SUSTAINING THE GLOBAL COMPETITIVENESS: GREEN STRATEGIES OF INDIAN COMPANIES

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ABSTRACT

The rules for modern day competition in corporate sector are rapidly changing. They no longer governed by production capacity, capital employability or even consumer demand patterns. The current global competition scenario is dominated by sustainability issues faced by business community all over the world. Rapidly diminishing natural resources are pressing the environment protection issues on the forefront and all the pragmatic companies need to balance the economical (profit earning) environmental and social impacts of their business activities effectively in this background. This requires adoption of green strategies for tackling these threefold issues for sustaining the global competitiveness. This paper studies the green strategies adopted and focus areas chosen by Indian companies of for spending their budget on sustainable activities in the light of current Global Competitiveness Report 2014-15.

Methodology: This study is an exploratory research undertaken with the help of survey responses of 196 Indian companies listed on Bombay Stock Exchange, from different industrial sectors.

Findings: Adoption of green strategies shows that " Technology, Innovation and Process improvement "were found to be three top ranking implementation strategies adopted by the respondent companies, whereas Collaboration and Sustainability Reporting were ranked last. The budget spending is mostly on Environmental aspects, Social aspects and on the Sustainability initiatives affecting company's bottom line.

Conclusion: The corporate sector in India is gearing up to face global competition with adoption of green initiatives and matching implementation strategies to face global competition. Their focus is on adopting those initiatives impacting companies' profitability and improves its goodwill and brand image.

Keywords: *Sustainability Initiatives, Green Strategies Adoption, Global Competitiveness Report*

I. INTRODUCTION

The rules for modern day competition in corporate sector are rapidly changing. They no longer governed by production capacity, capital employability or even consumer demand patterns. The current global competition scenario is dominated by sustainability issues faced by business community all over the world. As rapidly diminishing natural resources are pressing the environment protection issues on the forefront, companies need to balance the economical (profit earning) Environmental and social impacts of their business activities effectively in the background. This requires adoption of green strategies for tackling these threefold issues for sustaining the global competitiveness. The sustainable competitiveness at global level is a culmination of relationship between the competitiveness and sustainability at environmental and social level.

This research paper aims to study- 1) Green strategies adopted by the Indian companies 2) Focus areas for Budget spending for sustainability activities keeping in the focus -The Global Competitiveness Report 2014-15 in general and its chapter on assessing the sustainable competitiveness of nations, in particular.

1.1 Background

The chapter on assessing the sustainable competitiveness of nations, of The Global Competitiveness Report 2013-14, gives the recent projections and its studies point out that the rates of progress seen in the past may not be sustainable going forward[1] As income levels have risen and more and more emerging markets have entered rapid growth paths, pressures on the environment have become more palpable and concerns over the distribution of the benefits of economic progress within countries have grown. This has led many to question whether the prevalent growth model is sustainable over time.

The perception that economic growth is not translating into the desired results for society at large was given further support by the recent financial crisis and the ensuing economic slowdown, which brought social tensions to light. These manifested themselves in multiple ways, including the events related to the Arab Spring; the rise of unemployment in many Western economies, particularly in segments of the population such as the young and the less skilled; and increasing inequalities of income and socioeconomic opportunities in both Western countries and fast-growing Asian economies. At the same time, pressures on the naturalenvironment resulting from economic activity have grown over recent decades. Pollution has increased and the loss of biodiversity is more and more problematic, while climate change and its unpredictable consequences raise concerns. The world is also facing a progressive scarcity of water, energy, and mineral resources, for which demand continues to climb.

