A comparative study of inventory management and budgetary control system in the automobile sector

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ABSTRACT

In this paper titled, a comparative study of inventory management and budgetary control system in automobile sector aimed at finding out the impact of budgeting and performance in the automobile sector. Inventory management has come up with most of the important tools to improve operational efficiency over the last 3 to 4 decades across the globe. The automobile industry boosts it for profit it solve the unemployment problem and it shows new technologies through which time, money and manpower can be saved. Inventory is one of the major and most significant resources developed commerce possesses, and the earnings of stock are one of the major sources of proceeds production for a company inventory administration aims to hold inventory at the lowest potential charge, given the objectives to guarantee continual provisions for continuing Operations. While creating decisions on inventory management helps to find a compromise between different cost components. The different cost component includes costs of supplying inventory, inventory–holding costs and costs resulting from insufficient inventories.

Keyword: - *inventory management, budgetary control, comparative study, automobile sector etc….*

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1. Introduction: Budgetary Control System:

According to **Adams (2009:184),** a budget could be defined as a plan of action for the entire organization. Budget can also be stated as a financial and or quantitative statement prepared and approved before time to be pursued by the organization to achieve organizational goals and objectives. The basic objective of a budget is to measure the profitability of an organization. In other words, a budget is a well-ordered plan for the utilization of manpower and material resources. A budget may be divided into two main categorize: capital budget and operating budget. Capital budgets aimed towards proposed expenditure for new projects and often require special financing. The operating budgets are directed towards achieving short-terms operational goals of the organization, for instance, production or profit goals of a business firm. Operating budgets are further subdivided into several departmental or functional budgets. Most organizations use budget control as the primary means for internal control of corporate, it provides a thorough management platform for efficient and effective allocation of resources. Budgetary controls assist the management team to make plans for the future and implementing those plans and monitoring activities to see whether they conform to the plan, effective implementation of budgetary control is an important guarantee for the effective implementation of the budget in the organization **(Carr and Joseph, 2000).** Budgetary control can be stated as the process of developing a plan to spend the money and periodically comparing actual expenditures against that plan to determine if it or the spending patterns need adjustment to stay on track. This process is necessary because it control's spending and helps to attain various financial goals. Organizations depend heavily on budgetary control to manage their spending activities, and this technique is also used by the public and the private sector as well as private individuals, like heads of household who want to make sure they live within their means **(Dunk, 2009).** In Organizations, budgetary control can be used in forecasting techniques so that it helps the organization to make plans and budget for the future **(Epstein and McFarlan, 2011).** The management department uses both department services to estimate the expenditures and revenue of business under normal conditions of business **(Suberu, 2010).** In budgetary control, four techniques are used named variance analysis, responsibility accounting, adjustment of funds, and zero-based budgeting. Variance analysis compares actual accounting figures to determine whether the variances are favorable or unfavorable. Responsibility accounting is one of the techniques which create a profit center, cost center, and investment center which are just like departments of any organization in which all employees work based on their centers, each with specifically targeted performance.

Preliminaries for the Adoption of a System of Budgetary Control:
For the successful implementation of a system of budgetary control, certain pre-conditions are to be fulfilled. Those are elaborated as below:
(i) There should be a chart of an organization that lays out the responsibilities and duties of each level of executives in a clear manner and the delegation of authority to the various levels. To achieve success, a solid foundation in this context should be laid at the outset.
(ii) The plans, objectives, and policies of the business should be defined in a crystal clear way and unambiguous terms.
(iii) The output level for certain budgets is fixed, i.e., the budgeted output should be stated.
(iv) In particular, budget factors should be considered while preparation of various budgets.
(v) There should be an efficient and effective system of accounting to record and provide data by the budgetary control system.
(vi) For the establishment and accurate execution of the plan, a Budget Committee should be set up.
(vii) There should be an appropriate system of communication and reporting between the various levels of management.
(viii) There should be a sanction of the program, which is usually in the form of a budget manual.
(ix) The budgets should first and foremost be prepared by those who are responsible for performance.
(x) The budgets should be continuous, complete, and realistic.
(xi) There should be a word of honor from the top management executives of cooperation and acceptance of the budgetary system.

