Management Homework for Improving Productivity Including Productivity Linked Long Term Wage Settlement

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Introduction

Every enterprises whether small, medium or large operating in any part of India , needs to ensure that the business not only grows but continues to be competitive and remains viable during its life and does not become sick . There are times in the life of an enterprise when percentage of increase in inputs costs is higher than percentage increase in selling price, hence there are bound to be cost pressure to improve productivity. When an enterprise is not able to pass the cost increase to customers, then it needs to look at the cost structure of the entire value chain, explore possibilities in all areas of cost reduction and also improve productivity of every possible resource and also look at improving volume sales to avoid the financial stress and strain of running the enterprise. Hence, the enterprise needs to take appropriate corrective steps swiftly, so as to reverse the shrinking surplus margin of the enterprise.

Enterprises operating in India, whose workforce are covered under the ambit of The Industrial Disputes Act, 1947; do come across situations, where in the workers or their trade union over a period of time raise an industrial dispute through a charter of demand for increase in wages and benefits plus improvement in working conditions. There is no compulsion under the law for the Management of an enterprise which is paying wages and providing benefits commensurate with the practice in the region to entertain such a charter of demand raised by the workers or their trade union. However, when the management of an enterprise refuses to entertain such a charter of demand, in quite many cases it does lead to industrial unrest in the enterprise. Most enterprises have been entering into Long Term Wage Settlement at periodic time intervals with Trade Unions / Representatives of Workers / Workers for wage and benefit revisions coupled with other clauses covering workers under the provisions of the Industrial Disputes Act, 1947, to ensure peace and no further financial liability during the period of the Long Term Wage Settlement.

Measuring Productivity

In India in the 1950's, 1960's , 1970's , 1980's and even in 1990's most large and medium size enterprises employed qualified / personnel who could carry out studies to measure experienced productivity or availed the services of agencies like National Productivity Council (NPC), Local Productivity Council (LPC), Central Labour Institute (CLI), Regional Labour Institute (RLI), National Institute for Training in Industrial Engineering (NITIE), Indian Institute of Technology (IIT) or other agencies or consultants for carrying out studies to measure productivity on the shop floor or in the office. These qualified / experienced professionals would document the existing process through a flow chart, suggest improvements in the process by carrying out a method study exercise, undertake work measurement by observing the various operations / activities , set standards of expected output in a shift at various work stations keeping in mind the material used, the rated capacity and actual output of the machines used, and the available / required personnel with relevant skills working on the task. In certain cases they would also carryout large scale Work Breakdown Studies (WBD), not necessarily simple method studies but even involving managerial people linking / enriching their job descriptions, their job positions, their supervision spans including rationalizing manpower, improve productivity and at the same time give benefits back to people. There were enterprises that also took benefit of video shooting and analysis, for setting the production norms. There are others that have used the concept of Overall Equipment Effectiveness (OEE), which is the standard for measuring manufacturing productivity by identifying the percentage of manufacturing time that is truly productive, thus going much beyond efficiency and is also an effective measurement indicator.

During the period 1950 to 1990's there were many enterprises that introduced financial incentive schemes with an objective of improving productivity and also reaped benefits from it. Financial incentive schemes after their initial success for certain number of years, also ran in to rough weather in quite many enterprises for various reasons, including technological development , hence there were enterprises that brought about changes in the financial incentive schemes or also worked in the direction of abolishing/ modifying the financial incentive schemes. Still there are enterprises that have a productivity linked financial incentive scheme.

The older enterprises which had financial incentive schemes during the period 1950 to 1990 had compiled information regarding productivity levels of various operations in their enterprise and also used it for improving productivity where required. Financial incentive schemes gradually lost relevance in highly automated plants, as they were replaced by higher grades to the concerned employees and better manning norms. Emphasis shifted to total number of personnel for size of team and not for individual work stations. Quite many enterprises gave higher emphasis on multi - skilling / multi - tasking of manpower to improve flexibility in operations and improve efficiency and output. Also management's of many enterprises slowly upgraded critical jobs from worker category to officer category, who received an annual performance pay instead of the monthly financial incentive.

