



GREEN ACCOUNTING PRACTICES IN BMW GROUP

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ABSTRACT

Green accounting practices is a part of sustainability development. Sustainability development stands for entrepreneurs are not priority about profit performance they will balance with profit performance to social activities. They are prefer with environmental protect activities like recycling of industry wastage, maintain greenery, produced products are eligible for recycling process. Now a day's every country Govt. instructed to manufacturing organizations for implementing eco production and save environment. So each and every entrepreneur changes production process, adopt eco-friendly concept, like maintain recycling of wastage, reduce water, energy, control wastage of raw-material, etc. The present study focus on Green Accounting practices in Automobile sector with empirical study on BMW Group. Automobile sector is one of the major causes of environment pollution. BMW group is got top position in sustainable development in 2016 in the world published by Forbes Magazine. BMW group is the key example of for maintain green accounting practices with profitable manner.

Key words: BMW-Bayerische Motoren Werke AG, Green Accounting, Govt. – Government, Sustainable Development

Introduction

Green accounting practices are now-a-days was a very crucial role because follow the Govt. norms and rules and regulations like control the pollution, changes technology, changes production procedure and as well as satisfy about customer requirements also. Adopt pollution activities are not an easy because these are all expensive, if implemented then we cannot control

the cost. If Green accounting purpose we will maintain separate department and identify the product life cycle stages then convert into non-pollute line. The present studies observe on BMW group because it's got top position in sustainable development.

Objectives of the study

- To be know the importance of Green Accounting practices
- To be assess performance of Green Accounting practices in BMW group
- To be identify the Greener process and products
- To be identify findings and suggestions of Green Accounting practices in BMW group

Scope of the Study

The entire study depends upon Green Accounting practices in BMW group from 2012 to 2016 only. Between the period observe how can control the cost with use of environmental accounting. The research data collected from company magazines.

Review of Literature

Nasir Zameer Qureshi et.al.,(2012)in their research paper, environmental accounting and reporting: an essential component of business strategy, describes the environmental component of the business strategy, producing the required performance reports and recognizing the multiple skills required to measure, compile and analyze the requisite data. Special emphasis of the research is on generation of reports and their standards, for the range of business and regulatory purposes. They also identified the major obstacles for environmental accounting and reporting and concluded that for sustainable development of country, a well-defined environmental policy as well as proper follow up and proper accounting procedure is a must. Unless common people of India are not made aware about environmental damages and safety, development of accounting in this regard is really becomes difficult.

Malarvizhi P (2008) in a study corporate environmental reporting on the internet: an insight into Indian practices tried to establish the approach and scope of environmental accounting and reporting, as it exists today. The study was based on a sample of 24 documents comprising annual reports, environmental or sustainability reports and other relevant reports of past years. Initially companies in the sample were classified as manufacturing and

nonmanufacturing sectors. Since some companies operate in both sectors analyzed, the assignment to a specific one was determined on the basis of main activity carried out by the company. A structured data analysis sheet has been used for capturing corporate environmental reporting practices on the internet. The data collection and analysis sheet was framed to gather data on, key environmental indicator areas, as identified by the World Business Council for Sustainable Development and by the Global Reporting Initiative. The most relevant types of environmental information, as identified by them are: Environmental policy; Environmental impacts; Environmental management systems; Environmental targets and Environmental performance disclosure.

Green accounting methodology for India and its States, a project done by Haripriya Gundimeda et.al(2005). argue the case for Green Accounting for India (i.e. a framework of national accounts and state accounts showing genuine net additions to wealth) and to present a preferred methodology and models to reflect natural capital and human capital externalities in India's national accounts, measuring as depreciation the depletion of natural resources and the future costs of pollution, and rewarding education as an addition to human capital stock. the purpose of the study is to show that Green Accounting for India is desirable, feasible, realistic and practicable and that a start can be made with available primary data already being collected by various official sources of the Government of India. They also pointed out that there is a dearth of focused sustainability analysis and information provided to policy makers at the National and State levels in India. As a result, the processes of public debate, government planning, budgetary allocation, and the measurement of economic results are in effect being conducted without a sustainability framework. High GDP growth usually accompanies investment in physical infrastructure, which places mounting pressure on the country's environment and natural resources. However, there is an asymmetry between manmade and natural capital in that depreciation in the former reflects in GDP accounts but the latter does not. Recognizing that GDP growth is too narrow a measure of economic growth and not a measure of national wealth, they propose a "Green Accounting" framework for India and its States and Union Territories.

Hecht, Joy E. (1997), the world conservation union, explains Environmental accounting as an important tool for understanding the role played by the natural environment in the economy.