Despite some efforts to address these issues, the undesirable environmental consequences of human activity are leading to a less habitable world. As a result, social and environmental sustainability increasingly influence economic policy decisions and can have an impact on economic performance. At the same time, these challenges bring in to question whether well-established ideas and models that take a narrow view of economic growth and do not take into account the use of natural resources or social concerns can still provide adequate solutions. [2]

1.2 Competitiveness and Sustainability

The relationship between some aspects of sustainability and economic growth has been studied extensively by academics, policy practitioners, and international organizations. (Nordhaus 1992; Perotti 1993; Bertola 1993; Alesina and Rodrik 1994; Persson and Tabellini 1994; and Green et al. 2006).Despite mounting interest in sustainable development, the relationship between environmental or social sustainability and national competitiveness has been only marginally explored. So far, economists have devoted most of their efforts to trying to understand the way economic growth impacts the quality of the environment or income distribution within a country and vice versa. However, little is known about how these aspects of sustainability relate to competitiveness and productivity. [3-8]

1.3 Definition of Competitiveness

WEF defines competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be reached by an economy. The productivity level also determines the rates of return obtained by investments in an economy,

which in turn are the fundamental drivers of its growth rates. In other words, a more competitive economy is one that is likely to grow faster over time.

II. THE GLOBAL COMPETITIVENESS INDEX

For 35 years, this Report has shed light on the key factors and their mechanisms and interrelations that determine economic growth and the level of present and future prosperity in a country. In doing so, since its inception the Report has aimed to build a shared understanding of the main strengths and weaknesses of each of the economies covered, so that stakeholders can work together on shaping economic agendas that can address challenges and create enhanced opportunities.

In this context, policymakers, businesses, and citizens increasingly recognize the need for economic growth to be balanced by providing opportunities and benefits for all segments of the population and by being respectful of the environment. In sum, the social and environmental dimensions of an economy need to be fully considered in any growth or development agenda. (See fig.1)

The top ranking economies as per 2013-14 results were- Switzerland, Finland, Germany, United States, Sweden, Netherland, Japan, United Kingdom, Norway and Canada. India stood at rank 60 among the 147 countries analysed by the Report.

2.1 Top 10 of the GCI -2014-15 Report

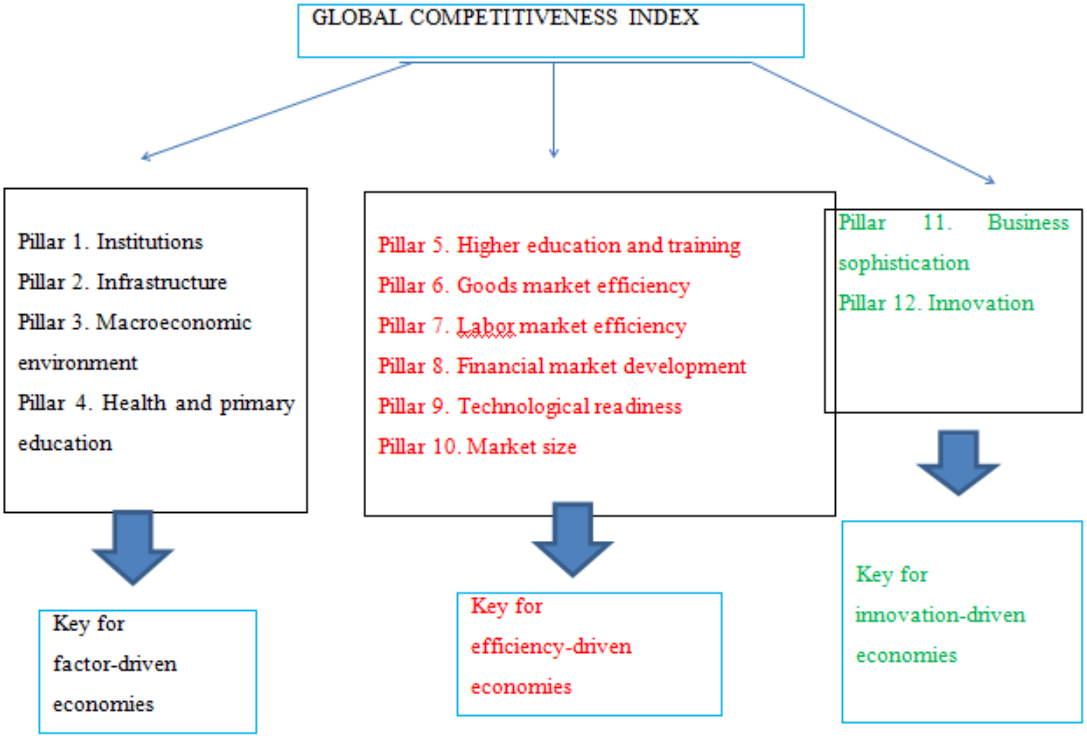
Rank 1-Switzerland (score: 5.70) 2-Singapore (5.65) 3-United States (5.54) 4-Finland (5.50) 5-Germany (5.49) 6-Japan (5.47) 7-Hong Kong SAR (5.46) 8-Netherlands (5.45) 9-United Kingdom (5.41) 10-Sweden (5.41)

