

PRODUCTIVITY AND COSTS. MANAGEMENT PROBLEMS AND PROBLEM MANAGERMENTS

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In the Cairo Museum there is an exhibit (No. 6080) of a model showing an official inspection of cattle.

There are thirteen drovers parading the cattle past a surveillance team of thirteen people. The surveillance team consists of the boss, his assistant, four scribes, an officer and six soldiers.

The model shows one drover being strongly motivated by one of the officials and in this system of motivation the carrot is most surely lacking but it certainly includes the stick.

Another prominent feature of this model is the question of overheads. Thirteen supervisors survey the activities of thirteen drovers.

By itself thirteen is a very unlucky number and when in addition the motivational aspects are negative and the overheads are one hundred percent then it is a most unfortunate state of affairs.

The intention is however not to pick a quarrel with the ancients over their management systems but rather to focus attention on the South African scene.

A comparable animate situation or museum model does not exist in South Africa but it is not excluded that it could be our ultimate destiny.

A rather different and lively situation characterises the South Africa scene; it is fashionable to condemn the average South African as being hedonistic, lazy and a below average worker and not contributing towards the attainment of a higher level of productivity.

Whereas the ancients employed a mixed civilian-military management team to do the motivating we in South Africa prefer a different approach. Here the team members include cabinet ministers, company directors, and to complete the entire spectrum, even a Springbok rugby captain voiced his concern — all making appeals to the worker for higher productivity. No sticks and no carrots enter this peaceful and non-violent demonstration.

We must presume that the ancient scribe had an idea as to at what level of productivity the drover had to perform otherwise he would not have punished the nonconformance in such a tangible way.

But have the exponents of higher productivity given thought to the various factors involved; factors so inextricably interwoven in the pattern making up the South African economy? Perhaps not, otherwise the labour part of the problem would not have been excessively stressed.

However, all the schools of thought on productivity have one common characteristic; they are expressed in measurable units and the units, irrespective of the method of measurement employed, can again be converted and expressed in one common denominator: MONEY.

So eventually it settles down to the fact that productivity is a money problem and without having to stretch the imagination to its limits we can arrive at the conclusion that productivity and costs are inseparable.

But what is the meaning of the word cost? Is it the total expenditure associated with a productivity factor or is it a money quantity embellished in nebulous terms?

And with these questions, going either answered or unanswered, the whole productivity problem is highlighted in different terms since there is no agreement in practice on what the word COST signifies.

Cost and productivity comparisons are by no means valid when the base selected for reference is continually shifting due to the semantic nature of the words.

The question to resolve is now whether the word cost has different technical meanings and hence whether two similar productivity factors under absolute similar circumstances have different or similar costs; in other words, is it a semantic or a technical problem?

It is reported that an eminent judge in the U.S.A. once said —

“A WORD is not a crystal, transparent and unchanged; it is the skin of a living thought, and may vary greatly in color and content according to the circumstances and the time in which it is used.”

(J.C. Bonbright; The valuation of property; McGraw-Hill, New York, 1937)

Lewis Carroll in "Through the Looking Glass" gives a similar impression in the captured dialogue between Alice and Humpty Dumpty —

"When I use a word". Humpty Dumpty said in a rather scornful tone,

"it means just what I choose it to mean — neither more nor less".

"The question is". said Alice, "whether you can make words mean so many different things".

"The question is," said Humpty Dumpty, "which is to be master — thats all."

So the whole problem resolves into a very simple question — Can anybody make the word cost mean so many different things and stay the master?

Let us first explore the climate in the U.S.A.

Way back in 1924, J.M. Clark in "The Economics of Overhead Costs" stated as a general proposition that the terminology of costs is in a state of much confusion and that it is impossible to solve this confusion by discovering and adopting the one correct use, because there is no one correct use, usage being governed by the varying needs of varying business situations and problems.

Stated in a nutshell it means different costs for different purposes and both the judge and Humpty Dumpty score direct hits.

Incidentally the National Association of Accountants in the U.S.A. asserts that costs are used for a variety of purposes and the same cost data cannot serve all purposes equally well.