Environmental accounts provide data which highlight both the contribution of natural resources to economic well-being and the costs imposed by pollution or resource degradation. It also explains what is environmental accounting why it matters how it is done who is working on it and how to get started. It talks about the System of National Accounts (SNA) which is the set of accounts which national governments compile routinely to track the activity of their economies. SNA data are used to calculate major economic indicators including gross domestic product (GDP), gross national product (GNP), savings rates, and trade balance figures. The data underlying these aggregate indicators are also used for a wide range of less publicized but equally valuable policy analysis and economic monitoring purposes.

Performance of Green Accounting Practices in BMW group

- Improving environmental performance
- Controlling costs
- Investing in cleaner technologies
- Developing greener process and products
- Forming decisions are related to their business activity.

Improving Environmental Performance

Product and Value Creation

Key Issues in product line	2012	2013	2014	2015	2016
Energy Consumption per vehicle Produced (in Mwh / vehicle)	2.41	2.36	2.25	2.19	2.21
Water Consumption per vehicle (in m3 / vehicle)	2.22	2.18	2.18	2.24	2.25
Process waste water per vehicle	0.51	0.47	0.47	0.45	0.42
CO2 emission per vehicle	0.72	0.68	0.66	0.57	0.54

Interpretation

In above table represents key items performance of improving environmental. If observe energy consumption of vehicle producing it decrease from 2.41 to 2.21 so it indicates reduce the cost of expenditure in per vehicle. Water consumption per vehicle is increased from 2.22 to 2.25

but process waste water per vehicle is decreased from 0.51 to 0.42 and co2 emission per vehicle also decreased from 0.72 to 0.54. in overall improving environmental performance is satisfactory.

Controlling Costs

Key Issues in costing line	2012	2013	2014	2015	2016
Waste for disposal per vehicle (in kg/vehicle)	6.47	5.73	4.93	4.00	3.51
Volatile organic compound (voc) per vehicle produced (in kg/vehicle)	1.78	1.59	1.29	1.22	1.14
Share of renewable energy	36	48	51	58	63
Purchased from third party share of production –relevant purchasing volume in the CDP supply chain management progress (in %)	--	---	45	53	69
Attrition rate at BMW AG (as % of workforce)	3.87	3.47	1.41	2.08	2.70
Accident frequency at BMW group (per one million hours worked)	5.8	4.8	5.1	4.4	4.00

Interpretations

In above table represents cost controlling activities. Waste from disposal per vehicle is decreased from 6.47 to 3.51. Volatile organic compound per vehicle produced also decreased from 1.78 to 1.14. Attrition rate of employees also decreased from 3.87 to 2.70. Accident frequency rate also decreased from 5.8 to 4.00.

Developing “Greener” Process and products

Key Issue in Items	2012	2013	2014	2015	2016
Co2 emissions of BMW group Automobiles (EU-28)	138	133	130	127	124
Sale of Electric and Electrified vehicles	---	311	18000	32000	62000

Interpretation

In above table represents Greener process and Greener products. BMW group concentrate on relevant product marketing like Diesel vehicle instead of introduce electrified vehicles. Its products are suitable for to control the pollution. Sale of electrified vehicle are increased from to 311nos to 62000nos. so simultaneously production also increased. CO2 emissions of BMW group automobiles also decreased from to 138 to 124.

Revenue performance

Business Activities	2012	2013	2014	2015	2016
Revenues (in € millions)	76848	76059	80401	92175	94163
Profit before Tax (in € millions)	7803	7893	8707	9224	9665
Sales volume automobiles (in thousand units)	1845.2	1963.8	2118.0	2247.5	2367.6

Interpretations

In above table represents revenue performance of BMW group vehicles. Revenue performance was increased from €76848 million to €94163 millions. Profit before tax also increased from €7803 million to €9665 millions. Sales of volume of automobiles also increased from 1845.2 units to 2367.6 units.

Findings of the study

- To be observe year by year wastage of water in reducing manner
- To be assess year by year profit turnover are increasing manner
- To be designed for especially sustainable development purpose alternative products are produced like e-cars
- To be identified..... So much of amounts are spent for research activities because of engine's convert into low rate of carbon releasing engines.
- To be introduced new design of spare parts because of all vehicles parts are eligible of recycling process
- To be developed component liquid hydrogen fuel for replacing of diesel and petrol.

Suggestions of the study

- Better to adopt new technology for reduce the wastage of water consumption
- Purchased from third party to indicates the reduce of cost control, in short run good but in long-run it's may be difficult
- Increased renewable energy also having advantages and as well as disadvantages also. Renewable energy means used alternative source of energy like use solar power, wind power, etc, Buts its activities are more costly it's have more investment.
- Sales performance was good but simultaneously cost of expenditure also increased. So adopt cost accounting system and control the expenditure.

Conclusion

The overall study observed BMW group maintain Green Accounting practices are good. They are followed environmental accounting in profitable manner. Company produced core products like diesel vehicles are replaced with electrified vehicles and Hydrogen fuel based vehicles. All these activities are examples of sustainable development.

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