly more pleasure from shopping (Wu *et al.*, 2013). Fixtures and interior decor have also been identified as key criteria in which consumers assess quality of a store and its merchandise, as well as giving cues on where to search for particular products (Ogle and Schofield-Tomschin, 2002; Hefer and Cant, 2013; and Wu *et al.*, 2015). One more factor which has been identified as resulting in a higher likelihood of purchase is staff people wearing the product, alongside the use of visible, appealing instore signage to make shoppers more likely to try the product (Ogle and Schofield-Tomschin, 2002; and Wu *et al.*, 2015). Hefer and Cant (2013) concluded that consumers are influenced and impacted upon by visual merchandising, generally on a subliminal level, with small cues pointing them in particular directions, or subtly influencing them to feel a particular way, or even to make a certain choice.

Research Objectives and Design

Research Objectives

- To explore the dimensions of visual merchandising which may affect the consumer buying behavior

- To study the effect of visual merchandising factors on purchase intention of consumers.

Research Design, Sample and Data

The research design is divided into two parts, the first part being exploratory in nature and the second part being descriptive. In the exploratory study the dimensions of visual merchandising were found from the existing literature by review of the same. According to the existing literature, there are many dimensions of visual merchandising like Store exterior (sign or logo, marquee, banner, windows, landscaping), Store layout (size and location of each department, permanent structures, fixtures, customer traffic pattern), Store interior (mannequins, seating, floor and wall coverings, lighting, colors, interior signage, graphics) and Interior display (Point-of-purchase displays, decorative/functional props) which affect the consumer buying behavior. These dimensions have been taken into consideration while designing the questionnaire. The study intended to focus on the impact of visual merchandising in the organized retail category. The sample size of the research was 384 which was calculated using the formula $N=(z2) *pq/e2$ wherein the value of z is 1.96, p and q are 0.5, and e is 0.05.

The sampling technique was mall intercept method wherein shoppers who walked out of the store were surveyed with the help of structured questionnaire. Thus, sampling procedure used by researcher was purposive sampling. The survey was conducted in retail malls of Ahmedabad, namely, Alpha one mall, C.G. square mall, Central mall and Gulmohar mall. ANOVA and factor analysis were run on the data using SPSS software.

Research Hypothesis

H_1: Product arrangement and display in the store has an effect on the purchase intention of consumers.

H_2: Signage in the store has an effect on the purchase intention of consumers.

H_3: Store layout has an effect on the purchase intention of consumers.

H_4: Store ambience has an effect on the purchase intention of consumers.

H_5: Window displays and mannequins in the store has an effect on the purchase intention of consumers.

H_6: Use of lighting in the store has an effect on the purchase intention of consumers.

The hypotheses have been formed based on the visual merchandising factors found from literature review. The dependent variable of study is purchase intention of consumers and independent variables are Product arrangement & display, Signage, Store layout, Store ambience, Window displays & mannequins, Use of lighting. These variables have individual variables which are tested on five-point Likert scale which ranged from strongly disagree = 1 to strongly agree = 5.

Analysis and findings

The analysis of data is carried out using Reliability test, KMO and Bartlett's test, Principal component analysis, Pearson correlation and Regression. Hypothesis testing is done using regression test whereas factors influencing consumer purchase intention are deduced using the principle component analysis.

Table 1: Reliability Test

Cronbach's Alpha	N of Items
0.787	26

Cronbach's alpha test was conducted to assess the internal consistency reliabilities of the Questionnaire. For variables, the value of 0.787 indicated adequate reliability.

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.537
Bartlett's Test of Sphericity	Approx. Chi-Square	1654.07
	df	276
	Sig.	0.000

KMO and Bartlett's test showed that the significance level is 0.000. The Kaiser-Meyer-Olkin Measures of sampling adequacy is 0.537 which is greater than the expected value of 0.5 and hence it is feasible to run factor analysis.

Table 3: Factor Analysis

Product Arrangement and Display (Factor 1)	Component value
A product being placed like a mess means that they are cheap	0.637
You don't mind picking up your fashion item you like the most even from a mess	0.737
The more shades, styles and variety are offered for you to choose from, the more likely you are going to buy the product	0.723
Product arranged according to their shades, colour, design and size attracts your attention and helps you in making a right choice.	0.582
When you are waiting for payment, you would pay attention to product items placed at the counter which helps you in buying the missed-out products	0.662
Products on sales gathered at one place during EOSS (end of season sale) can stimulate your buying intentions and reduce your shopping efforts.	0.830

Signage (Factor 2)	
Signage in form of tags increases awareness and offers you more information about the product (e.g. Price, material) and attracts your attention and navigates you towards the merchandise	0.691
The more information you have got about the product through display along with signage the more likely you will buy it	0.580
Store layout (Factor 3)	
You tend to buy more when your product is placed with another related product.	0.707
You spend more number of hours of shopping than actually required in a well - organized, well arranged, self-servicing retail outlet with good ambience.	0.848
A well-planned store with proper layout simplifies your shopping procedure	0.867
You prefer to shop only in those retail outlets which has good space to move in with broad aisles and proper layout	0.783
Store ambience (Factor 4)	
You would like to buy the products in an environment which allows you to touch and check the product	0.655
Store with music whispering can let you feel relaxed and helps to make a right decision while shopping	0.639
Scents and fragrance in the store enlivens your mood, catch your attention and you buy more than what you have planned	0.529
Mood generated by music, fragrance in the store puts you at ease and stimulate your buying intentions	0.658
A good ambience with sensory retailing reliev es stress, makes your day happy and makes you a fun shopper.	0.503
Window displays and mannequins (Factor 5)	
A well -arranged display counter is very necessary to help consumers pick up the right merchandise.	0.791
You generally pick up styles and colour which are put up on mannequins or are wore by the models in the visual display	0.838
The colourful assortments of products in the window display could arouse your awareness and increase your interest to go into the store	0.819
You always pay attention to different window displays which gives you the idea and information about the merchandise available which in - turn helps you to start your buying process.	0.795
Frequent changes of the window display arouse your interest towards products of that store and also help you to learn about new merchandise arrivals.	0.833

Use of lighting (Factor 6)	
Your interest towards a product can be raised if you can see it clearly with the help of proper lighting and fixtures and helps you to make a right choice	0.763
Back-lighted signs helps to get the clear information to pick up the right product	0.785
Mood generated by using dimmed lights increase your interest of shopping and gives a pleasant shopping atmosphere to concentrate on products	0.806
The use of lights in different brightness to decorate the store would stimulate your preference towards product items and attracts your attention and also increases the possibility of making purchase	0.568

Factor analysis is carried out through Principle Component Analysis method. All 26 statements have been reduced to 6 factors namely (i) Product arrangement & display; (ii) Signage; (iii) Store layout; (iv) Store ambience; (v) Window displays & mannequins; and (vi) Use of lighting. These have been deduced as the factors of visual merchandising which affects consumer purchase intention. These factors have further been used as independent variables for Pearson correlation test as well as regression analysis.

Table 4: Correlation and Regression

Hypothesis	Variables	Pearson Coefficient	R-square Coefficient	p-Value	Result
H_1	Product arrangement and display	0.753	0.567	0.000	There is a significant effect of Product arrangement and display in the storeon the purchase intention of consumers
H_2	Signage	0.534	0.285	0.000	There is a significant effect of Signage on the purchase intention of consumers
H_3	Store layout	0.413	0.171	0.014	There is a significant effect of store layout on the purchase intention of consumers
H_4	Store ambience	0.355	0.126	0.006	There is a significant effect of store ambienceon the purchase intention of consumers
H_5	Window displays and mannequins	0.685	0.469	0.03	There is a significant effect of window displays and mannequins on the purchase intention of consumers
H_6	Use of lighting	0.265	0.070	0.000	There is a significant effect of u se of lighting in the store on the purchase intention of consumers

Pearson correlation tests were conducted to see the correlations between the dependent variable - purchase intention and independent variables which are mentioned in table 4. Linear regression analysis was also conducted for the hypothesis testing. Discussion on hypothesis testing result is done below:

H_1: The result of Pearson correlation test shows a significant correlation (0.753) between consumer purchase intention and product arrangement & display in the store. The regression analysis also found that product arrangement and display have a moderate impact (0.567) on customers' purchase intention. This suggests that having a product arrangement & display liked by customers can lead to positive purchase intention among consumers.

H_2: The result of Pearson correlation test shows a significant correlation (0.534) between consumer purchase intention and signage in the store. The regression analysis found that signage in the store has a low impact (0.285) on customers' purchase intention. This suggests that promotional signage in a store, although weak, but does lead to positive purchase intention among consumers.

H_3: The result of Pearson correlation test shows a moderate correlation (0.413) between layout of the store and consumer purchase intention. The regression analysis found that signage in the store has a low impact (0.171) on customers' purchase intention. This suggests that layout of the store, although weak, but does lead to positive purchase intention among consumers.