In the 1990's the concept of Business Process Reengineering (BPR) as defined by Michael Hammer and James Champy came in , which involved "fundamental rethinking and radical redesign of business achieve dramatic improvements, to in critical processes contemporary measures of performance, such as cost, quality, service, and speed". This was mainly a top down approach, which did lead to improvements in productivity, reduction in cycle time and quality improvement. Enterprises implementing BPR also faced turbulence, if the workforce / union opposed the changes arising out of BPR. In BPR, companies rethink existing processes to deliver more value to the customer and there are enterprises that have benefitted by it. Post liberalisation of the Indian economy in 1991 many enterprises have gone in for Enterprise Resource Planning (ERP) business management software which being a suitable integrated application has helped users to store and manage data of their business and improve accessibility of speedy and reliable information for decision making, whether they implemented Business Process Reengineering (BPR) or not.

Also bench marking studies in 1990's, 2000's & 2010's have been undertaken by enterprises which involves comparing their performance figures with the best in the country or the world in the area of productivity, cycle times and quality (NB Bench Marking studies by and large are based on published information available in public domain, unless collaborating enterprises agrees to part with the information amongst themselves). For Multi National Corporations (MNCs) undertaking bench marking studies is comparatively easy, as they have operations in various countries and the information can be easily shared amongst their various establishments for improving performance and efficiency.

In the present environment the concept of Quality & Productivity goes hand in hand. In India quite many enterprises from 1990 have undertaken Lean Manufacturing or Lean Production, often simply referred as "Lean", which is a systematic method for waste minimization dealing with ("Muda") within a manufacturing system without sacrificing productivity. Lean also takes into account waste created through overburden ("Muri") and waste created through unevenness in work load ("Mura"). Looking at things from the perspective of the client (internal/external) who consumes a product or service; "value" is any action or process that a customer would be willing to pay which is the main criterion. Lean manufacturing makes obvious what adds value, by reducing everything else (which is not adding value). This management philosophy is derived mostly from the Toyota Production System (TPS) and identified as "lean". TPS is renowned for its focus on reduction of the original Toyota seven wastes i.e. Transport, Inventory, Motion, Waiting, Over Production, Over-Processing, Defects (TIMWOOD) to improve overall customer value, but there are varying perspectives on how this is best achieved. Quite often these are dealt with respect to material, machine and manpower in the case of manufacturing.

Enterprises in India post 1980 have also been using various Japanese and other tools; to educate all their employees at varying levels for improving quality and productivity. Some of the common tools used are listed below:--

- 5S is a workplace organization method that uses a list of five Japanese words Seiri (Sort), Seiton (Sent in order), Seiso (Shine), Seiketsu (Standardise) and Shitsuke (Sustain) and ensuring their compliance.
- Kaizen which is an approach at creating continuous improvement based on the idea that small, ongoing positive changes can reap major improvements. Typically, it is based on cooperation and commitment and stands in contrast to approaches that use radical changes or top-down edicts to achieve transformation. Kaizen is core to lean manufacturing, or The Toyota Way. It was developed in the manufacturing sector to lower defects, eliminate waste, boost productivity, encourage worker involvement, and promote innovation.
- SMED (Single-Minute Exchange of Dies) is a system for dramatically reducing the time it takes to complete or partial set up involved in machine from one product to other product. The essence of the SMED system is to convert as many changeover steps as possible to "external" (performed while the equipment is running), and to simplify and streamline the remaining steps. "ECRS (Eliminate, Combine, Rearrange and Simplify)" is one of the main tools used in SMED. Activities are mainly classified according to these categories and actions are taken accordingly.
- Poka Yoke is any mechanism in a lean manufacturing process that helps an equipment operator avoid (yokeru) mistakes (poka). Its purpose is to eliminate product defects by preventing, correcting, or drawing attention to human errors as they occur.
- Work Flow Management is the administration of multiple steps or tasks within a business process. Individuals conducting work

flow management will assess how work flows through a specific business process, moving from person to person and from task to task, as part of a broader look at how to improve the operations.