It should therefore be inferred that a cost must be understood in its relationship to the purpose or purposes which it is to serve.

The American Institute of Certified Public Accountants states in the Accounting Terminology Bulletin No. 4 that a cost is the amount, measured in money, of cash expended or other property transferred, capital stock issued, services performed, or a liability incurred, in consideration of goods or services received or to be received.

With apologies now to both the eminent judge and Alice substitute WORD with COSTS in the two quotations and observe the effect.

In January, 1970 the Comptroller General of the United States submitted a report on the feasibility of applying uniform cost-accounting standards to negotiated defense contracts and demonstrated that the laymen's notion of cost is "the amount paid for something."

This idea underlies all discussions of the cost concept in the report and the fact is stressed that it should be clear that cost is only crudely defined by the notion of what is paid for something; cost must perforce mean different things under different circumstances.

The report demonstrates that various factors enter the issue of cost determination and hence that the cost concept should be considered to involve —

- disbursement; the amount paid for something,
- expected future disbursements,
- credit's effect,
- costs incurred in advance of use,
- long term assets and current usage costs,
- implied costs; some costs accrue even when there is no immediate outlay or even a future outlay definitely and positively connected with the present activity,
- imputed costs; the notion of an equitable basis for cost recognition is easily carried into other transactions,
- opportunity costs; the most logical justification for including interest on investment as a cost of using assets is the concept of opportunity cost,
- probabilistic costs; costs of this kind are not visible as cash drains, but they are none the less real,
- replacement costs; the price at which the cost was incurred should be subject to adjustment,
- normative costs; underlying all cost calculations there is the idea of a rational minimum.

The normative cost concept requires a few explanations. Outlays which exceed the amount really necessary to achieve the desired result are not regarded as costs of that result. In the report the opinion is expressed that any excessively high cost would be regarded as either a loss (cost which produces no useful or desirable result) or a waste (cost which could have been avoided by exercise of typical or expected foresight).

To separate "excessive" costs one would have to know just what does constitute the most efficient method, the most satisfactory supply and quality of goods or services employed, and the best kind of result to be obtained from the activity in question. The cost of that optimum subtracted from the otherwise determined outlays would leave the excessive amount. Thus almost every cost includes some unknown amount of waste or loss.

The report ultimately comes to the conclusion that in the analysis of the cost concept there is no single and simple definition of cost which will serve for all situations and uses.

Eventually the Comptroller General's report paved the way for legislation and on August 15, 1970, Public Law 91-379 became law in the U.S.A. and requires, among other things, that a Cost Accounting Standards Board be created to promulgate the cost accounting standards that are to be used by Defence contractors. The techniques used must be in accord with the standards

promulgated by the Board.

The new law was the result of many years of concern that rising costs on government defence contracts may have been caused by the contractor's ability to manipulate their accounting for costs. Generally accepted accounting principles and practices were attacked as too undependable and little evidence was found that the accounting profession was willing or able to develop standards that would attack the problems disclosed.

In Britain the scene is dominated by the Institute of Cost and Works Accountants and the Institute gives a very general definition of costs as being the amount of expenditure incurred on a given thing. The Institute further busies itself with the classification of costs and the methodology of cost accounting.

In a similar vein the Institute of Chartered Accountants of England and Wales in a publication "Developments in Cost Accounting" asserts that costs may be required for many different purposes at different times and they have to be assembled for each purpose in appropriate combinations; a cost can only be a convention and the expression 'an accurate cost' can have meaning only within the particular convention chosen as appropriate to the purpose for which the cost is required; it cannot be emphasised too strongly that it is the use to be made of the cost that should determine the particular convention within which the cost is prepared; and if those whose task it is to prepare costs do so with a different notion as to the use to be made of them for those who in fact make use of them, then the costs may not only be useless, but positively harmful.