H_4: The result of Pearson correlation test shows a weak correlation (0.355) between ambience of the store and consumer purchase intention. The regression analysis found that store ambience has a low impact (0.126) on customers' purchase intention. This suggests that ambience of the store, although weak, but does lead to increased purchase intention among consumers.

H_5: The result of Pearson correlation test shows a significant correlation (0.685) between window display & mannequins in the store and consumer purchase intention. The regression analysis found that window display & mannequins have a moderate impact (0.469) on customers' purchase intention. This suggests that attractive window display and mannequins lead to increased purchase intention among consumers.

H_6: The result of Pearson correlation test shows a significant correlation (0.685) between window display & mannequins in the store and consumer purchase intention. The regression analysis found that window display & mannequins have a moderate impact (0.469) on customers' purchase intention. This suggests that attractive window display and mannequins lead to increased purchase intention among consumers.

Conclusion

This study was conducted to inspect some factors of visual merchandising which manipulated the consumer purchase intention. The main finding of the study was that consumers' purchase intention is positively manipulated by visual merchandising factors. Results of the study proved that consumers' purchase intention is significantly influenced by Product arrangement & display, Signage, Store layout, Store ambience, Window displays & mannequins and Use of lighting. According to the findings of the study, product arrangement & display as well as mannequins & window displays have a moderate impact on consumers' purchase intention. The reason behind this finding is that the consumer can visualise the products which are displayed in the store as well as on the mannequins and thus it attracts the consumers and increases their purchase intention. Other factors like signage, layout, ambience and lighting of the store have also been found to significantly affect the purchase intention of consumers but the impact of these factors on purchase intention of consumers is weak. Nonetheless, these four factors (signage, layout, ambience and lighting of store) can be made favourable so as to make consumers' experience in the store positive and therefore increase the purchase intention of consumers. Stores/Marketers can make use of these visual merchandising factors to increase

Limitations of Study

Sample was collected only from the city of Ahmedabad. Thus, the sample may not be geographically representative. The judgements of many outside the chosen participants were not represented. Moreover, the study is not longitudinal and is confined to only one point of time, when the survey was undertaken.

Future Scope of Study

This study was specific to only a few factors of visual merchandising in four stores of Ahmedabad. It did not investigate in detail regarding factors of visual merchandising that affect each product category individually. This study was a generalization of visual merchandising factors affecting consumers' purchase intention across all categories in malls. Therefore, further studies can investigate whether there is any difference between visual merchandising factors affecting consumer's purchase intention across different product categories.

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Determinants of Indian Exports: An Empirical Investigation of the Agriculture and Services Sectors

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Abstract

Exports is an important sector in an economy, especially it has gained prominence in the recent times as the countries are becoming highly integrated. Since India is a net importer, exports of the country have a crucial role to play in providing foreign exchange to finance the required imports. This study aims to empirically examine the various determinants of the Indian exports with a special attention to the agriculture exports and the services exports over the period of 1980-81 to 2014-2015. The impact of several domestic and external variables on the exports is analyzed with the use of OLS regression. The analysis shows that the Indian exports are highly influenced by the stability of the domestic variables such as GDP, GFD, GDCF and it also depends on the external conditions like the world income and the REER. Besides the findings suggest that the Indian exports cannot be influenced much by the devaluation of the currency as the M-L condition for the Indian case is found to be unsatisfied.

Key words: Agriculture Exports, Service Exports, M-L Condition, OLS, Currency devaluation

Introduction

The external sector has overwhelmingly gained importance in the recent times due to the increased integration of the world economies. The nations are no longer confined to their own economic activities but are constantly expanding their capabilities. It has led to an enormous increase in the world integration. World now stands united in the economic front as the activities of one nation go in tandem with the others and the consequences are also shared by all. Creation of an international platform for the nations to interact among each other has led to numerous advantages and also various complexities of different nature. The higher the degree of integration, more will be the impact of the global shocks on the nation, so a country has to prepare itself for such uncertainties which arise suddenly in some part of the world.

India's international trade has received a boost as a result of the growing integration and certain other factors such as the reforms of 1991 and other subsequent reforms in the external sector, namely, the exchange rate policies, opened the Indian economy. Following the success of other Asian countries, the realization dawned on the policy maker that India can no longer remain isolated from the other world economies. This proved to be an important landmark on the history of India as it shifted its focus of import restriction towards a more liberal approach. The economy did not respond immediately until the 2000s when the Indian economy stabilized to a great extent and was on a robust growth path until the crisis of 2008. Though the Indian economy was well equipped to face the challenges, it could not escape the ordeal setup by the western world.

The external sector is an essential component in a nation's development and needs to be given attention as it is influenced by various factors both domestic and global. India, being a net importer of goods, needs to focus on the exports. The growth of exports should be at least to the extent that it provides for the ever increasing imports of the country. Since India is a developing country, import restriction would be meaningless as it would curtail the development prospects and hamper the overall growth. In order to prevent this, exports should be the focus as it provides for the foreign exchange requirements and provides a comfortable import cover.

Exports and its various determinants has become a relevant subject of study among many scholars. Various articles and research papers have been published regarding this relationship between the exports and its determinants. P.K. Mishra (2011) concludes that exports and GDP are positively related and also a very high degree of correlation exists between them and rejects the export-led growth hypothesis for India. Pradeep Agarwal (2014) concludes that GDP caused exports during the period 1960 to 2012, thus rejecting the export-led growth hypothesis. As per C. Veeramani (2008) the appreciation of REER leads to a fall in the merchandize exports. Yin-Wong Cheung

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and Rajeswari Sengupta (2013) show that, appreciation of currency has a greater impact than deprecation, and appreciation has a negative impact on Indian firm's exports. Rajiv Kumar, Geetima Das Krishna (2015) found that fall in exports was due to the fall in the global economy, which decreased demand for Indian export. Alif Darrat (2001) concluded that even when the traditional path of exchange rate is not taken, budget deficit still has a significant and independent effect on the trade deficit. Ashok Parikh and Bill Rao (2006) stated that the causation runs from the domestic to external deficits. According to Rajasekar and Malabika Deo (2016) fiscal deficit and other macroeconomic factors have a cointegrating relationship with the trade deficit in India. As per Pravakar Sahoo *et al* (2013) India's service exports depend on the world demand, exchange rate and endowment factors. Grunfeld and Moxnes (2003) have found a strong home effect that influences trade in services. Tarek Tawfik Alkhteeb *et al* (2015) concluded that depreciation of the Indian rupee since the 1991 reforms has led to rapid growth of agriculture exports. For David Bonansi (2014) key determinants of exports are found to be production, competitiveness in exports, volume of world exports and the prices of exports. As per Ritesh Pandey (2013) the M-L condition is valid for Indian case. Tripti and Gargi Bandyopadhyay (2016) found that M-L condition in the post reforms period has reduced. The remainder of this paper is organized as follows: The Data and Methodology section gives an outline of the variables used and the methodology adopted in this study. Empirical analysis and findings present the results obtained in the analysis of the study. The paper ends with the summary and conclusions of the study.

Data and Methodology

The data used for the empirical estimation of demand and the supply determinants of exports is the annual data from the year 1980-81 to 2014-2015, and the data for the analysis of agriculture and services exports is for 1990-91-2015. These data have been chosen based on the various literatures and in accordance with the objectives of the study. The various data have been taken from the *RBI Handbook of Statistics,* and the World Bank. The variables and the notations being used in this study are given in Table 2.1.

Table 2.1: Variables and Notations

Notations	Variables
EX	Exports
GDP	Gross Domestic Product
IMP	Imports
EXRATE	Nominal Exchange Rate
REER	Real Effective Exchange Rate
GFD	Gross Fiscal Deficit
WGDP	World GDP
GDCF	Gross Domestic Capital Formation
FDI	Foreign Direct Investment
INTRATE	Domestic Interest Rate
INFDIF	Inflation Differential
LNAGIN	Log of index of agriculture production
LNPCI	Log of per capita income
LNWAGIMP	Log of world agriculture imports
LNWPI	Log of Wholesale Price Index
LNFER	Log of fertilizer use
LNIRI	Log of gross irrigated area
LNWGDP	Log of world GDP
LNEXRATE	Log of exchange rate
LNMANEX	Log of manufacturing export from India
LNFDI	Log of foreign direct investment
LNFIN	Log of financial development
LNHC	Log of human capital
LNINFIN	Log of index of infrastructure
LNAGREX	Log of agriculture exports from India
LNSEREX	Log of services exports from India
LNUVEX	Log of unit value index of Indian exports
LNUVIMP	Log of unit value index of Indian imports

With regard to the methodology adopted in this study-the OLS regression was employed to check the possible determinants and their impact on the dependent variable.

