

Value Added Statements: Analysis on Volkswagen

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Abstract: Value added statements are gaining importance in today's corporate world as another source of accounting disclosure of corporate results. In this study, value-added statements are prepared from the data obtained from the Volkswagen an international car manufacture industry . The study is based on the hypothesis that the concept of value-added statement is somehow integrated in the several areas of accounting of Volkswagen, a private sector organization. Efforts have been made to investigate the above hypothesis to establish a comprehensive overview of the different uses of the value-added statements in various areas of accounting in the Volkswagen. In particular, the role of value-added statements in financial reporting and a critical analysis has been done. As an illustration, the value-added accounting for the past 5 years i.e. 2011-2015 of the VAS is presented. Gross value-added and net value-added is calculated by using multiple regression model. Value-added equation and compared graphically. Simple statistical tools are used for testing statistical significance of the data and for analysis. The study provides financial information in a better way and it is very much useful to judge the performance and productivity of an enterprise for managerial decision-making

Keywords: Value added, Volkswagen, value added statements, GVA and NVA, Multiple regression, multiple correlation.

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I. Introduction

The concept of value added was primarily used by Gillchrist (1970) in the first North American Census of Production. Trenche Cox is responsible for realizing that value added would avoid double counting and his techniques have been implemented by most industrial nations in the calculation of Gross National Product (GNP). The term value added defined as a difference between the value of goods or services produced and the value of services purchased from other firms in producing output.

Value Added = Value of Output - Value of Inputs

The Value Added may be classified into two category:- Gross value added (GVA) and Net value added (NVA).

- i. Gross Value Added : The GVA refers to sales plus income from other services less production materials and services purchased from external suppliers
- ii. Net Value Added: The NVA refers to the difference between Depreciation and Goss Value Added. Additionally, NVA is the sum of the value added to all stakeholders in the organisation.

The value added statement (VAS) describes when the calculation of value added used and its application among the stakeholders i.e. Employees, government, shareholders, creditors and the wealth that is retained in the company (C. J. van Staden 2000). With the help of income statement i.e. salaries and wages used to be the only further information, but it gives the information in a different and supposedly format.

The Value Added Statement (VAS), aims to show the value added generated by the entity, and how this value is distributed between all those who have made the try to create the value. which consist of shareholders capital, also the employees, other parties that finance the company's activity, society and payments paid to the government. Gross wealth can be calculated as the arithmetic difference between the value obtained from sales and the amount paid for inputs to outside parties(external suppliers). Net wealth refers to understand the gross wealth created regulated by the effect of depreciation.

In the Value Added Statement, the data normally pull out from the Profit and Loss Account (PLA), but they have corresponding similar objectives. The priority of the Profit and Loss Account (PLA) is to highlight net profit, i.e. allocated to the shareholders of the company. In the PLA the other segments of value added that are distributed to employees, to the government and to external financiers.

II. Origin And Growth Of Value Added Statement:-

The concept of value added (VA) came to be seen into existence in 1790. To measure Value added (Lewis et al. 1979), North American census of production is the first manufacturing industry used value added concept. In the late 1800s (Mitchell 1978), VA was used to measure the net output of UK companies in census of production. Value Added Statement (VAS) came to be seen more and more frequency in 1954, however VAS came into sight in the U.S. accounting literature and suojanen (1954) had find U.S. corporations issuing distribution of revenue by referring annual reports. Suojanen argued that the managers affect all people taking part in organization like the shareholders, employees, lenders, the government, and anyone who had contributed for organisation Value added statement. In 1970s emergence of public reporting statement of the VAS appeared in the United Kingdom. At that time of 1980s in Nigeria, some huge public companies were producing a value added statements while similar companies are not. South African companies published (1997) VAS with 43 per cent increase of industrial companies and found (2002) that 55 per cent of companies i.e., 125 of 228 companies listed in the industrial sector on the Johannesburg Securities Exchange (JSE) published a VAS.