- Value Stream Mapping is a lean tool that employs a flow diagram documenting in high detail every step of a process. Many lean practitioners see value stream mapping as the fundamental tool to identify waste, reduce process cycle times, and implement process improvement. The main objective is to map all details associated with material & information flow & arrive to best possible future state of product or service. This is one the main foundation of world class manufacturing.
- Workplace Ergonomics is the sciences of designing the workplace, keeping in mind the capabilities and limitations of the worker. It is a scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design to optimize human well-being and overall system performance. Poor worksite design leads to fatigued workers which hampers performance of the productive worker.
- Seven Basic Tools of Quality is a designation given to a fixed set of graphical techniques identified as being most helpful in troubleshooting issues related to quality. These can be used by people with little formal training in statistics to solve the vast majority of quality related issues. The seven tools are (i) Causeand-effect diagram (also known as the "fishbone" or Ishikawa diagram), (ii) Check sheet, (iii) Control chart, (iv) Histogram, (v) Pareto chart, (vi) Scatter diagram and (vii) Stratification (alternately, flow chart or run chart).

Corrective and Preventive Action (CAPA), also called corrective action/preventive action or simply corrective action which consists of improvements to an organization's processes taken to eliminate causes of non-conformities or other undesirable situations. It is usually a set of actions that laws, or regulations take in require an organization to manufacturing, documentation, procedures, or systems to rectify and eliminate recurring non-performance. Non-conformance is identified after systematic evaluation and analysis of the root cause of the non-conformance. Non-conformance may be a market complaint or customer complaint or a failure of machinery or a quality management system, or misinterpretation of written instructions to carry out a work. The corrective and preventive action is designed by a team that includes quality assurance personnel and personnel involved in the actual observation point of non-conformance. It must be systematically implemented and observed for its ability to eliminate further recurrence of such non-conformation. CAPA is an important quality system for medical devices and pharmaceuticals industry.

These above mentioned tools are used for study of any problem, either productivity related or quality related and facilitate improvement.

There are enterprises in India who have used **Maynard Operation Sequence Technique** (MOST) which is a predetermined motion time system that is used primarily in industrial settings to set the standard time in which a worker should perform a task. To calculate this, a task is broken down into individual motion elements, and each is assigned a numerical time value in units known as time

measurement units, or TMUs, where 100,000 TMUs is equivalent to one hour. All the motion element times are then added together and any allowances are added, and the result is the standard time. The most commonly used form of MOST is BasicMOST, which was released in Sweden in 1972 and in the United States of America in 1974. It is not easy to implement MOST as it needs to be understood and accepted by the all the shop floor personnel (i.e. executives, workers and union) and also the enterprise needs to have an effective internal monitoring system. In India companies like Mahindra & Mahindra Ltd, Crompton Greaves Ltd and others educated all their employees including the trade union and have an effective internal monitoring system which has helped in implementing MOST as part of their Long Term Wage Settlement for improved productivity from 1998 and onward.

Management Homework for Improving Productivity

Management of an enterprise that desires to improve productivity directly or link the improvement in productivity with the Long Term Wage Settlement needs to do homework by compiling at least the following information and also have an effective monitoring system.

- (i) Details of workers engaged (permanent, temporary, casuals, trainees, apprentices, NEEM trainees, fixed term contract and contract workers through contractors / service providers). Analysis of absenteeism percentage – work station wise, shift wise and day wise. Detail analysis of overtime hours and overtime cost. Total personnel cost. Welfare cost.
- (ii) Ratio of workers in direct operations (i.e. manufacturing) v/s indirect workers and clerical staff (i.e. involved in quality

inspectors, maintenance, material movement, office administration, accounts, etc.)

- (iii) Production / Output figures with respect to each of the resources (i.e. work-days, machine hours, energy consumed, capital employed in plant and machinery) to determine the productivity ratios.
- (iv) Capacity utilization, plant availability, process yield, reworks percentage, rejection percentage.
- (v) Cause wise analysis of non utilization of manufacturing facilities and steps needed for reducing the same.
- (vi) Conversion cost of each product stage wise, unit cost of the product.
- (vii) Sales figures (quantity & revenue) with resources spent on each territory (i.e. field force, call average, sales targets, classification of township, advertising & sales promotion expenses).
- (viii) List of all restrictive work practices. (NB Most old manufacturing plants have many restrictive work practices).
- (ix) Identify areas for productivity improvement, including areas of low output norm, scope and methods for improvement.
- (x) Identify systems and procedures that the management desires to implement.
- (xi) Identify all areas of operations where improvements are desired and feasible.
- (xii) Identify areas of resistance by workmen for any of the improvements, changes desired including the restrictive work practice and why.
- (xiii) Identify the various items including non use of personal protective equipment (PPE) and safe work practices.