Due to cross-pollination between the British and Dutch schools of thought and catalysed by certain scholars in South Africa, the British business leader J. Batty asserts that in cost accounting only the normal costs should be treated as the cost of producing, selling and distributing. This means that expenditure has to be divided into normal costs and abnormal or exceptional costs. The latter are to be written off to Costing, Profit and Loss Account.

This is a stimulating approach and a wind of change blowing in the right direction.

The Dutch school of thought on the other hand rests on a fairly solid theoretical foundation. Put into a nutshell this school propagates that:

- (i) The enterprise makes sacrifices to bring forth services or goods.
- (ii) A sacrifice has two components; a quantity (q) and a price (p) component. The product of p and q gives a value (w).
- (iii) All sacrifices can be divided into two groups —

— unavoidable sacrifices which are termed costs. This means that the product $p \times q = w$ is a normal cost;

— avoidable sacrifices which are termed waste. Either p or q or both can be in the wrong and consequently the product $p \times q = w$ incorporates a waste which is not a cost.

At this stage now it is necessary that a tie-up between the two concepts productivity and costs be effected.

The International Labour Office in the publication "Introduction to Work Study (Geneva, Revised Edition, 1971) describes in a very interesting and concise way the general problem of the cause of low productivity and the use of techniques to eliminate them.

Productivity is defined as the ratio between output and input and this definition applies in an enterprise, an industry or an economy as a whole.

The components entering this ratio can be

- Land
- Materials
- Plant, machines and tools^{1/2} — The services of men or, as is generally the case, a combination of all four.

Of consequence however in the I.L.O. publication is the grouping of the time element into two distinct categories. The first category involves the basic work content of the product and/or operation and the second category involves the added work content.

To effect a tie-up between productivity and costs the basic work content can be related to the unavoidable sacrifices whilst the added work content can be related to the avoidable sacrifices. Hence the basic work content determines the cost whilst the added work content determines the value of the wasted sacrifices.

The reason why this paper has a sub-heading titled: Management problems and problem managements **SHOULD NOW BE APPARENT.**

The self-contained diagram highlights those areas where the workers are at fault; this involves a management problem.

But also vice versa, the diagram illustrates those areas where management are at fault and blocks the pursuit of higher productivity; this involves a problem management.

It is not the intention however to sort out the semantic jungle surrounding the two concepts, productivity and cost, nor to further scramble the issue. It can however be safely conjectured that the clarion call towards higher productivity will go unanswered unless the semantic problem is clarified.

Since the productivity-cost problem seems to be firmly embedded in a circular track, and one cannot get to grips with productivity because the cost issue is undecided, it seems only appropriate that the whole issue should be placed on a straight course with a fixed beginning and a definite direction.

We should however not be distracted by the fact that for the present the productivity-cost problem stands on a rather loose footing.

In the days of antiquity there was little measurement. Units of length, weight, and volume did exist, but there was no precision. It calls to mind that as late as the sixteenth century, the legal definition of the foot in Germany was the average of the lengths of the left feet of sixteen men as they emerged from church on Sunday.

The degree of sophistication associated with present-day measurement will not be dwelt on but let us rest in the consolation that a similar degree of sophistication will characterise the cost concept in the foreseeable future.

In South Africa the cost concept is inextricably interwoven with the requirements dictated by the income tax structure. It is hence suggested that our legislators should critically review the general usefulness of this practice since it impedes the evolvement of new thoughts and actions aimed

at more sophisticated and rational accounting practices.

The purpose of this paper is not to suggest any particular structure or definition for securing a satisfactory degree of excellence of productivity and costs.

The detail of any approach can safely be placed in the hands of a surveillance team to debate, guide and finally to cast the whole issue into an amended structure.

In conclusion:

"Why, I do believe we've been under this tree all the time! Everything's just as it was!"

"Of course it is," said the Queen:

"what would you have it?"

"Well, in our country", said Alice, still panting a little, "you'd generally get to somewhere else — if you ran very fast for a long time, as we've been doing."

"A slow sort of country!" said the Queen.

"Now here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"

(L. Carrol: Through the Looking Glass)

This philosophy applies to our productivity and cost problem.