The top of the rankings continues to be dominated by highly advanced Western economies and several Asian tigers. For the sixth consecutive year Switzerland leads the top 10, and again this year Singapore ranks as the second-most competitive economy in the world. Overall, the rankings at the top have remained rather stable, although it is worth noting the significant progress made by the United States, which climbs to 3rd place this year, and Japan, which rises three ranks to 6th position. **India's Rank has gone down to 71 from 60 with the score of 4.21 in this current report.**

This classification clearly shows that India and nearby countries (except Bhutan-which is in next transitionary stage and Sri Lanka-at stage 2) are still **factor driven** economies and are far from being "developing" nations. China is in the category of **efficiency driven** economy at stage 2, while Brazil in the next transition stage ahead of India and China. This indicates that the among the BRIC countries Brazil and china are far ahead of India. Even Malaysia has undertaken right steps in this direction and within a short span crossed stage2 and reached next level of development.

India needs to gear up its developmental activities to be called as developing nation and the future powerful country to be recon with

Figure 1: framework of Global competitiveness Index (with 12 pillars)



http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf

As per the 12 pillars of GCI, the economies are categorised according to the -factor driven, efficiency driven and innovation driven respectively, which shows the rate of development of the countries falling in each category.

Countries/economies at each stage of development:

Stage 1: Factor-driven (37 economies): include like India, Bangladesh, Pakistan, Myanmar, Nepal etc.

Transition from stage 1 to stage 2 (16 economies): Include Bhutan, Iran, Saudi Arabia, Algeria, Kuwait etc.

Stage 2: Efficiency-driven (30 economies): China, Indonesia, Columbia, Egypt, Morocco, Sri Lanka etc.

Transition from stage 2 to stage 3 (24 economies): Brazil, Chile, Malaysia, Mauritius, Mexico, Russia

Stage 3: Innovation-driven (37 economies): Australia, Canada, UK, USA, France, Germany, Hong Kong

2.2 Definition of Sustainable Competitiveness

Given all these forces and interrelationships, the report defines sustainable competitiveness as the set of institutions, policies, and factors that make a nation remain productive over the longer term while ensuring social and environmental sustainability.

The World Economic Forum has continued its research into how sustainability relates to competitiveness and economic performance. Chapter 1.2 of this Report presents **sustainable competitiveness**, a concept introduced three years ago in the Report series, and aims to analyse how country competitiveness can be assessed once issues of social and environmental sustainability are taken into account.

2.3 Competitiveness and environmental sustainability

For decades, economists, strategists, and business leaders were sceptical about the compatibility between environmental goals and industrial competitiveness. (Porter and van der Linde 1995) [9] ,consequently, natural resources are modelled as an additional input in the production process or as an additional cost that must be

incurred to abate unwanted by-products such as pollution. Another limitation to growth, according to this strand of literature, can be traced back to nature's decreasing ability to dissipate waste from production as pollution accumulates. Once pollution reaches a critical limit, ecosystems will not be able to function properly and cannot absorb additional waste from production. The relationship between environmental sustainability and competitiveness is multifaceted and affects an economy in different ways. Multiple channels support a positive relationship between environmentally sustainable practices and productivity gains. The Report identified and described the main ones as:

- Efficient use of natural resources.
- Improved health.
- Biodiversity for innovation.