Inventory Management:
Inventory is defined as the stock of any item or resource used in the organization. There are three types of manufacturing inventories: raw materials, work in progress, and finished goods.
The inventory needs to be managed systematically due to various reasons, some of them can be:
• To meet anticipated demand;
• To smooth production requirements;
• To protect against stock-outs;
• To take advantage of order cycles;
• To enclose against price increases or to take advantage of quantity discounts;
• To permit operations;
• To decouple components of the production distribution system.
• For a smooth running of a business.
• To fulfill an expected demand.
• To avoid a stock-out situation.
• To look for protection from price increases shortly.
• For the smooth distribution cycle.

A systematic inventory management system helps in the consolidated functioning of all these above-mentioned factors. It is a process that is dependent on effective inventory control. There are various inventory control techniques such as EOQ, ABC analysis, VED analysis, Safety stock level, etc.

INVENTORY MANAGEMENT TECHNIQUES
1. STOCK REVIEW

Stock review can be said a regular analysis of stock concerning projected future needs. Stock review can be done through a manual review of stock or by using inventory software. Describing the minimum stock level will allow you to set up regular inspections and reorders of supplies.

2. ABC ANALYSIS

It is one of the widely used ways to analyze your inventory. In this method, the inventory is classified into three categories namely A, B, and C. The categorization is based upon the inventory value and cost significance. Also, the number of items and values of each category is expressed as a percentage of the total.

- Items with high value and small in number are termed as “A”
- Items with moderate value and moderate in number are termed as “B”
- Items with small in value and large in number are termed as “C”

3. JUST IN TIME:

The main objective of the JUST IN TIME method is just to increase the inventory turnover and also reduce the inventory holding cost. JIT inventory system alsoshows the unwanted or dead inventory held by the retailer/ manufacturer. This method is ideal for manufacturing organizations and it is not used in the Retail industry in general. This will also involve the usage of Kanban cards to track inventory movement.

4. VENDOR MANAGED INVENTORY:

As the name indicates, it involved SKUs managed directly by the supplier. Inventory is refilled based on sales at regular intervals by the vendor. The retailer provides shop floor space and the vendor is charged a consignment rate on every product sold at the location. The ownership of the items from receiving to sales and inventory loss if any will be with the supplier.

1.1 Objective:

1**.** To study in detail the budget control system in Automobile Industry
2. To study Inventory management in Automobile Industry
3. To evaluate the analysis of Automobile concerning Inventory management and Budgetary control.

1.2 Scope:

This paper concentrates on Inventory Management and Budgetary Control as well comparative analysis of the same. Though the main focus of this paper is on the automobile sector this study can help to study another sector like telecom, paint, etc. Inventory is the stock of any item or resource used in an organization. There are three types of manufacturing inventories: raw materials, work in progress, and finished goods. Effective budgetary control solves an organization's need to plan and consider how to confront future potential risks and opportunities by establishing an efficient system of control.

The Study of inventory problems dates back to **1915** when **F. N. Harris** developed a very simple but useful model of an inventory problem **(Shore, 1980).**

Inventory is the total amount of goods or materials contained in a store or factory at any given period. A store owner needs to know the exact number of items on the shelves and storage areas to place an order or control losses and risk. Inventory management is a science which deals with specifying the shape and percentage of stocked goods. Inventory management is required at different locations within multiple locations of a supply chain network, to protect the regular and planned course of production against the random disturbance of running out of the materials or goods. Inventory management also concerns with the fine lines between the replenishment lead time, carrying costs, asset management, inventory forecasting, valuation of inventory, future inventory price forecasting, physical inventory, inventory visibility, available space for inventory, quality management, replenishment, returns, defective goods as well as demand forecasting.