VAS regularly followed in Europe, especially in Britain. In 1975, the Accounting Standard Steering Committee (ASSC) published the corporate report tract in addition to the traditional profit and loss account, with instructions specified by the British companies. Companies are recommending preparing value-added statements, in addition to profit and loss account (P/L) or income statement. Mainly in countries like Germany, Italy, France, USA, Switzerland, Netherlands and Denmark practicing preparation of VAS with that a good number of organizations. Later by understanding the significance of value-added statements is used by the Indian organisations, even though it is not mandatory on the part of the Indian organizations (Rao, 2000). With the rapid growing of Indian companies like SAIL, CCI, BHEL, Infosys, Britannia Industries, Escorts, etc. have started preparing value-added statements as a part of the financial report.

III. Literature Review

According to Suleiman A.S Aruwa(2009) in this research article titled the "Worth of disclosures in the value added statements and pattern of value added distribution", published in JOFAR: A journal of the Department of Accounting, Nigeria. a study conducted on Nigerian companies that are legally publishing the VAS along with other financial reports. This paper set out, to found the worth of value added reports, distribution and to check whether the VAS disclosures are useful in social reporting in Nigeria. This study focused on value added ratios and these ratios are used to study the correlation in relation to sales. Finally the study concludes the usefulness of VAS and it can be a pointer to the net output of the firm. The study recommends that an enterprise can survive without making profit, but not generating value is an iniquity to the society.

According to A. Kijewska et.al (2015), published their article in journal Metalurgija, article titled the "value added statements of mining and metallurgical companies in Poland". The study conducted on mining and metallurgical companies in Poland for a period 3 years i.e 2011-2013. This study focused on evaluation above said companies and showed them a difference in doing value added statement for its stakeholders. The study concludes that mining and metallurgical companies do not take into account and do not show participation of all stakeholders. Additional information could be pertinent indicators built on the basis of value added. It is probably in connection with the distribution of the theory of stakeholders and the need for corporate social accountability and more companies and businesses too.

That report may provide an additional source of information for the company's stakeholders such as employees, capital donors, State Budget and the company itself. According to the theory of stakeholders and corporate social responsibility the objective of the company is to deliver value to all stakeholders, not just shareholders. Hence the need for disclosure of information about the value added generated for all stakeholders. For internal analysis and for comparison purposes, several indicators based on value added should be elaborated. Calculations were carried out on the example of two Polish companies of the metallurgical and mining sectors for the years 2011-2013. This allowed for the evaluation of these two companies, to show the differences in the distribution of value added for stakeholders and evaluation of selected indicators

According to G. Aragiaes et.al(2008) published their article in REPEC journals, titled "The Value added statements: An appeal for standardization" . The study showed the published value added statements of companies listed on the JSE securities exchange during the period 1976-2005. In this Article difference between published value-added statements (PVAS) and standardized value added statements (SVAS)were analyzed and that leads to wrong calculation in value added statements . the study found two main differences which are confusing the users and government, that are 1. Items included in the allocation to the government and not bought-in goods and services. 2. The enclosure of interest received as a contribution to Value Added instead of decrease in the distribution to of capital.

As a conclusion of individual differences between a PVAS and SVAS(), cross-sectional analysis, on PVAS is not possible. Users should therefore not base their analysis of aggregate Value Added on the Value Added Statements. A slight benefit is obtained by doing cross-sectional analysis and ratio analysis on PVAS. SVAS

According to Mr Marcio Andre Veras Machado et.al (2015) published their article in social science research network, titled "Analysis of the relevance of information contact of the VAS in the Brazilian capital market". By using linear regression, Ratio analysis b/w stock price and wealth created per share (WCPS) calculated for a period of 2005-2011. WCPS shows a better sign of a company's result than net profit per share. If any variation found in share price of the companies and relationship between wealth created per share and stock price shown by VAS. the study found that market reacts more to WCPS compared to net profit per share. For Brazilian capital markets, WCPS may be a better substitute theory for referring to a company's result than NPPS. Finally the experimental evidence shows that the VAS has relevant information and achieved to show variation in stock price.

According to niranjan mandal et.all(2008) published their article in great lakes, titled "VALUE ADDED STATEMENTS: A Critical Analysis". A study conducted on BHEL for 8 years during the period 1999-2007. The study focused on Time series, Ratio Analysis and Regression for budgeting, performance and productivity. With the help of fisher's t-test 5% and 1 % level of significance have been calculated and tested. At last finally from his analysis, author concluded that value added statement is useful For managerial decision making, to evaluate the performance and productivity of an enterprise. VAS has failed to score sufficient in favour to the traditional financial statement. So, it necessary to reinforce the concept by promoting and defining the various technical terms used in VAS for calculating the amount of Value Added. It is meaningful to mention that the Professional Accountants should stretch the significance of value added statement.