2.4 Competitiveness and Social Sustainability

Overall, there is no widely accepted definition of social sustainability. Each branch of social science tends to approach it from a different perspective, applyingdifferent criteria. However, it is possible to identify recurring themes in the different definitions that have been proposed so far. Human rights, equity, and socialjustice are among the most relevant .The body of research on social sustainability is growing, but remains limited. Because of the sometimes intangible nature of the social dimension of growth that is often the result of deliberate political choice; the concept of social sustainability tends to be under-theorized. [10]

It includes the following elements:

- Inclusion.
- Equity and cohesion.
- Resilience

2.5 Relationship between Environmental and Social Sustainability

The third and final relationship that was explored in the report was the one between environmental and social sustainability. It says that the quality of the environment and the structure of a society are strictly correlated. The elements examined include

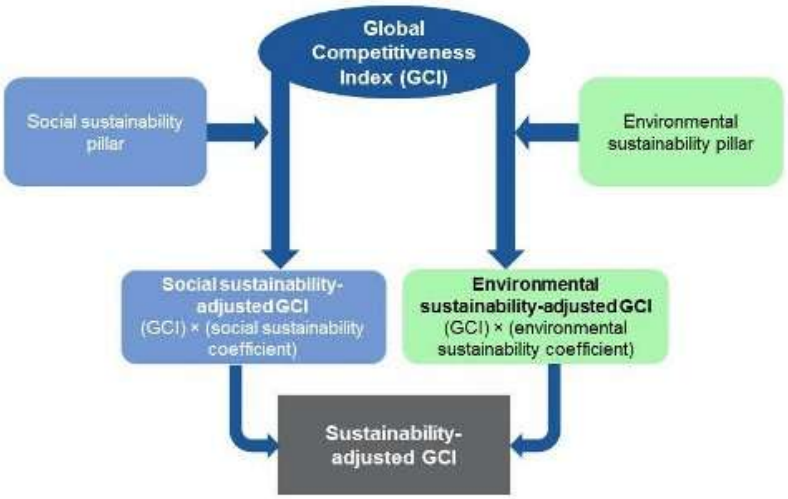
- Health and environmental degradation
- Demography, poverty, and the environment
- Energy and social stability
- Climate change, food security and conflict.
- Climate change and women's empowerment

Summary of indicators for **Social sustainability**		
Access to basic necessities • Access to improved drinking water • Access to sanitation • Access to healthcare	*Vulnerability to shocks* • Vulnerable employment • Extent of informal economy • Social safety net protection	*Social cohesion* • Income Gini index • Social mobility • Youth unemployment
Summary of indicators for **Environmental sustainability**		

Environmental policy • Environmental regulations (stringency and enforcement) •Number of ratified international environmental treaties • Terrestrial biome protection	*Use of renewable resources* • Agricultural water intensity • Forest cover change •Fish stocks overexploitation	*Degradation of the environment* •Level of particulate matter concentration • CO2 intensity •Quality of the natural environment

2.6 Sustainability-Adjusted Global Competitiveness Index

This index is the World Economic Forum's on going contribution to these efforts to measure sustainable competitiveness, considered the following indicators of measurement:



Source:http://www.weforum.org/content/pages/sustainable-competitiveness

2.7 Results of the sustainability-adjusted GCI analysis

The results indicate that there is no clear trade-off between being competitive and being sustainable. Developed economies tend to have more mature institutions that ensure that citizens have access to basic infrastructure, health, and welfare. At the same time, countries that face challenges related to their competitiveness fare even more poorly in terms of social sustainability. In terms of environmental sustainability, the picture is more complex. Countries toward the lower end of the competitiveness scale tend to fare better than advanced economies in terms of emissions such as CO2, as well as manufacturing-related pollution such as waste and by-products of industrial processes.

III. INDIA'S SUSTAINABLE COMPETITIVENESS

It is characterized by concerns in both areas of sustainability. On the social sustainability side, India's performance is hindered by lack of access to basic sanitation and health services for many of its citizens (only 35 per cent of the population has access to improved sanitation). Also, despite the introduction of the National Social assistance Programmes (NSAP) in 1995, the share of population covered by the social safety net is still relatively small. This issue, combined with a large informal sector and a high share of the workforce in vulnerable employment, makes it difficult to manage the country's growing income inequality. Altogether these structural issues make India's competitiveness vulnerable to shocks.