Empirical Analysis and Findings

Exports of the country has two aspects, the demand for exports and the supply of exports, so the macroeconomic variables can also be categorized on the basis of the above two broad categories. The demand side factors include those factors which influence the volume of export demanded by other nation and the supply side factors are those that directly influence the volume of export supply of the country as these variables will impact the export decisions of the exporting firms and also their capacity to export. Further analysis is done highlighting the factors which impact the Indian exports in a disaggregate level, which include the determinants of agriculture exports and the determinants of the services export of the nation. Certain additional analysis has been done to confirm the validation of the export-led growth hypothesis, whether it is valid for India or not. We have also calculated the M-L condition for India, to see whether devaluation is a good measure of correcting the disequilibrium or not.

Before we fit the model it is customary to check for the stationarity of the variables, to do this we have used the Augmented Dickey Fuller Test. The results of the Augmented Dickey Fuller Test conducted for the variables used in the models are given in Table 3.1.

Table 3.1: Augmented Dickey Fuller Test

Sl. No.	Variable	Levels	1st Difference	2nd Difference	Inference
1.	*EX*	-4.68*	-	-	I(0)
2.	*GDP*	-5.29*	-	-	I(0)
3.	*IMP*	-4.17**	-	-	I(0)
4.	*EXRATE*	-4.73*	-	-	I(0)
5.	*REER*	-0.41	-4.77**	-	I(1)
6.	*GFD*	-6.20*	-	-	I(0)
7.	*WGDP*	-4.53*	-	-	I(0)
8.	*GDCF*	-6.50*	-	-	I(0)
9.	*FDI*	-5.57*	-	-	I(0)
10.	*INTRATE*	-3.55**	-	-	I(0)
11.	*INFDIF*	-2.54	-8.10*		I(1)
12.	*LNAGIN*	-3.63**	-	-	I(0)
13.	*LNPCI*	-0.72	-5.69*	-	I(1)
14.	*LNWAGIMP*	-2.15	-4.97*	-	I(1)
15.	*LNWPI*	-0.18	-2.76	-7.70*	I(2)
16.	*LNFER*	-2.95	-7.49*	-	I(1)
17.	*LNIRI*	-1.86	-7.53*	-	I(1)
18.	*LNWGDP*	-2.73	-4.54*	-	I(1)
19.	*LNEXRATE*	-1.28	-4.43*	-	I(1)
20.	*LNMANEX*	-1.04	-6.13*	-	I(1)
21.	*LNFDI*	-3.51***	-	-	I(0)
22.	*LNFIN*	-1.04	-5.02*	-	I(1)
23.	*LNHC*	-0.57	-1.50	-4.18**	I(2)
24.	*LNINFIN*	-0.43	-5.06*	-	I(1)
25.	*LNAGREX*	-3.90**	-	-	I(0)
26.	*LNSEREX*	-2.04	-3.45***	-	I(1)
27.	*LNUVEX*	-1.49	-4.96*	-	I(1)
28.	*LNUVIMP*	-1.70	-5.85*	-	I(1)

Note: *, ** and *** indicate Stationary at 1%, 5% and 10% level of significance.

The variables are transformed into their log form for certain models and most of these variables are stationary at 1st difference, i.e., integrated at I(1). From the table we can also see that the variables WPI and the Human Capital are stationary only at the second difference i.e. integrated at I (2).

Model 1: Export Supply Function

EX = -3.96+1.52*GDP(-1)-0.003*D(INFDIF(-1))+0.55*EXRATE + 0.56*IMP-

  (-1.18) (3.29) (-0.38)   (4.67)   (7.14)

0.06*INTRATE(-1) – 0.07*GFD + 16.37*DUM

(-2.13)   (-2.45) (6.73)

R-squared=0.82   Durbin-Watson stat=1.95

Adjusted *R*-squared=0.78 *F*-statistic=18.70

The model explains the supply determinants of exports of India, the variables used are quite significant as their *t*-statistics suggest except for the variable inflation differential, we can also tell that the variables under consideration are able to explain about 78% (adjusted *R*-squared) of the model. The domestic GDP has a significant impact on the supply capacity of exports, from the model we can see that when GDP increases by 1 %, the exports tend to increase by about 1.52 %. So we can say that higher economic growth in India will also raise the level of exports of the country due to boost given to the domestic economic activities. It can be seen that 1 % increase in imports will cause a 0.56 % rise in the exports, this is mainly because the items of both imports and exports are highly related. India exports high volume of crude oil, gold and other precious metal, machineries, all these are used to make finished products and are again exported. Existence of highly efficient refineries in the country helps to produce oil products ready or exports, thus we can see that a large bulk of India's imports act as raw material for the exports of the country.

Dummy variables have been used for the years 1985, 1993, 1998, 2000 and 2015. It has been found out that there has been a highly significant change in the exports of India, which may have been due various domestic or external circumstances. In the year 1985, Indian exports declined drastically from about Rs. 177.44 bn to about Rs. 108.95 bn, mainly due to fall in exports of two major items of exports. There was a tapering off of the crude oil exports and also the exports of gems and precious stones declined due to the recessionary conditions in the industrial countries. Also during the period 1979-1986 there was a steady appreciation of rupee by almost 20%. In the year 1993, the Indian exports to Rupee Payment Area, i.e., erstwhile Soviet Union fell from $ 255 mn to about a mere $ 56 mn. Also there was a transporters' strike during the months of August and September. In 1998 the growth rate of exports fell to 9.49% from 28.64% in 1995-96, mainly due to the impact of the East Asian Crisis. The crisis resulted in the re-evaluation of the emerging markets as investment destination. The appreciation of rupee in REER terms was mainly because of the devaluation of the surrounding East Asian economies. The fall in the growth maybe also due to domestic factors such as Infrastructure constraints, high transaction cost and restriction of agriculture exports. In the year 2000, the semi recession in the US due to the Tech Bubble hampered Indian exports as US is one of the major export destinations of India. Recently also the exports has suffered a setback due to slowdown in the global economy so the growth of exports went to negative territory in 2015. The impact can also be attributed to the volatility in the global financial market.

The Durbin-Watson Statistic says that there is positive auto co-relation problem in the model which is common in time series data. The *F*-statistic 18.70 which is enough high, concludes that equation is significant. So we can accept the alternative hypothesis that all the coefficients of the explanatory variables are simultaneously zero.

Stability Test

The recursive residual of the above estimated OLS regression doesn't fall outside the standard error band. Hence the parameters of the equation are stable across various subsamples of the given data.
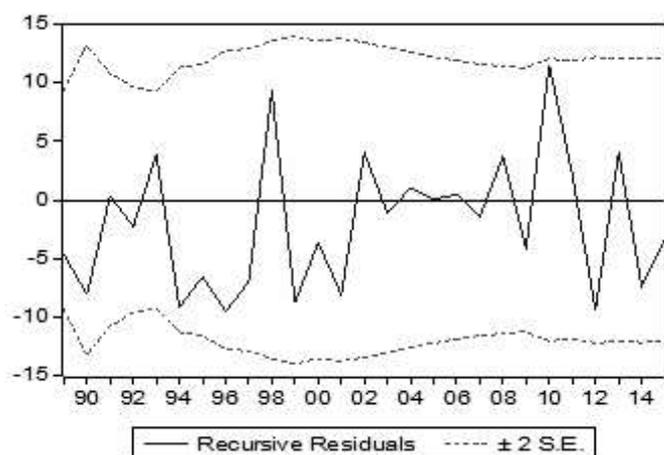

Figure 3.1: Stability Test for Export Supply Function

Model 2: Export Demand Function

EX = 5.51 + 1.41*WGDP(-3) + 0.40*GDCF(-1) + 0.41*IMP + 0.01*FDI(-2) -

(2.72) (2.06)   (3.73)   (5.08)   (1.64)

0.07*GFD - 0.78*D(REER) - 0.06*INTRATE(-1) + 16.36*DUM

(-2.50)   (-4.56)   (-2.01)   (6.86)

R-squared=0.87   Durbin-Watson statistic=1.63

Adjusted *R*-squared=0.82   *F*-statistic= 20.42

The variables such as world income and REER have been added to analyse their impact on the demand for exports. When we analyze the exports we have to look at both the factors, so these variables have been added in the presence of the domestic variables. From the model we can see that the variables taken in the model explain about 82% of variations (adjusted *R*-squared) in the dependent variable. So we can say that the major influence on the dependent variable has been captured by these variables.

The Durbin-Watson Statistic is 1.63 which means that the problem of auto correlation is also low. The *F*-statistic 20.42 is high and we can conclude that the equation is significant. So we can accept the alternative hypothesis that all the coefficients of the explanatory variables are simultaneously zero.