Inventory control is very important to almost every type of business, whether the business is product-oriented or service-oriented. Inventory control touches almost every facet of operations. A proper balance must be there to maintain a proper inventory with the minimum financial impact on the customer. Inventory controls are the activities that maintain stock-keeping items at different levels. In manufacturing, as the focus is on the physical product, inventory control focuses on material control. Inventory means the physical stock of goods, which is kept in hands for the smooth and efficient running of future activities of an organization with the lowest cost of funds blocked in inventories. The basic reason for carrying inventory is that it is physically not possible for each stock item to arrive exactly where it is needed, exactly when it is needed. Inventory management is the combination of various functions of an organization that deals with the supply of materials and associated activities to achieve maximum coordination and optimum expenditure on materials. Inventory control is the most crucial function of inventory management and it forms the nerve center in any inventory management organization. An Inventory Management System is an

essential element in any organization. It is comprised of a series of processes, which provide an assessment of the organization's Inventory Management. For example, we are considering the inventories in a company which makes washing machines in all these analyses.
Inventory problems of too large or too small quantities on hand can cause business failures. If an organization experiences out of stock for any necessary inventory item it will lead to a halt of production. The inventory management technique is widely used in determining the optimum level of inventory and tries to find the answers to problems of safety stock and lead time. Inventory management has become well developed to meet the rising challenges in most corporate entities.

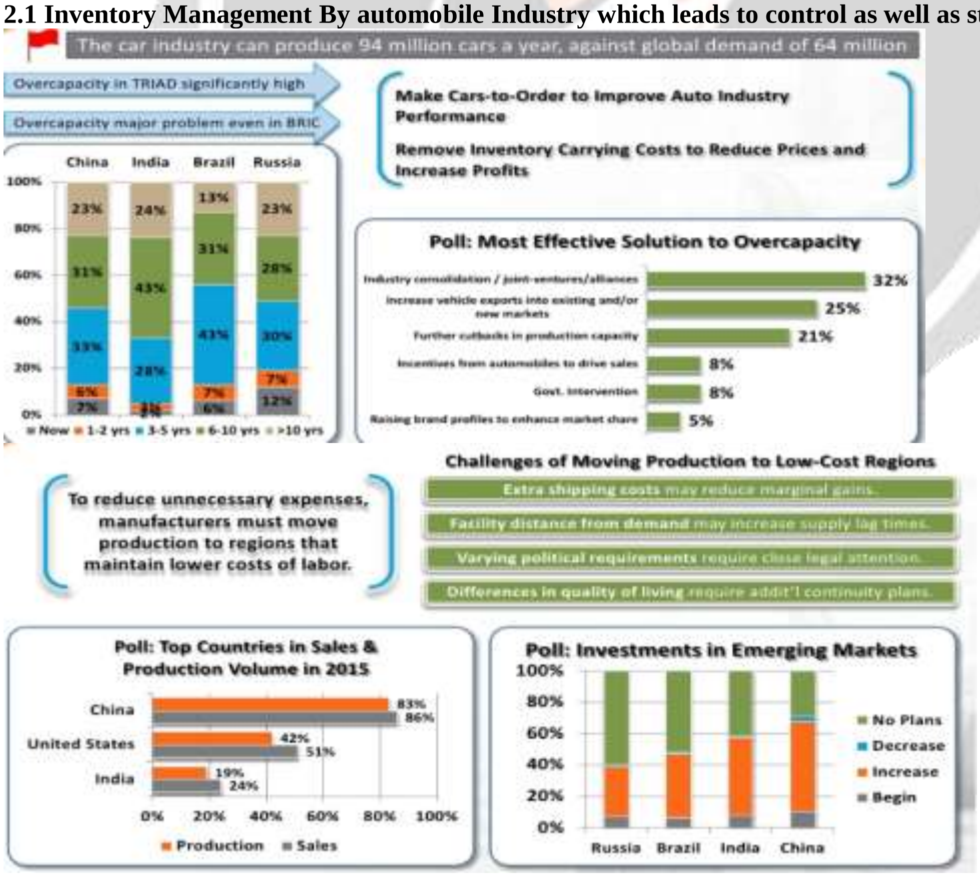
Inventories are stocks which company is manufacturing. The various forms in which inventories are processed and finished goods are formed are as follows-
a. Raw materials are basic inputs that are changed into finished products through the manufacturing process. Raw materials inventories store the units which are purchased for future production.
b. Work-in-process inventories are semi-manufactured products. They represent products that need more work before they become finished products for sale.
c. Finished goods Inventories store the products which are ready for sale. Stocks of raw materials and work-in-process alleviate production when the stock of finished goods is so linked between the production and consumption of goods.