India's environmental performance also hinders the achievement of sustainable competitiveness. A high level of emissions (especially in terms of particulate matter concentration) and few protected areas are wearing down the quality of the natural environment. Additionally, high agricultural water-use intensity is depleting water tables because usage is above their regenerative capacity.According to the Ministry of Water Resources, "68% of the country is prone to drought in varying degrees of which 33% is chronically drought prone."[11] (See the Agriculture use, industrial use, increasing population, infrastructure gaps, and contamination exacerbate the water scarcity issue.) The Ministry of Water Resources reports that: "high incidence of fluoride, arsenic, iron& heavy metals has been found in isolated pockets" in several states. [12]

3.1 India's Competitiveness Crisis

Despite its immense potential and promise, by many accounts India continues to suffer from poverty. A third of its population still lives in extreme poverty—possibly the highest incidence outside sub-Saharan Africa—and many people still lack access to basic services and opportunities, such as sanitation, healthcare, and quality schooling. Improving the standards of living of the Indian population will require the country to accelerate its growth. Yet, since 2011, India has experienced a slowdown. In 2013, its economy grew by a modest 4.4 percent. Improving competitiveness in order to put growth on a more stable footing should therefore be a priority for the new government. It is the lowest ranked among the BRICS economies. While India's GDP per capita was higher than China's in 1991, today China is four times richer. This competitiveness divide helps to explain the different trajectories of these two economies. India's slide in the competitiveness rankings began in 2009, when its economy was still growing at 8.5 percent (it even grew by 10.3 percent in 2010). Back then, however, India's showing in the GCI was already casting doubt about the sustainability of this growth. Since then, the country has been struggling to achieve growth of 5 percent.

The country has declined in most areas assessed by the GCI since 2007, most strikingly in institutions, business sophistication, financial market development, and goods market efficiency. Overall, India does best in the more complex areas of the GCI: innovation (49th) and business sophistication (57th). In contrast, it obtains low marks in the more basic and more fundamental drivers of competitiveness. For instance, India ranks 98th on the health and primary education pillar. The health situation is indeed alarming: infant mortality and malnutrition incidence are among the highest in the world; only 36 percent of the population have access to improved sanitation; and life expectancy is Asia's second shortest, after Myanmar.

On a more positive note, India is on track to achieve universal primary education, although the quality of primary education remains poor (88th) and it ranks a low 93rd in the higher education and training pillar of the GCI. Transport and electricity infrastructure are in need of upgrading (87th). In 2012, a working group appointed by the Planning Commission of India had recommended that a trillion US dollars—or almost 10 percent of India's GDP—be spent on infrastructure by 2017.

Given the country's strained public finances, addressing the infrastructure gap will require very strong participation on the part of private and foreign investors through public-private partnerships. But for these types of investments to materialize, the institutional framework needs to improve. There are encouraging signs. India has achieved spectacular progress in various measures of corruption and now ranks 65th. Red tape seems to be less of an issue than it had been, and government efficiency is equally improving.

However, the overall business environment and market efficiency (95th, down 10 places) are undermined by protectionism, monopolies, and various distortionary measures, including subsidies and administrative barriers

to entry and operation. The World Bank estimated that it takes 12 procedures (130th) and almost a month to register a business (106th). In addition, it calculated that taxes for a typical registered firm amount, on average, to 63 percent of its profits (130th). Furthermore, the labor market is inefficient and rigid (112th). These factors contribute to the high cost of integrating more businesses into the formal economy. Some estimates find that the informal sector accounts for half of India's economic output and 90 per cent of its employment.

India achieves its lowest rank among the 12 pillars in technological readiness (121st). Despite mobile telephony being almost ubiquitous, India is one of the world's least digitally connected countries. Only 15 percent of Indians access the Internet on a regular basis. Broadband Internet, if available at all, remains the privilege of a very few. India's knack for frugal innovation should contribute to providing cheap solutions for bridging this digital divide. The financial resources required for delivering basic services, including sanitation and healthcare, and for improving India's physical and digital connectivity are considerable. But India's fiscal situation remains in disarray, as evidenced by the country's 101st rank in the macroeconomic environment pillar of the GCI.

With the exception of 2007, the central government has consistently run deficits since 2000. Because of the high degree of informality, its tax base is relatively narrow, representing less than 10 percent of GDP. In addition, over the past several years India has experienced persistently high, in some years near double-digit, inflation, which reached 9.5 percent in 2013.