The addition of external variables such as the world GDP and the REER have yielded good results. According to the above equation we can infer that world GDP variable is playing a vital role in determining the export from India to the rest of the world. From the model, when the World income increases by 1 %, the exports from India rise by about 1.41 %. The increase in income of the nations around the world will lead to a higher purchasing power and so the demand for exports rises, but this transmission is not immediate as it may take almost around three periods for the impact to be felt on the Indian exports.

Another major determinant of exports is the REER, the 1% increase in REER will cause the rupee to appreciate and so the exports will fall by almost 0.78 % as we know from the theory that the appreciation of the domestic currency will make the exports costlier in the international market. The domestic investment in various areas such as infrastructure development like building of proper transportation connectivity, better roads, and also investments in production activities will raise both the quality and the quantity of the Indian exports. We can see that the rise in investment by 1 % will lead to rise in the exports by 0.40 %.

Among these variables World GDP, REER, GDCF have a higher magnitude of impact on exports. The effect of world GDP can be seen during the years when the nations faced various crises and the level of economic activity went down. Recently also due to the slowdown in the world economy the Indian exports suffered a setback, the growth of exports went to negative and now as the world economy is reviving, the Indian exports is also on a correction path. Thus World GDP, REER and GDCF are the major determinants of export.

Stability Test

To check the stability in parameters of the equation we have used OLS estimation recursive residuals. Here we can see from Figure 3.2 that the parameters are stable across various sub samples except for the year 2011.
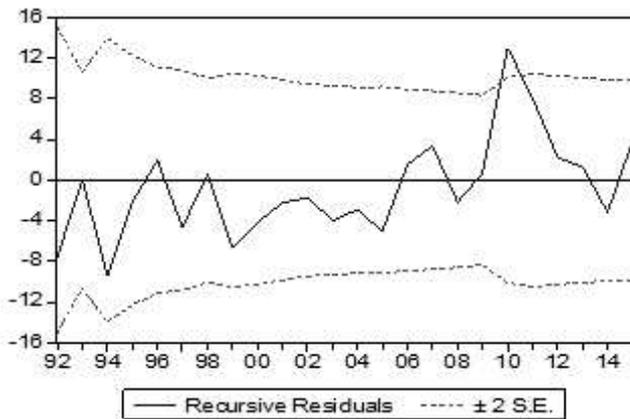

Figure 3.2: Stability test for export demand function

Model 3: Agriculture exports

$$LNAGREX = 2.25 + 0.97*D(LNAGIN(-1)) - 13.95*D(LNPCI) - 0.01*D(LNREER(-1)) +$$

$$(15.45)\,(1.79) \qquad\qquad (-5.20) \qquad\qquad (-1.53)$$

$$2.13*D(LNWAGRIIMP(-1)) - 5.77*D(D(LNWPI(-1))) + 4.12*D(LNFER(-2)) +$$

$$(2.65) \qquad\qquad (-2.56) \qquad\qquad (5.44)$$

$$3.82*D(LNIRI(-2)) + 0.94*DUM$$

$$(1.98) \qquad\qquad (6.60)$$

R-squared=0.87   Durbin-Watson statistic=1.59

Adjusted R-squared=0.82 F-statistic= 20.41

This model has been built to analyze the Indian agriculture exports, and its various determinants. The R-square suggests that the dependent variables taken in the model explain about 82% (adjusted R-squared) changes in the dependent variable. In this model we have taken various domestic as well as international variables that are likely to influence the agriculture exports. These variables have been transformed to their natural log form so the coefficients of the variables are measured in terms of the elasticties.

From the model, the major determinants of the agriculture exports are WPI, PCI, input variables such as fertilizer and irrigation and world agriculture imports. WPI is one of the major determinants of agriculture exports which should be kept under acceptable levels. The agriculture export is relatively price elastic compared to other items of exports, so the fluctuation on the WPI will have a higher impact on the agriculture exports as it is of non-essential nature. Here, we can see that the 1% rise in the WPI inflation will lead to fall in the agriculture exports by 5.77%. So, we can say that when there is inflationary situation in the economy, the exporters of agriculture commodity are hampered the most.

When the per capita income rises, the purchasing power of the people rises, this will lead to a rise in the demand for goods which in turn will reduce the exportable surplus. From the model, we find that the rise in PCI by 1% will lead to a fall in the exports by around 13%. The model shows that usage of fertilizer and the gross irrigated area have an impact on exports with a magnitude of 4% and 3% respectively, but this impact can only be seen after a lag period of 2 years in both the cases.

The dummy variables have been used for the years 1986, 1990, 2000, 2002, 2010.

The model is almost free of auto correlation problem as the Durbin-Watson statistic is 1.59 and the F-statistic 20.41from which we can conclude that over all the equation is significant. So we can accept the alternative hypothesis, that all the coefficients of the explanatory variables are simultaneously zero.

In-Sample Forecasting

After the estimation of the variables we have also done the test for the Agriculture exports equation to check whether the equation is useful for forecasting or not. Ideally the Root Mean Square Error (RMSE) should be less than 3 and TIC less than 1. The value of RMSE and TIC obtained from the above model are 0.264044 and 0.064112 respectively.
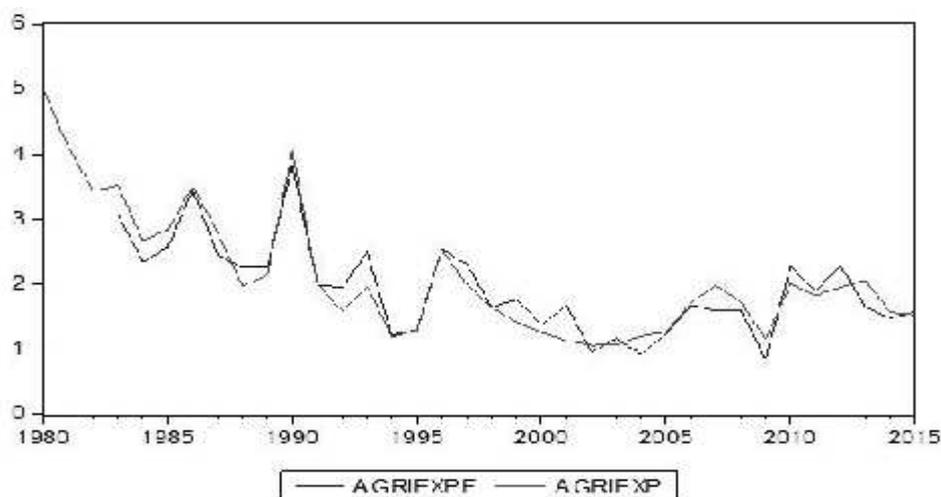

**Figure 3.3: In-sample Forecasting**
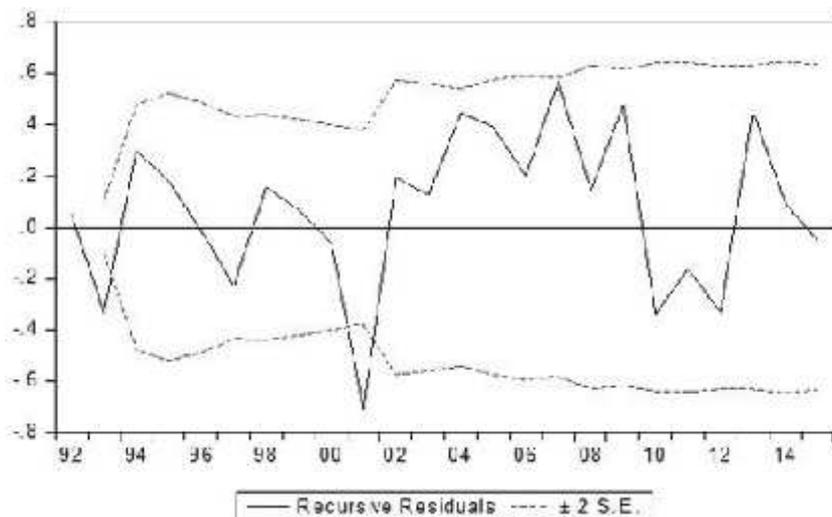
Stability Test

Figure 3.4: Stability Test for Agriculture Exports

The estimated parameters are considered to be stable as one can see from Figure 3.4 that the recursive residuals fall within the standard error band, except for one or two periods.

Model 4: Services Exports

$$D(LNSEREX)=-0.40+4.86*D(LNWDGP)+0.52*D(LNEXRATE(-2))+$$

$$(-3.13)\quad(5.24)\qquad\qquad(2.83)$$

$$0.04*D(LNMANEX(-2))+0.01*LNFDI(-1)+0.52*D(LNFIN(-1))+5.98*D(D(HC))+$$

$$(2.14)\qquad\qquad(3.21)\qquad\qquad(2.71)\qquad\qquad(2.94)$$

$$0.47*D(LNINFIN(-1))+0.23*DUM$$

$$(2.23)\qquad\qquad(7.71)$$

R-squared=0.81   Durbin-Watson statistic=1.72

Adjusted R-squared=0.74 F-statistic= 12.82

In the above model we have taken the services receipt as the dependent variable and various other factors which comprise both supply side and the demand side factors. The variables taken in the model are able to explain 74% (adjusted R-squared) of changes in the dependent variable and so we can tell that these are the major possible determinants of services export. Variables such as the world income, exchange rate, human capital, financial development and the infrastructure development are the major determinants.