- (xiv) Identify the Benchmark practices in similar industries or any other place in same organization.
- (xv) Identify a third party, acceptable to both management & workmen, who can facilitate the process in case of any major hurdles in negotiation process.

The information compiled, as stated above needs to be debated and discussed within the management team to assess and work out a **Gap Analysis** between the desired achievable level and the existing level of output with the existing / reengineered workforce. Based on Gap Analysis, details to be worked out as to what is to be exclusively done by management and what are the areas which need to be negotiated with the Union, as the same has an inter phase with the workers. The management team that will be involved in the negotiation of the Long Term Wage Settlement should develop a "Management Charter of Demand" or "Management Imperatives for Improvement" based on the Gap Analysis.

When there is a "Management Charter of Demand" or "Management Imperatives for Improvement", then the management in the process of negotiation is asking the union to fund the increase in wages by committing to improved productivity, so that the unit cost of the product / service is contained at the existing level, and if possible it is reduced. Wage increases in India are by and large about 8% to 10% per annum on Compound Annual Growth Rate (CAGR) basis to compensate inflation and to maintain the relative standard of living of the employees and also ensure peace at work place.

The problem of restrictive work practice as well as inability to implement improved productivity is comparatively less in new manufacturing sites set up after 2000 and in the service sector. This in most cases is because these enterprises have ensured that restrictive work practices are curbed when they commence, and also the work culture is such that performance parameters are well set at the beginning, regularly monitored and a culture of continuous improvements is prevalent, well accepted and desired changes implemented without any delay.

Management of enterprises need to have a culture of every month sharing with all their employees the existing levels of performance in terms of quality & productivity of their products and services coupled with changes in the market place. Managements must educate all their employees on the methods used for measuring quality & productivity of their products and services and also the tools for improving them. Educating and involving the workforce helps in reducing ambiguity and misunderstanding.

Enterprises at periodic time intervals do enter into wage settlements with unions to ensure peace and no further financial implications during the period of the Long Term Wage Settlement. Every Long Term Wage Settlement involves a quantum jump of increase in the wage cost to the enterprise, and the same needs to be funded by obtaining improved productivity from the people that benefit from the Long Term Wage Settlement. Hence, managements need to not only compile information on existing and desired productivity level, but also negotiate the same and use language of specifics on the desired improved level of productivity in the Long Term Wage Settlement. In quite a few cases shop floor executives, didn't follow up and ensure the achievements of norms signed during the Long Term Wage Settlement and the management looses the advantage of improved productivity and the same just remain on paper. Hence, managements need to ensure that the specified agreed figures of productivity improvement are complied and achieved immediately when the Long Term Wage Settlement is signed before the ink dries.

In most of the cases, the negotiation starts before the existing Long Term Wage Settlement expires, and agreement on the new one may take a few months more while the earlier agreement has expired. The workforce mostly gets all the financial benefits back dated, while the new productivity norms or abolition of restrictive work practices comes in to effect only after signing of the Long Term Wage Settlement. Thus, managements mostly loose the benefit of improved productivity for few months, because of the delays in the signing of the Long Term Wage Settlement. This could be avoided to some extent by asking the trade union to implement certain critical "Management Charter of Demand" by at least 50% or so. Most of the trade unions would be reluctant to agree with the logic of such a demand. If this point is not agreed, the new settlement could be made effective from the date of signing the agreement; no trade union would agree to this, and may prefer partial implementation of the above demand.

Conclusion

Enterprises need to ensure that they continue to be the lowest cost producer of products or services, so that they continue to remain competitive and be in business. Hence, every enterprise needs to measure and improve productivity of all the resources including that of the work force weather they are members of a union or not . We need to ensure an eight hours output in an eight hour shift. All employees of an enterprise including workers need to be educated with the simple tools available for improvement of quality and productivity, so that the enterprise has the capacity to bear the financial increase arising out of the Long Term Wage Settlement and the annual increase in wages and still be the lowest cost producer of products or services. Productivity Linked Long Term Wage Settlement is very much a need in local, regional or global competitive business environment wherein management, trade unions, workers and service providers have to make their contributions in achieving long term success of the business and benefit from it in turn as well.

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