The Reserve Bank of India is torn between keeping interest rates low to stimulate the faltering economy and tightening monetary policy to stem inflation. Improving competitiveness will yield India huge benefits. In particular, it will help rebalance the economy and move the country up the value chain so as to ensure more solid and stable growth; this in turn could result in more employment opportunities for the country's rapidly growing population.

Despite the abundance of low-cost labor, India has a very narrow manufacturing base. Manufacturing accounts for less than 15 percent of India's GDP. Agriculture represents 18 percent of output and employs 47 percent of the workforce. Low productivity in the sector means very low wages and a life of mere subsistence for many. The services sector accounts for just 28 percent of employment but for 56 percent of the economy. Most services jobs are low-skilled and poorly paid ones, though. White collar jobs remain rare. For example, the vibrant business-process outsourcing sector employs 3.1 million workers, or 0.6 percent of India's 482 million strong labor force (but accounts for 6 percent of GDP).

India needs to create jobs in the "missing middle" for the 610 million youths under 25—half of India's population— who have recently entered or will soon enter the workforce. In a parliamentary address in June 2014, President Mukherjee outlined the government's economic agenda. It envisages building smart cities, establishing world-class industrial zones, and transforming the country into a manufacturing hub. It remains to be seen whether the new administration will succeed in convincing the public opinion, mobilizing the resources, and passing the reforms necessary to achieve this vision. [13]

In the light of the above WEF report on Global competitiveness Index, we can draw some parallels from the exploratory study of 196 Indian companies related to their corporate sustainability initiatives undertaken by the researcher.

IV. RESULTS FROM THE RESEARCN STUDY

There were 29 different corporate sustainability initiatives listed in the study:

These initiatives were a mix from three basic categories of sustainability goals -

1) Environmental Initiatives: • Pollution control• Water management• Tree plantation/Forestation • Carbon Foot printing• Carbon Credits• Environment/ energy audit• Clean energy patent• Corporate sustainability reporting• Environment Audit• Environment Studies

2) Social Initiatives: • Sponsoring green initiatives• Partnering with Govt. /NGOs• Environment awareness for public

3) Economic Initiatives: • Environmental financial impact-

Through travel: • Employee commuting• Employee telecommuting• Waste/ fleet impact

Through building: • Green building• Green office space

Through processes: • Energy conservation/use renewable source• Operations efficiency• Paper usage• Waste Management• Eco packaging• Procurement from green suppliers• Use of Clean/ Green Technology• Green IT

Through organization culture: • Existence of sustainability /Green policy• Use of "Resource Reduce-Reuse-recycle" principle• Environment awareness for employees.

The following were the initiatives most and least preferred by surveyed Indian companies-

Most preferred: Water management, Pollution control, Green policy and Use of "reduce-reuse-recycle principles, Paper usage, Waste Management.

Least preferred: Carbon Credits, Carbon Foot printing, Environment Studies, Sponsoring green initiatives, Waste/fleet impact, Procurement from green suppliers, Clean energy patent.

In the light of the discussion done above we tried to analyse the Indian companies' contribution by way of

1) Green strategies adopted by the Indian companies

2) Focus areas for Budget spending for sustainability activities

4.1 Green Strategies Adopted By the Indian Companies

- **Process improvement:** Manufacturing and services processes are improved continuously for value addition and waste reduction
- **Collaboration:** building relationships and cooperating with various stakeholders of business to attain sustainability goal.
- **Innovation:** improving quality of products and services to serve the consumer in a better manner and minimize the use of resources.
- **Technology:** using technology to minimise and substitute non renewable energy and other natural resources.
- **Sustainability Reporting:** Reporting and disclosing sustainability information of the companies periodically in the public domain, bringing transparency in company functioning.

4.2 The Analysis across (A) Industry/Sector

1. The overall analysis shows that " Technology, Innovation and Process improvement "were found to be three top ranking implementation strategies adopted by the respondent companies. Collaboration and Sustainability Reporting were ranked last.