The largest impact is of the world income on export of services, the model suggests that 1% change in the world income will raise the export of Indian services by about 40%. This is clear from the fact that the as the world income rises, the economic activities start to gather momentum, leading to higher purchasing power and also higher demand for services export.

Poor quality of human capital is one of the major factors that hinder technology transfer and learning, which hamper the growth of exports and also diversification in low-income countries. In this model human capital is the major determinant of exports of services with the coefficient value of 5.98. So, we see a huge impact of the human capital on the exports of services and hence the government should focus more on the quality of secondary and tertiary education levels of the country.

The model shows that 1 % rise in exchange rate will lead to a rise in the exports by 0.52 % and similarly 1 percent rise in the financial development will increase exports by 0.52 %. The index of infrastructure development incorporates the essential structural requirements of the services sector such as the rail, road connectivity, air freight, telecommunication etc. Here in the model we see that the impact of index of infrastructure development is 0.47.

The model is almost free from auto correlation as the Durbin-Watson statistic is closer to 2. The value of F-statistic is 12.82 which shows that the overall model is significant.

In-sample Forecasting

Smaller the RMSE, the better the forecasting ability of the equation and Thiel inequality coefficient indicates the predictive performance of the equation. The value of RMSE and TIC obtained from the above model are 0.154478 and 0.007793 respectively.
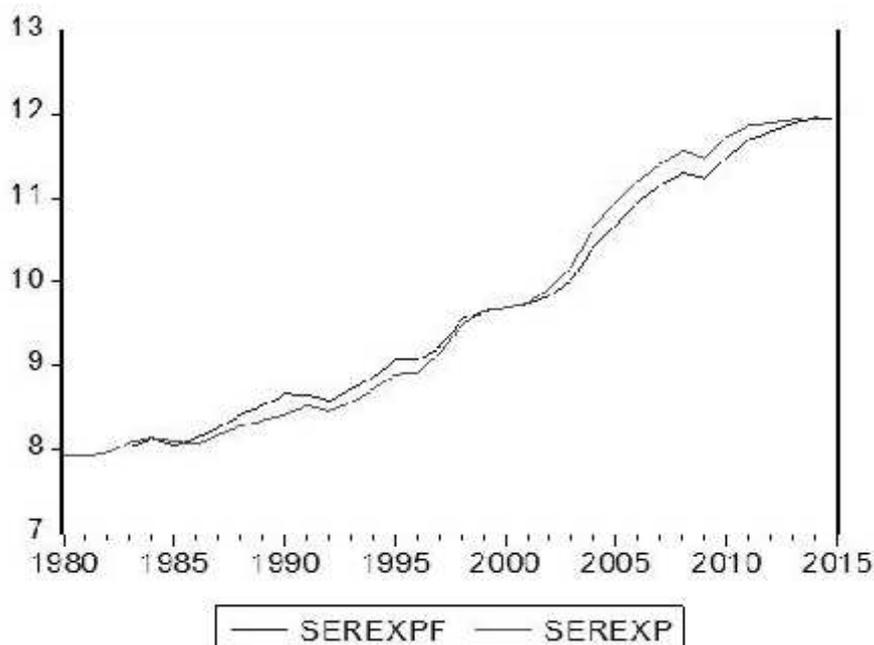
Figure 3.5: In Sample Forecasting
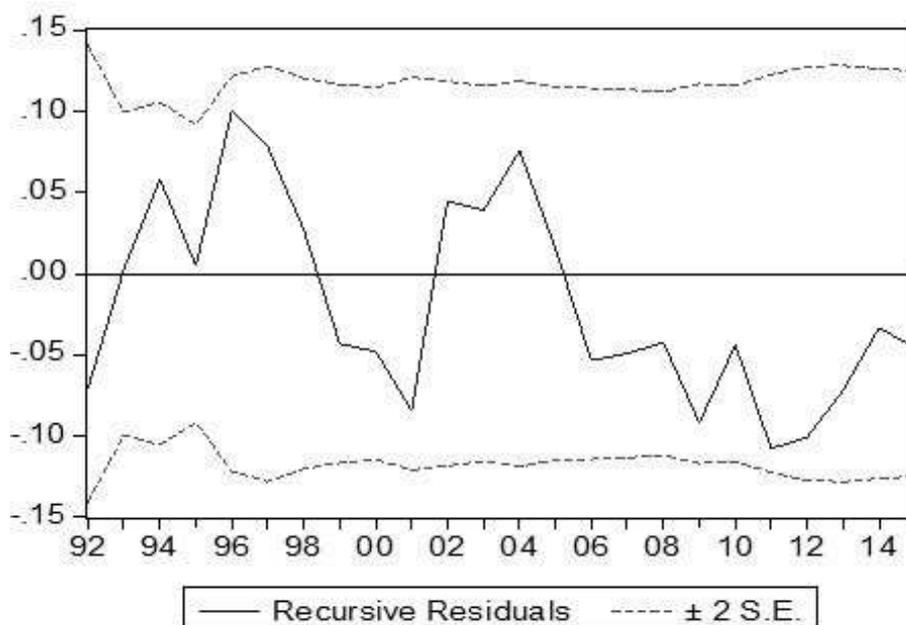
Stability Test

Figure 3.6: Stability Test for Service Exports

Figure 3.6 shows that the parameters are stable across various sub samples.

M-L Condition

Devaluation may not have any impact on price inelastic goods as any decrease in the price of the goods will not spur the demand in the global market. Therefore, before any devaluation the Marshall-Lerner condition should be checked, if it is satisfied then the devaluation will work.

$$\eta_X + \eta_M \geq 1$$

Using the ordinary regression model we calculated the price elasticity of both exports and imports. Since we have taken the data in their natural form, the coefficients give the respective elasticity. The results of the regression analysis are as follows:

D(EX)= 0.18 - 0.27*D(UVEX(-2))   -(1)

D(IMP)= 0.17 - 0.23*D(UVIMP)   -(2)

The price elasticity of exports and imports are:-

$$\eta_x = 0.27 \quad \eta_m = 0.23$$
$$0.27 + 0.23 \quad 0.50$$

So, from the above results we see that the M-L condition is not satisfied for India as the sum of price elasticity is only 0.50 whereas it should be more than 1. Thus devaluation will not be a successful measure in correcting the exports in India. The impact of currency depreciation will be minimal and government's indirect intervention to influence the exchange rate will not be reflected in the growth of exports. This may be due to the reason that the Indian imports comprises of essential commodities, and the export basket is traditional in nature and more so the quality of Indian exports is low.

Summary And Conclusions

The strengthening of the external sector has led to not only the external sector growth but also enhanced the capabilities of the domestic sector. India's exports have suffered a setback since the end of November 2014 and have been in the negative zone since then, only in the recent month the growth has picked up. Slowdown in the global economy above all the reasons is the main reason for the bad performance of the Indian exports, nevertheless it has been showing signs of recovery in the recent times. The results of the empirical analysis of the determinants of the Indian exports, gives us different set of variables which are the possible determinants of the Indian exports. The possible determinants of Indian exports are GDP, REER, Imports, GFD, GDCF, world GDP, FDI, interest rate, inflation. There is a granger causing relationship from the world GDP to the export, which says that world GDP is an important factor for Indian exports growth. GDP growth plays a vital role in shaping the exports, higher economic growth will lead to higher exports. So, the prerequisite for a sustained rise in the growth of export is domestic stability in terms of stable domestic indicators such as interest rates, inflation, GFD, GDCF, etc. In the Indian case the growth led exports hypothesis seems to be relevant rather than export-led growth as we see from the results of the Granger causality test that there is a uni-directional causality from exports to GDP. The twin deficit hypothesis can be highlighted from the result of granger causality that there is a bi-directional causality between the fiscal deficit and the exports. The disaggregate analysis of the Indian exports shows that the agriculture exports are determined by factors such as the per capita income of the people and inflation which decreases the competitiveness of the Indian exports, world income and the inputs such as use of fertilizer and the irrigation. The immediate need for the agriculture sector is the adoption of new technologies, and modernization of the Indian agriculture with special incentives by the government. The service sector exports is another major item of the Indian exports as India is rapidly tending towards a service-led economy.