2. Need for inventory control:

A cost secretarial scheme is to be successful there should be a correct control of account and equipment form the time information are positioned with the supplier until they have been successfully making use of in manufacture.

Resources are correspondent to money and they create up a significant part of the sum cost. Materials must be properly safeguarded and correctly accounted for.

2.1 Inventory Management By automobile Industry which leads to control as well as stabilized budget:



2.2 Review of Literature:

Omolehinwa (2002) studied budget as a plan in an organization expressed in monetary terms and subject to the constraints imposed by the participants and the environments, indicating how the resources which are available with the organization can be utilized to achieve the objectives of the organization.

Brown and Howard (2002)], it is a predetermined statement of management policy during a given period which provides a standard for comparison with results achieved. Budgetary control techniques reflect the financial implications of business plans as well as identifies the amount, quantity, and timing of resources needed **(Shields & Young, 1993).**

Scott (2005), budgeting and budgetary control processes allow for subsequent comparison of actual results with the expected results

Selznick (2008), budgets play several roles which include coding, learning, making goals explicit, contracting with external parties as well as facilitating control. Inventory decisions are high risk and high impact on the supply chain management of an organization **(Bowersox, 2002).**

Dimitrios, (2008) inventory management practices have come to be recognized as a vital problem area needing top priority.

Lambe (2014), one of the effective ways to prepare for changing conditions is to provide a framework that contains a specific plan that is sufficiently flexible to adapt to unanticipated changes. A complete process of providing such a framework is called budgeting. Budgeting involves the setting of targets and effectively monitoring actual performance against those budgeted.

Sunitha, K. V. (2012) in her thesis, inventory management is very important for keeping costs down while meeting regulations. It is a crucial task to balance demand, supply, and inventory management to make sure that the balance is untouched. The trained inventory management and good quality of the software will help to make inventory management successful. The ROI of Inventory management has seen improvement in revenue and profits, positive employee ambiance, and an increase in customer satisfaction.

Plinere, D. & Borisov, A. (2015), concluded that inventory management is essential for every company that maintains inventories. Inventory management can improve the company's inventory control existing condition and reduce costs of the company.

Marcormick and Hardcastle (2011) carried out a study on budgetary control and organizational performance in government parastate in Europe. The research suggests that employees need to be very sensitive to budgetary controls and the effect on the performance of the organization.

Anthony and Govindarajan (2001), budgeting has a positive impact on management efficiency.

Fisher, Maines, Peffer, and Sprinkle (2002) proved that the allocation of resources improves the performance of staff. Budgeting is a management tool for controlling, promoting, and evaluating performance.

To achieve specific targets or visions, an organization needs to ensure that all departments work towards the same goals **(Zimmerman, 2003).** The reason is that all departments relate to each other in many ways; therefore, managers of departments need to take responsibility for their departments and know how to communicate and cooperate with other departments effectively. Otherwise, resource allocations would be inefficient **(Weetman, 2006).** Moreover, efficiency tends to increase when managers use budgets to allocate resources **(Tavakkoli & Etemadi, 2007).**

John and Ngoasong (2008), budgeting facilitates the creation and maintenance of competitive advantages in the following management functions:

(1) forecasting and planning, (2) communication and coordination, (3) motivation, (4) evaluating and controlling, and (5) decision making.