According to B.S. Yogesha et.al(2014) published their article in IOSR Journal Of Humanities And Social Science, titled" Analysis of Value Added Ratios of Indian Oil Corporation Ltd". ". A study conducted on Indian Oil Corporation for 8 years during the period 2005-2012. The main intension of this paper is to analyze value added ratios of Public Sector Company. This paper totally concentrated on how the Value added ratios were beneficial to the company to measure the productivity and efficiency of an organization. At last finally from his analysis, author found that his may assist to improve current accounting by restating profit and loss account into value added statement. As VAS is different from profit and loss

account, it is helpful to make decisions on value added information. With gross value and net value information we can understand how the company has generated value added statements and allocate to different stakeholders. from his findings longitudinal study would help to know how an body has generated it value and circulated to different stakeholders.

COMPANY PROFILE

Volkswagen Group (VW AG), is a German multinational automotive manufacturing company. Its main headquartered in Wolfsburg, Germany and they designs, manufactures and deals out with vehicles, motorcycles, engines, and turbo machinery even it offers related services including financing, leasing and fleet management. In 2015, it manufactured 9.93 million motor vehicles, the second-largest manufacturing company in the world, following Toyota and ahead of General Motors (GM). It has largest market share in Europe and VW AG ranked seventh in the 2016 Fortune Global 500 list of the world's largest companies. The VW AG manage 121 production plants in 20 European countries and 11 countries in the Africa , Asia and Americas. In Volkswagen group worldwide 610,076 employees produce nearly 42,000 vehicles and offers related services. In 153 countries the Volkswagen Group sells its vehicles.

HYPOTHESIS

- I. Whether there is any significant relationship between sales value with respect to GVA and NVA.
- II. Whether there is any association between sales value to contribution towards workforce, organisation and other parties of the Volkswagen with revenue generated.

Objectives Of Study

The objective of the study is to measure the performance of Value added statements of the Volkswagen group. This research is based on the following objectives:

- 1. To understand the concept and usefulness of value added statements.
- 2. Other objectives of the study are mentioned below:
 - A. To study the purpose of calculating and finding relationship between Gross Value Added (GVA) and Net Value added (NVA) .
 - B. To compare the value added statements for 5 years.
 - C. To find the relation between revenue generated (sales value) and
 - Wages and salaries, benefits - employees
 - Reserves - company
 - Dividend - shareholders
 - Taxes and duties - State
 - Interest expenses - Creditors

IV. Methodology

The study concentrated on the analysis of value added statement from the financial statement of Volkswagen for a period of 5 years (i.e. from 2011-2015). Value Added Statement (VAS) and other financial statements have been prepared simultaneously over the period under study. Statistical analyses are bringing together after considering necessary re-arrangement done for the purpose of the study. The analysis has been made in VAS analysis, comparison of VAS from 5years data on multiple regressions and multiple correlations. Volkswagen is a leading private sector undertaking in India has been selected as a sample for the study. This analysis is to show the use of the value added measurement in the current practice of financial reporting in Volkswagen context. The analysis has been made in three parts: (i) VAS analysis, (ii) multiple regression analysis and (iii) multiple correlation analysis.

In Value added statement analysis of Volkswagen, Gross Value Added and Net Value Added have been computed by using the VAS format. In multiple regression analysis were calculated between the variable sales revenue generated to gross value added (GVA) and net value added (NVA). In multiple correlation analysis whether there is a association between sales value to contribution towards workforce, organisation and other parties of the Volkswagen with revenue generated.