The major determinants of the export of services are the financial development which strengthens the service sector, development of the infrastructure which is the basis of service exports and human capital. The major determinant of the exports is the exchange rate but the results show that the M-L condition is not fulfilled in the Indian context as it is less than 1. We can conclude that the indirect intervention to influence the exchange rate will not be effective in raising the level of the Indian exports. Thus there is a need to expand the capabilities of the Indian exports through proper investment and government initiatives, making exports as the engine of growth.

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E-Way Bill - A bird's - Eye view

Dr. S. V. Ramana Rao *

Abstract

Goods and Services Tax (GST) is considered as one of the biggest reforms in the Indian tax system ever since 1947 which has been introduced with effect from 1st July 2017. It is the first ever indirect tax reform taken up by the Indian government. GST subsumes all the indirect taxes prevailing in the country. According to experts, GST will help the economy to grow and improve the tax collections along with brings transparency. There will be a smooth transportation of goods due to removal of check posts across the country. For free mobility of goods, GST provides a bill system called E-Way Bill an electronic document detailing the movement of goods. E-Way bill is generated from the GST Portal and this document is carried by the individual who is in charge of mobility of goods. The E-Way Bill is considered as one of the important anti-tax evasion measures in the GST architecture. A draw back in the tax reporting system is that sometimes taxpayer's may underreport or not report the transactions, while E- way bill in the GST, is considered to eliminate or reduce such practices. This paper touches fundamentals of E-Way Bill, E-Way Bill generation, situations where E-Way bill is not required and E-Way Bill issues and challenges.

Key words: E- way bill, GST Portal, Subsume, GST architecture and GST

Introduction

Indian Government has announced the introduction of one more major reform under GST regime which was aborted earlier in February, i.e., E- Way bill. The government finally rolled out from April 1st 2018 (Anita Rastogi,2018) that the E-Way Bill system which is considered as an important aspect under the GST regime for both Government and Industry. The government expects improvements in the GST collections while the Industry expects hassle free process for shipment of goods. The E-Way Bill system has been introduced after many trials but still facing technical glitches. The implementation of E-Way bill seen as crucial by the Government for shipment of goods. The truckers and good transporters are having bitter experiences with complex systems and procedures in the pre GST era and major concern for the industry is increase in the input cost due to inefficient logistics system, long ques at state border check posts (Sindhu Bhattacharya, 2017). Before the GST come into force every shipment in transit should have a unique identification method. Government use to check the paper based delivery note along with VAT system. It is the practice even to check the tax documents which the government believes that can help in reduction in tax evasion. In India three-fifth transportation takes place through roadways which is far higher than some of the regions of the world according to Nomura research (Team Numadic, 2017). Every interstate movement of goods need to have numerous entry/exit notes based on the number of state boarders to be crossed. The entire paper based process has become cumbersome. Way bill is quite familiar concept to traders in India with different names like road permit, way bill, etc. It has been in use in many of the states under the erstwhile VAT regime. It was used to curb tax evasion. A way bill should be carried along with goods on their mobility from consignor to consignee. These way bills are subject to state government rules (Anita Rastogi, 2018). One of the intended objectives of roll out of GST is that it would eliminate delays and long ques at state boarder check posts and at the same time simplifies the entire documentation process. India has notoriously high average waiting time and stoppages for trucks transporting goods. Transport Corporation of India (TCI) along with IIM-K has estimated the cost involved in such delays were amounting to $21 billion annually (Pritam Banerjee, 2016). With the introduction of GST, the provisions for generation of E-Way bill is same across the country under the uniform set of rules and it is electronically generated on the GST portal. The provisions allows the transporter to register a complaint if the vehicle detained more than 30 minutes.

Motivation for the Study

GST is introduced with a motto "One nation One Tax". It subsumed various indirect taxes prevailing in India. An E-Way bill is an electronic receipt used for transportation of goods between buyer and seller. It is intended to eliminate

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physical checks by concern authorities, bring down the transit time especially at the state border check posts and reduction in costs involved in the logistics. E-Way Bill system is considered as one of the vital elements in GST because it facilitates government to improve GST collections. Another stakeholder, i.e., industry expects less administrative mechanisms and free movement of goods across the country. One of the objectives of GST related reform, is providing an environment for seamless flow of goods across the country. For every shipment of goods worth more than Rs 50,000 whether it is interstate or intrastate must have E-Way bill. The government's back and forth over implementation of the e-way bill, seen as a crucial piece of legislation seems to characterize the pitfalls in the ambitious GST regime (Sindhu Bhattacharya, 2017). As the concept of E-Way Bill is relatively new and has many issues and challenges this paper focused on providing basic aspects related to E-Way Bill. Since there is no research article available on this topic the present work adds value to the academic literature.

Review of Literature

Saurabh Gupta, Sarita, Munindra kumar Singh, Komal, and CA Hemraj Kumawat (2017), authors examined Indian Model GST with other countries. The GST tax rate structure has been listed out like Australia 10%, France 19.6%, Canada 5%, Germany 19%, Japan 5%, Singapore 7%, Sweden 25%, and India 18%. Under the GST in India products like Alcoholic liquor for human consumption, Aviation turbine fuel, Diesel, Petrol, etc., do not come under the perview of GST. The authors concluded that GST procedure should be simple and easy to understand for every one which would help in reduction of tax evasion.

Prakash E Humbad (2017), mentioned that GST subsumes many indirect taxes prevailing in India and it is a One nation and One Tax. The key element of GST is Input tax credit when compared to the earlier tax structure, where some of the taxes are not eligible for tax credit. Only registered taxable person can avail tax credit within time limits. More than 196 countries in the world are levying GST which is beneficial to both dealers as well as consumers. The author also explained about the process for availing of Input Tax Credit.

Manoj Kumar Rathod (2017), explained about the basic aspects of GST structure in India. At present India is having complex indirect tax structure having cascading effects. The author feels that GST is a hope which may bring change in the Indirect tax structure in the country and also believes that India is progressing into a uniform market with one single tax structure. Manoj covered GST basics and challenges too.

Lourdunathan and Xavier (2017), found that there is a mixed response and opinions among manufacturers, traders and customers about GST. It basically helps to achieve One Nation and One tax market. Authors explained about input tax credit set-off and subsuming of several indirect taxes and also believed that GST facilitate to improve the revenue collection for both Center and State governments. Many positive aspects have been highlighted by the authors like Electronic filing of tax returns, refunds, payments using GSTNET portal etc. There are built checks on trade transactions, seamless credit and return processing are some of the benefits need to be covered in educating all the stakeholders by organizing seminars and workshops.

Shilpa Arora (2017), attempted to find the impact of GST on start-up firms. Since 2010, start-ups have grown tremendously and it is providing self-employment and employment to unemployed capable candidates. Start-ups provide solutions to problems and also attracting international investors like Softbank, Tiger Global etc. The author felt that taxation is one of the major roadblock for growth of start-ups and must have easy and transparent tax structure. GST has both positive and negative impact on start-ups. The positive factors for Indian start-ups are transparency and reduced compliance cost, improvement in logistics efficiency, reduction in logistics cost, higher threshold limit, common registration and simple taxation. At the same time the author mentioned negative factors of GST on start-ups are not a single rate of taxation, increase in tax rate for service providing start-ups, frequency of filing of returns and cross set off of levy is not permitted.

Gaurangkumar C Barot (2017), explained that the first indirect tax structure like Modified Value Added tax was given by VP Singh in 1986 and now GST was introduced based on Kelkar task force recommendations. The new contribution by the author in this paper is that accounting entries under GST. The author concludes that in India there are 17 indirect taxes and 23 types of cesses. 19 % goods and services covered under the slab of 28% tax rates while 81 % Goods and services covered under the 18% tax rate slab in GST. 3% tax is levied on gold and silver supply.

Research Methodology

This is an exploratory study focusing on basic aspects of E-Way Bill. Literature review plays a key role for this kind of studies but no research paper is available on this specific topic so far. The present study has been carried out with the help of secondary data resources like newspapers, financial dailies, websites and reports released by Government of India etc. E- Way Bill is an academic topic for research is still at the nascent stage in India. Hence, this paper adds value to the academic literature.

E-Way Bill – Concept

It is an Electronic Way Bill is to be carried by a person in charge of transportation of goods from one place to another place including one state to another state. E-Way bill can be generated by registered users or transporters on the E-Way Bill Portal, through SMS, Android App and by Site-to-Site Integration (through API) (and name, 2018). As per of Section 68 of the Goods and Services Tax (GST) Act it is mandatory to carry E-Way bill if goods worth more than Rs. 50,000 being transported. Whenever an E-Way bill is generated a unique E-Way Bill Number (EBN) being allocated and the same is available to the supplier, recipient, and the transporter. For inter-state movement of goods Nationwide E-Way Bill system has come into force from April 1st, 2018 where as for the intra-state movement of goods the system has been introduced by various states in different phases before June 1st 2018 (PWC, 2018).