The main thing is to determine the current demand for information, taking into account the potential demand for management information in the future; e.g. **[Nowosielski 2002].** Budgeting can be successfully used by small, medium, and large firms **[Kotowska 2012].** Given the diversity of the goals of budgeting, it can be said that the creation of budgets is caused by the desire to achieve objectives that have been included in the operational and financial plans of an entity. In small units, budgeting aims to improve the financial condition by reducing costs **[Michałowska 2014]**

Hirst (1987) explained that an effective budgetary control solves an organization's need to plan and consider how to confront future potential risks and opportunities by establishing an efficient system of control.

Shields and Young (1993) define the theory of budgeting as a detector of variances between organizational objectives and performance. Budgets are the important elements of the control process and consequently a core part of the broad concept of effective budgetary control.

Organization's Performance (OP) is partly dependent on its technology, processes, systems, and employees. It is concerned with the efficiency and effectiveness of the operation. Organization Performance (OP) is an indicator which measures how efficiently an enterprise achieved their objectives **(Hamon, 2003). Blair (1995)** stated major areas in which performance can be examined. The areas would include liquidity, profitability, efficiency, and debt repayment capability.

Fonjong (2007) shown a positive link between budgetary control and financial performance and have a good motivational impact by involving managers in the budgeting process and by providing incentives to managers to help for achieving the business's goals and objectives. It can be said that budgetary control is one of the key tools which leads to the benefits in the financial performance in the organization. Budgetary control includes the preparation of a budget, recording of actual achievements, ascertaining and investigating the differences between actual and budgeted performance, and proposed 42 suitable remedial actions which can be taken, so that the budgeted performance may be achieved efficiently and effectively **(Kinyua, 2015).** By implementing proper budgetary control planning, the firm can reduce costs and improve the quality of its services based on its budgetary allocations. This will help to reduce the costs and achievement of goals is enhanced thus organizational effectiveness. By budgeting, managers coordinate their efforts so that the objectives of the organization co-relate with the objectives of its parts **(Churchill, 2001).**

Walker (1930:47–48) Stated that the problem of budget distribution is one of the mechanics. The final appropriation is the result of all the forces in action just as accurately as in an analogous case in physics. To understand the municipal budget making it is essential to visualize this tremendous pressure that is being exerted from all sides. The pressure of organized interests, ambitious departmental heads, civic groups, official prejudices, of the political potency of a low tax rate, even of public opinion where it is not represented by any of the above. The final budgeting will be the result of the forces and not the outcome of a dispassionate evaluation of all the different functions.

Michael C. Bergerac, former CEO of Revlon Inc., Stated that every management mistake ends up in inventory. Several management problems could be solved by removing extra inventory. Since inventory is mostly related to customer service, it is most worth close attention**.** Inventory is a major asset and it represents a sizable investment in businesses that sell or manufacture products. Manufacturing, wholesaling, retailing as well as importing/exporting, and other fields, the inventory contains one of the largest controllable assets of businesses. There are two major economic objectives of inventories **(**Thomas and Ross, 1979): they act as buffer zones in the system of production as well as distribution and maybe act as investment or speculation.

Sharma (1984) Suggest, Inventory management systems are mostly applied in manufacturing settings, where their viability and potential economic value are duly attained. The average business has 30% of its working capital tied up in inventories, while as, about 70% of its investment is in the plant and equipment. It is an essential fact that the carrying of the inventories involves an exorbitant cost**.**

Alford and Bangs, "the annual cost of carrying a production inventory averages approximately 25 percent of the value of the inventory. Everell Welch has also stated that, "the annual carrying cost of the inventory average nearly 20 percent of the total inventory value, exhibiting a range of nearby 10 to 34 percent.