Table -1 Results And Discussion-

Volkswagen Group – Value added statements 2011-2015					
Source of funds in □ million	2011	2012	2013	2014	2015
Sales revenue	159,337	192,676	197,007	202,458	213,292
Other income	13,125	24,652	13,994	14,192	20,092
Cost of materials	-104,648	-122,450	-127,089	-132,514	-143,700
Depreciation and amortization	-10,346	-13,135	-14,686	-16,964	-19,693
Other upfront expenditures	-9,759	-22,077	-21,027	-15,063	-28,578
Value added	47,709	59,666	48,198	52,109	41,413
Appropriation of funds in □ million					
to shareholders (dividend)	1,406	1,639	1,871	2,294	68
to employees (wages, salaries, benefits)	23,854	29,503	31,747	33,834	36,268
to the state (taxes, duties)	4,525	4,322	3,865	3,817	3,033
to creditors (interest expense)	3,530	3,957	3,442	3,389	3,472
to the Company (reserves)	14,393	20,246	7,274	8,774	-1,428
Value added	47,709	59,666	48,198	52,109	41,413

The value added statement indicates the added value produced by Volkswagen in the financial years as its contribution to the gross domestic product (GDP) of its home country, and how it is appropriated.

- In fiscal year 2011 to 2012, the value added produced by the Volkswagen was 25% higher than in the previous year. Generated value added in the year 2012 was €127.1 thousand (+5.4%) by the employees of Volkswagen
- The value added generated by the Volkswagen Group in the 2013 was 19.2% lower than in the previous year(2012), as measurement effects from the integration of Porsche had a positive effect on other income. Added value per employee in 2013 was €98.4 thousand (-22.6%).
- The value added generated by the Volkswagen Group in the year 2014 was 8.1% higher than in the previous year. Added value per employee in 2014 was €103.9 thousand (+5.5%).
- The value added generated by the Volkswagen Group in the year 2015 was down 20.5% year-on-year in particular as a result of the negative special items in connection with the diesel issue. Added value per employee declined to €80.1 thousand (-22.9%) in 2015.

TESTING OF RESEARCH HYPOTHESIS:-

Hypothesis 1:

Multiple regressions:-

H₀: There is a no relationship between sales value with respect to GVA and NVA.

H₁: There is a significant relationship between sales value with respect to GVA and NVA.

1. Multiple regression were calculated between the variable sales revenue generated to Gross value added(GVA) and net value added(NVA)
2. Sales revenue generated is taken as Dependent variable and Gross value added(GVA) and net value added(NVA) are considered as Independent variables
3. Study shows there is a strong association between sales revenue generated with Gross value added (GVA) and net value added (NVA).
4. To test the hypothesis multiple regression in fractional statistics are used to test the variable.

Hypothesis 2:

Multiple correlations:

H₀: There is no association between sales value to contribution towards workforce, organisation and other parties of the Volkswagen with revenue generated.

H₁: There is association between sales value to contribution towards workforce, organisation and other parties of the Volkswagen with revenue generated.

V. Findings

1. To study the association among workforce, organisation, reserves, dividend and government parties of the Volkswagen with revenue generated.
2. Multiple correlation study shows, there is a high degree of association between employee groups.
3. Here the significant value shows 0.03 which is less than 0.05, hence H₀ can be rejected straight away and conclude that there is a high positive association between sales and workforce.
4. Here the significant value shows 0.032 which is less than 0.05, hence H₀ can be rejected straight away and conclude that there is a high positive association between workforce and Government.
5. Here the significant value shows 0.044 which is less than 0.05, hence H₀ can be rejected straight away and conclude that there is a high positive association between government and the company.

Multiple Regressions:-

- Sales revenue generated is taken as Dependent variable and Gross value added(GVA) and net value added(NVA) are considered as Independent variables
- To test the hypothesis multiple regression statistics are used to test the variable.
- Study shows there is a strong association between sales revenue generated with Gross value added (GVA) and net value added (NVA).

Multiple correlations:

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- Here the significant value shows 0.044 which is less than 0.05, hence H₀ can be rejected straight away and conclude that there is a high positive association between government and the company.

VI. Conclusion And Summary

Employees' share of NVA was 5.4% in 2011-2012 and it decreased to -27.5% in 2012-2013 and after that it has continuously decreased over time and ultimately it has come down in 2013-2015. Added value per employee declined to €80.1 thousand (-22.9%) in 2015. The retained earnings, a portion of owners' share, is very much important for growth and expansion of business. From the table it is found that retained earnings have been come down over the period of study. It suggests that company should try to maintain a stable increasing trend of retention of funds in future after careful

consideration of dividend policy in the one hand and market value of the firm on the other, so that it can grow and expand without any difficulties. It is worthwhile to mention that a major portion of NVA has been concentrated in two heads i.e. contribution to employees and the owners.

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