Validity of E-Way Bill

E-Way bill validity depends on the distance the goods have to be travelled. According to the Finance Ministry clarification the validity of the E-Way bill will be counted from the day transporter fills in the details in the GST form for the first time (PTI, 2018).

Type of Conveyance	Distance	Validity of EWB
Normal Cargo	Up to 100 km	1 day
	For every additional 100 km or Part thereof	1 additional day
Over Dimensional Cargo	Up to 20 km	1 day
	For every additional 20 km or Part thereof	1 additional day

Source : Validity of E-Way Bill retrieved from https://taxguru.in/goods-and-service-tax/validity-eway-bill.html.

Issuance of E-Way Bill

When there is a movement of good worth more than Rs 50,000 either each invoice or aggregate of all invoices in a vehicle E-Way bill is mandatory. For the this purpose the supply may be either of the following. (i) A supply made for a consideration (payment) in the course of business; (ii) A supply made for a consideration (payment) which may not be in the course of business; (iii) A supply without consideration (without payment). Hence E-Way bill is must for all types of movement of goods. For certain types of movement of goods though the supplies are worth less than Rs50000, E-Way bill is mandatory. In a situation where inter-state movement of goods from principal manufacturer/ brand owner to job worker E- Way bill is must without considering the value of goods being transported. The second situation is inter-State Transport of Handicraft goods by a dealer exempted from GST registration.

Movement of goods for which e-way bill needs to be generated: Under the following situations generation of E-way bill is must.

- Movement in relation to supply of goods;

- Movement for any reasons other than supply of goods;

- Procurement of goods from an unregistered person, including import of goods;

- Effectively, e-way bill needs to be generated for all movement of goods, unless the same has been specifically excluded.

Movement of goods for which e-way bill need not to be generated

· Goods which have been otherwise exempted from GST;

· Specified goods such as jewellery, precious or semi-precious stones, currency, used personal and household effects LPG;

· Goods not covered under GST (alcohol, crude oil, petrol, diesel, natural gas and ATF);

· Transportation of empty cargo containers, movement by a non-motorised conveyance; and

· Movement under customs bond from an inland container depot or container freight station to a port/airport/air cargo complex/ land custom station or vice-a-versa.

Generation of E-Way Bill

Registered person, Unregistered Person and Transporter must generate E-Way Bill whenever there is a movement of goods.

Registered Person: If the value of goods is worth more than or less than Rs. 50000 is moving from one place to another place, a GST registered person or the transporter must generate and carry E- Way bill.

Unregistered Person: If an unregistered person is making a supply to a registered person E-Way Bill must be generated and in this case the goods receiver must ensure that the supplier fulfils all the compliances.

Transporter: If the supplier has not generated E-Way Bill, the transporter has to shoulder the responsibility of generating E-Way bill because the transporter is the one carries the goods either one of the following ways. Road, rail, air etc.

Contents of E-Way Bill

The GST act provided guidelines for generation of E-Way bill. As it is a system generated the following details are to be furnished:

a) E-Way Bill consists of two parts and those are Part A and B (GST EWB-01).

b) Goods invoice details are to be furnished including date and number in Part A. GSTIN of supplier and recipient, HSN and value of goods etc. should also be included.

c) Part B of the document transporter details like vehicle number in case of road transport, transport document number.

d) In case of intra-state movement within 50kms from the place of consigner to place of transporter for further transportation or from place of transporter to the place of consignee Part B is not required to be filled.

e) Validity of e-way bill starts only when vehicle details in Part B is updated

E- Way bill is not Required: In the following circumstances E- Way bill is not required.

1) Transportation of goods using other than motor vehicle.

2) When the goods are transported from Customs port, airport, air cargo complex or land customs station to Inland Container Depot (ICD) or Container Freight Station (CFS) for clearance by Customs.

3) If the goods are under Customs supervision or under customs seal.

4) Goods transported under Customs Bond from ICD to Customs port or from one custom station to another.

5) Transit cargo transported to or from Nepal or Bhutan.

6) If Ministry of defence transported goods as a consignor or consignee.

7) Empty Cargo containers movement.

8) Central Government, State Governments or a local authority transporting goods by rail.

9) Goods specified as exempt from E-Way bill requirements in the respective State/Union territory GST Rules.

10) Transport of certain specified goods- Includes the list of exempt supply of goods, Annexure to Rule 138(14), goods treated as no supply as per Schedule III, Certain schedule to Central tax Rate notifications.

Challenges to E-Way Bill

Any new system has its own challenges, E-Way bill in GST regime is no exception. Though technology plays a major role generating E-Way bill, yet it is considered to be efficient however it may create problem to transporters especially in the rural areas. Most importantly all transporters may not be tech savvy. Logistics and Transportation industry in India is highly unorganized and there is less of tax compliance.

a. Whenever there is a change in the vehicle during the transportation of goods a new E-Way bill has to be generated from the online portal.

b. If the goods are to be sent through a dealer to the consumer, two separate E-Way bills have to be issued. One for transportation of goods from factory to dealer and second one is for dealer to send good to consumer.

c. When the goods are in transit, if the recipient of goods cancels the order before the goods reached, in such case another E-Way bill has to be generated.

In all the above a, b and c situations new E- Way bills have to be generated in place of old E- Way Bills which is perceived as a cumbersome process by traders and businessmen including e-commerce firms. The Radio Frequency Identification Device (RFID) could be another setback for many small and medium based transporters/ traders putting onerous conditions of compliance.

The GST council has decided to post phone the E-Way Bill implementation to June 2018 due to many operational challenges. Around 15 state governments have come forward to roll out the E-Way bill but experienced technical problems like huge volume of transactions, bulk generation of E-Way bills without using API's, Failure of NIC's offline utility in case where a single invoice contains more than 250 line items and Complexities involved in reverse integration, 2-way connectivity of NIC e-way bill system to/from the business ERP/source system (Krishna Sriteja, 2018).

Another major concern for E-Way bill is time and distance bound validity. For Instance, when a transporter makes multiple stops to serve different customers explaining about the distance covered to GST authorities is a challenging task. Due to introduction of GST law, check posts at the state boarders need to be removed however there could be random checks to ensure compliance, but the traders worry that few unscrupulous officers may harass the transporters. Any extension of validity of E-Way bill leads to generation of multiple way bill numbers for a single invoice may results into duplication. Traders felt that the time lines given for extension is not sufficient as it is only 4 hours before and after expiry of validity of E-Way bill. There is also no mechanism to track delivery and closure of transportation of goods on the portal (Anita Rastogi, 2018). A trader who has business operations across India, needs

to generate E-Way bill for the multiple movement of goods on timely basis would require a software solution and it reconciliation with turnover is also a challenging task.

"Bill To Ship To" for E-Way Bill

There is a lot of concern with regards to "Bill To Ship To" model of supplies. In this model three parties are involved. For Instance, X placed an order to Y but deliver goods to Z. Here Y is directly delivering the goods to Z and he is recipient of the goods. In this scenario, two invoices are to be issued one is Y to Z and second one is X to Z. The crux is who should generate E-Way Bill? According to CGST Rules, 2017 either X or Y can generate E-Way Bill in this scenario but it is only one E-Way Bill as per the following Procedure.

Case -1: Where E-Way Bill is generated by 'Y', the following fields shall be filled in Part A of GST FORM EWB-01:

1.	**Bill From:**	In this field details of 'Y' are supposed to be filled.
2.	**Dispatch From:**	This is the place from where goods are actually dispatched. It may be the principal or additional place of business of 'Y'.
3.	**Bill To:**	In this field details of 'X' are supposed to be filled.
4.	**Ship to:**	In this field address of 'Z' is supposed to be filled.
5.	**Invoice Details:**	Details of Invoice-1 are supposed to be filled

Source : Reprinted from http://pib.nic.in/newsite/PrintRelease.aspx?relid=178856.

Case -2: Where e-Way Bill is generated by 'X', the following fields shall be filled in Part A of GST FORM EWB-01:

1.	**Bill From:**	In this field details of 'X' are supposed to be filled.
2.	**Dispatch From:**	This is the place from where goods are actually dispatched. It may be the principal or additional place of business of 'X'.
3.	**Bill To:**	In this field details of 'Y' are supposed to be filled.
4.	**Ship to:**	In this field address of 'Z' is supposed to be filled.
5.	**Invoice Details:**	Details of Invoice-2 are supposed to be filled.

Source : Reprinted from http://pib.nic.in/newsite/PrintRelease.aspx?relid=178856.