2. Software and manufacturing sector gives highest importance to Technology strategy, while service and others give first rank to innovation strategy. Second rank is given to process improvement strategy by service, software and other sector while manufacturing sector rates innovation at second position. Others indicate that the process improvement and sustainability reporting strategy are of equal importance at 3rd position in the

ranking order. In the Service, Software and Manufacturing sectors sustainability reporting comes as the least important strategy.

The study also tried to understand the importance given to **"measuring" the outcome** of such activities and "**linking these activities with the corporate policies**" Unless the processes and progress of any undertaking is measured in specific manner one remains unsure about the impact it may have on the various aspects of the business. Another premise behind these queries was that- if the support is not provided by the top management for these activities it would not become part of the organization culture and would not be considered as "important" by the employees. The following questions addressed to the respondents to find out the same-

- **Is measuring outcomes of sustainability initiatives considered as important in your company?**

It was found that: 106 (54%) (Out of 196) companies responded for the alternatives 5, 6 and 7 indicating high importance given by them to this query. 31 companies did not respond to this query.

When the analysis of importance given at three levels to measuring outcomes was analysed, it was found that -at the Top level 91(46%) respondents, at the Middle level 79 respondents (40%) and at the lower level 79 respondents (40%) (Out of total 196) were giving high importance to this issue.

4.3 Focus Areas for Budget Spending For Sustainability Activities

(a) Industry/sector wise:

In the overall analysis the preferred basis for budget allocation to be spent on sustainability initiatives are % of revenue, the % of profit as a basis came least preferred budget allocation criteria. Most of the companies gave "legal requirement' as a basis for budget allocation.

(b)**Turnover wise:**

In the turnover wise analysis the budget allocation for all categories of turnover i.e. (>500 Cr., 100 -500 Cr and <100Cr.) rank1 goes to % of total Revenue, rank2 for existing legal requirements and rank 3 for % of profit.

In "Focus areas for spending the budgeted funds for sustainability activities" –The study considered the following aspects for analysis-

(a) Environmental aspects
(b) Social aspects
(c) Fulfilling Legal requirement
(d) Acquiring Certification related to green issues
(e) Initiatives affecting company's bottom line

(a) Industry/sector wise:

1. In the overall analysis Environmental aspects, Social aspects and Sustainability initiatives affecting company's bottom line as top three focus areas for budget spending. Acquiring Certification related to green issues and Fulfilling Legal requirement were the last ranking focus areas for budget spending.

2. All sectors consider Acquiring green certification as the least important focus area ranking at no.5.

3. Rank 1 preference given to Environmental aspect by manufacturing and other sectors, while social aspect is considered as rank 1 by service sector and initiatives affecting company's bottom line by software sector.

4 Social aspects is ranking as second focus area for budget spending for software and manufacturing sector, while service sector considers Environmental aspect and others consider fulfilling legal requirement as rank 2.

(b)Turnover wise:

As per the **turnover analysis** focus areas for budget spending for companies with More than Rs.500 Crore are 1) environmental,2) social, 3) initiatives affecting company's bottom line.

For Rs. 100 -500 Crore- Companies focus of spending is 1) social aspect 2) initiatives affecting company's bottom line and 3) Fulfilling Legal requirement

For Less than Rs. 100 crore - Companies focus of spending is 1) Fulfilling Legal requirement 2) social aspect 3) initiatives affecting company's bottom line.

V. CONCLUSION

This research study indicates that the companies are taking up various sustainability initiatives in their respective organizations. The numbers of companies disclosing sustainability information, acquiring certification and undertaking initiatives are definitely on the rise. We can safely say that the India INC has understood the importance of such initiatives, not just from the point of view of protecting environment or gaining goodwill or image in the society but the large number of economic initiatives adopted by these companies show that by adopting these initiatives they can surely improve their economic gains and the profitability in an effective manner.

As indicated in the GCI by world Economic Forum, India's position is very low and requires massive efforts on the part of Government by building developmental policies, working on reducing roadblocks in creating new businesses, taxation reforms and improving infrastructure facilities. The corporate sector in India can help building competitiveness and wealth creation by building institutions, improving business sophistication, financial market development, and bringing goods market efficiency. The corporate sustainability budget can be focused on health and primary education sector as well as investing in the projects to help bridge infrastructure gaps in India.

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