3. Research Methodology:

Type of Research Methodology: Exploratory research method
Type of data: Secondary Data

3.1 Method of data collection: The secondary data is collected from both print and electronic media. The print media includes reports, magazines, journals, published research papers, thesis works, unpublished industry reports, newspaper reports as well as other textbooks. The electronic media sources include digital databases, web portals, indexed journals in open access portals as well as industry association reports, etc. In this research work, we have referred to 37 research papers as a secondary source

3.2 Findings and Discussions:

Inventory Management:

Inventory management has to do with keeping accurate and appropriate records of finished goods that are ready for shipment. This often means posting the production of newly completed goods to the inventory totals as well as subtracting the most recent shipments of finished goods to buyers. When the company has a return policy in place, there is usually a sub-category contained in the finished goods inventory to account for returned goods that are of second-grade quality. Appropriate in maintaining figures on the finished goods inventory makes it possible to quickly convey information to sales personnel as to what is available and ready for shipment at any given point in time. Inventory management is important for keeping the costs down while meeting regulations. Supply and demand is a delicate balance and inventory management ensures that the balance is undisturbed. Highly trained Inventory management and high-quality software will help to make Inventory management a success. The ROI of Inventory management will be seen in the forms of increased revenue and profits, positive employee atmosphere also on overall increase of customer satisfaction.

Budgetary Control:

The study concludes that regular monitoring and proper allocation of resources and continuous budgeting review are key attributes to lowers losses hence it leads to increase financial performance in any organization. Lastly, the study notes that budgetary controls have a direct relationship with the level of financial performance. Also, the budgetary controls system affects the level of financial performance of the NOC. This agrees with a study by Silva and Jayamaha (2012) who found that efficient apparel companies maintain sound budgetary processes which contribute to higher levels of organizational performance. Hence there exist a positive relationship between budgetary controls and financial performance. This could be attributed to the fact that budgeting controls minimize cost and thus helps to increase the profits of the organization.

4. CONCLUSIONS

Inventory Management:

While going through the available literature it was found that almost every country that has a growing Automobile sector is trying to tackle the problem of deciding the efficient Inventory Management. Many researchers have shown interest in the field of the inventory management system and have come up with beautiful work. As the field of inventory management is not too old, so many aspects are yet believed to be explored. The Automobile sector is again a growing sector that gained its importance in the recent past. Not much amount of work has been done on this area of managing inventories in the Automobile sector. So it leaves ample scope for this study.

Budgetary Control:

Performance evaluation is fundamental to every profit-making organization in that it can be employed as a means of ascertaining if the budget or budgetary control measures of organizations achieve the expected results during a specified period hence, performance evaluation is a tool for appraising how well an organization has performed. This study was also carried out with the view to address two fundamental issues: first, to determine if there is any association between budget/budgetary control, and; second, to ascertain if there is any significant variation in budget/budgetary control. The study employed descriptive design and Secondary data was the major source of data collection. The analysis of the study revealed that all the items in the Secondary data were useful in establishing the association between budget/budgetary control and comparison to inventory Management. More interestingly, it was found that budget or budgetary control is a means of evaluating the performance of the Automobile Industry. Furthermore, it was revealed that there is a significant variation in the budget/budgetary control in Automobile Sector. Based on the findings, it was recommended that Automobile Industry should carry out performance evaluation on every aspect of their budget and budgetary activities as a way of ensuring that budgeted outcomes are met. Also, budgetary costs should be a basis for choosing the most-fit performance evaluation technique for Automobile firms since such performance evaluation systems can provide economic benefits of different sorts to them.

Thus, proper inventory Management Needs proper budgetary control Majors, hence by comparing two fields it can be clear that appropriate budgetary control is the means of Management of Inventories.

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