Conclusion

One of the key aspect in GST is the E-Way Bill System. It is expected that this system helps to increase GST collections. Traders and the industry expected less administrative procedures, elimination of long standing ques at state borders. It is an Electronic Way Bill required to be carried by a person in charge of the transportation of goods from one place to another place including one state to another state. For every shipment of goods worth more than Rs.50000 whether it is interstate or intrastate E-Way bill is mandatory with certain exceptions and its validity depends on the distance the goods have to travel. Registered person, Unregistered Person and Transporters are allowed to generate E-Way Bill whenever there is a movement of goods depending on the type of transaction between the buyer and seller. E-Way bill has time and distance bound validity which is an area of concern for traders. Technical glitches delayed even the roll out of E-Way bill system in India. Ever since implementation of GST

highest collection of Rs 1.03 lakh crore for the march month collected which is higher than the average monthly collection of Rs 90,000 lakh crores. The ministry of Finance is of the opinion that arrears collected for the previous months resulted in highest ever collection (Shreya Nandi, 2018). One has to wait and see whether E-Way Bill serve the intended purposes or not in the coming months. Since it is a new system drawing any conclusion would be considered premature.

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Case Study:
In Layoff Season, Hiring Platforms Buzz Aloud

Dr. S. Subbalakshmi and Mr. Siva Krishna Goud J *

Product Details:

Please find below the full details of the product.

Title: In lay off season hiring platforms buzz aloud.

Focussed area: Perfect competition, Cost functions related to snap deal layoffs.

Objective: Purely meant for academic purpose. Developed for the students of Management Studies, FBS business school.

Authors: Dr S.Subbalakshmi, M.A, MPhil, Ph.D. Chair, Business & Economics, FBS Business School. Vijayawada & Mr. Siva Krishna Goud J, MBA,(PhD) –Executive Director, FBS Business School.

Data Source: The Economic Times, 9th March 2017.

Article by: Prachi Varma Dadhwal, Surabhi Agarwal.

Referencing: Harvard system.

Concepts: E-Markets, Right sizing, Downsizing, equilibrium, revenue functions and cost functions.

Key words: Head hunters, hiring platforms, paucity, lay off, right-sizing, down-sizing, fixed cost, variable cost.

Annexure: Graph.

Definitions of the concepts:

Fixed costs: Costs which are independent of output.

Variable Cost: Costs that change along with the changes in the output.

Down-Sizing: reducing the number of employees on operating payroll.

Right-sizing: Restructuring the business by cost-cutting, reduction of work force.

Head hunters: Identifying the suitable candidates employed elsewhere and to fill business positions.

Equilibrium: A point where Marginal cost is equal to Marginal revenue and Marginal revenue cure cutting MC curve from below.

Abstract

The E-commerce firm Snapdeal operated by Jasper InfoTech Pvt Ltd is planning to lay off 1000 employees as per the column written on 9th March 2017 in *Economic Times*. The online market place aims to trim about 30% of it's staff over the next two months to cut its costs since there is slowing growth and paucity of investors to provide fresh funds. The company's total sales grew to the worth of Rs. 1457 cr but losses more than doubled to Rs. 2960 cr. The company employee related expenses rose to 911 cr in 2016. Employee expenses is the largest cost for Snapdeal after marketing and advertising but unlike the latter which is a variable cost wages is a fixed cost. A source says Snapdeal does not have the pace of growth it wanted. Hence it is into cost control mode. Shifting away from growth to profitability inevitably leads to cost cutting.

Full Length Case

With fears of layoffs engulfing start-ups head hunters have started witnessing major spike in receiving resumes in hiring platforms.

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The column written by Prachi Varma Dadhwal, Surabhi Agarwal in *The Economic Times*, 9th March 2017, says with fears of layoffs engulfing start-ups and automation squeezing jobs from IT sector head-hunters in the past six months alone have witnessed a major spike in receiving resumes on hiring platforms.

It is happening at times where the management is either reducing work force or rationalizing the head count to balance demand/supply said Bhatia/business head staffing solutions IKYA, human capital solutions.

Many of the layoffs were by food delivery, e-commerce and consumer service companies. Snap deal is in the process of laying off at least one thousand company employees, 30% of its work force ET reported this month.

The layoffs came after the home grown-commerce firm witnessed several top level executives exits in the past few days. Losses at Snap deal more than doubled to rupees two thousand nine hundred and sixty crores (436 million dollars) for the financial year ended March 2016. Consolidated loss widened to rupees three thousand three hundred and fifteen crores from one thousand three hundred and twenty eight crores in 2014-15. It is going through a severe fund crunch.

Hence Snapdeal started hiving off its various acquisitions and divesting its assets to cut costs. That is what is called a 'Snapdeal 2.0' strategy in a bid to revive its fortunes. Selling Unicommerce its subsidary, the technology solutions arm of Snapdeal to Ahmedabad-based Infibeam Incorporation Ltd., country's only listed e-commerce company is part of Snapdeal 2.0 plan and to revive its fortunes.

Soft Bank-Snapdeal's biggest investor wrote-off around $ 475 million dollars in combined value of its shareholding Snap deal and Ola. Responding to a money control query a Snapdeal spokesperson said it is due to our journey towards profitability, it is imperative that we continue to drive efficiency in our business which enables us to pass on the value to our consumers and sellers.

The online market place aims to trim about 30% of its staff over the next two months to cut its costs as the Indian e-commerce industry battles slowing growth and paucity of investors willing to provide fresh funds. This cost cutting is expected to affect about 1000 employees directly employed by the company in its e-commerce market place while 1000's of contract workers in the company's logistics division are also expected to be let off.

In February 2016 the company had put over 200 employees on a performance improvement program and eventually let go off the additional staff. The employee's related expenses rose to 911 crores in fiscal year 2016 up to 148% from the previous fiscal year. Employee expenses is the largest cost for Snapdeal after marketing and advertising but unlike the later which is average cost, wages is the fixed cost for the financial year 2015-16 the company's total sales grew 56% that is 1457 crores of rupees but losses rose to more than doubled to 2960 crores. Also the other reason for layoffs is the company's decision to shut down Shopo the Etsy-like online consumer to consumer platform for small sellers. The lay-offs are primarily directed at mid-level employees and new hires. The managers with market place operations have been asked to right-size their respective teams. If you want to grow 200% annually you will grow the team accordingly. But if you are anticipating only 20% growth you have to cut down the staff.

A source says Snapdeal does not have the pace of growth it wanted. Hence it is a cost control mode, shifting away from growth to profitability inevitably led to cost cutting.

Snapdeal still has the possibility of acquisition by Alibaba. Before acquisition usually the company wants to show profitability. So Snapdeal is right sizing as part of its cost cutting exercise- if not profitability at least reduce losses.

Pedagogical Objectives:

Students are required to understand –

1. The difference between fixed costs and variable costs.
2. What is equilibrium?
3. Pricing strategies like full cost pricing and marginal cost pricing.
4. The difference between mark-up rule and marginal cost pricing.

5. What is shut down point?

6. What is disguised unemployment in terms of law of variable proportions?

Case Related Questions:

What is the reason behind Snap deal lay-offs?

Discuss the case with reference to fixed costs and variable costs?

Laying off 1000 employees by Snapdeal, is it right sizing or downsizing according to you? Justify your answer.

According to below graph given identify the fixed costs of Snapdeal.

Given the above case with the related diagram identify whether Snapdeal is adopting average cost pricing or marginal cost pricing?

Explain the equilibrium point of Snapdeal with reference to marginal cost pricing.

What is shut down point? Identify the point in the diagram.

What is disguised unemployment? Do you think disguised unemployment is the reason for the Snap deal lay-offs?

Fig. 13.
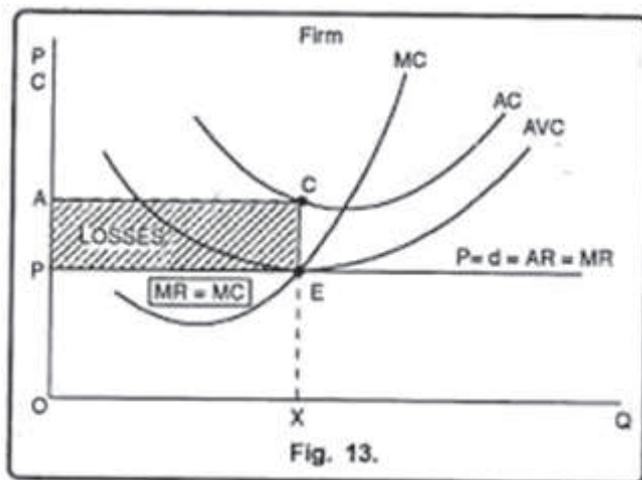
Web References

Techcircle.vccircle.com

www.hindustantimes.com>business/news.

Declaration: I hereby declare this case study is my own brain child. This is been developed for the students of FBS business School only for the academic purpose. This is neither published nor submitted for publication elsewhere. The source is mentioned above. The data from the source is developed as the case study. I do not take any responsibility for the authenticity of the data provided by the source.

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