

STATISTICS AS A TOOL OF MANAGEMENT

By

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During the almost two years that have elapsed since I arrived in Manila, it has been my pleasure to take note of the continuously growing interest in the improvement of statistical data. This has come about through a variety of reasons but I am sure that the principal reason for this growing interest is the stimulus given by the Philippine Statistical Association. Composed as it is of persons from both business and government and with the leavening influence of the academic members, we find in the Philippine Statistical Association a group which is in a position to do much to improve the reliability of data and to start collection of much needed data in those areas where there are gaps.

In considering the topic of this paper, *Statistics As A Tool Of Management*, we should bear in mind that the techniques of management in government are not essentially different than those of private business. Government is the single largest enterprise in the Philippines today. Much of the future economic and social development of the country depends upon the success of government management and the skill with which public affairs are administered. I wonder if you professional statisticians very often stop and think that the name statistics was first applied to data collected for purposes of the State. Demographic and agricultural data were collected and used by the Medes and the Persians, for the purpose of moving populations and for the control of crops. The Old Testament bears testimony to the counting of things that took place many centuries ago. We know from historical research that this counting was not done just to be doing something but for very definite purposes of the State. This means that ancient peoples had managerial problems and probably went about trying to solve them in much the same manner as we today.

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However today in this age of atomic energy for peace and the adapting of jet propulsion for peaceful commercial transport we need, in a world in which time and space are reducible relative to the past, data collected quickly and accurately upon which major programs can be planned and decisions made for their execution.

At the risk of perhaps displeasing some professional statisticians, I wish at this point to define statistics as a tool of management as meaning any form of quantitative thinking and not solely the use of neatly tabulated data or involved and complicated mathematical computations. The modern day manager makes use of data not only in day to day operations but also in meeting crises and in future forecasting and planning.

Raw undigested data has little meaning for the manager of either business or government. In the 1 March 1952 *Saturday Evening Post*, there was an article entitled, "How To Get To Be The Boss" by J. Elliott Janney, which contained a paragraph which I would like to quote.

"Few appreciate how busy a top executive is or how much patience he must exhibit to fulfill the saying, 'A company is known by the men it keeps.' The executive vice-president of an insurance company told me how, twenty-five years ago, the president taught him what management was about. Soon after his arrival, he was called on to do a market analysis. When he had finished, he brought it in, with a two-page summary of the figures. He expected a pat on the back, but the elder man just grunted and asked, 'What do the figures mean?' The young man stammered and the president said, 'Go back and study them.' Eventually he came back with a written interpretation. The old man glanced at it and grunted, 'What are we going to do about it?' The junior did not know, was told to find out. Next time, he said, 'Here are the figures. Here is what they mean. Here's what can be done about them.' The president leaned back in his chair and permitted himself a smile. 'Sit down, son,' he said. 'Now we can talk business.'"

This contains an important lesson for us. All too many times statistics are presented in raw form. The manager

must know three things — (1) the figures (2) what they mean (3) what decision or decisions are indicated.

Many managers conceive of operating statistics as a quantitative means through which delays, deficiencies and weaknesses in operations can be detected and remedied without delay.

Management has long recognized the value of personnel and financial controls as aids in directing and checking performance. These elements fail to direct attention to the objectives of administration and performance. Good statistical controls will measure work done and provide a measure of progress or performance in the conduct of operations. The Philippine Government today stand sorely in need of all three of these controls — personnel, fiscal and statistical. There is no single official or group of officials who know the total number of persons employed by the Government; for that matter it is doubtful if the heads of executive departments know exactly how many persons are employed in their departments. Fiscal data is produced so slowly as to be almost valueless as a means of exercising control. And I need not tell this group that there is such a dearth of operating statistics that government management cannot rely on this important tool for help in making decisions so necessary in the conduct of public affairs.

It would indeed be unfair to say that there are no statistics in the Philippines. Some have been collected for general reporting purposes. But there are not many statistics that lend themselves to be labeled as a tool for management because they lack the element of continuity; they do not involve regular application; and they do not use standardized data on a periodic basis.

The Philippines today is a country which is largely undeveloped existing in a highly competitive world. The long and short range planning for the economic development of the country depends in no small manner upon the development of necessary data. No person knows how much rice is produced and consumed in the country and this in a country in which rice is a staple article of diet.

I would suggest that there be developed a system by which the progress of the Philippines toward economic development can be measured. This does not imply a complicated and costly statistical operation. One measure for example is the amount of electrical energy produced and consumed. Progress can be measured in terms of carefully established progress goals. If the goal is ten thousand wells in ten thousand barrios in a given period of time, the progress made toward the achievement of the goal can be easily ascertained. This concept of the use of statistics may not please professional statisticians who tend the world over to become an over-professionalized caste. One of the most difficult tasks of management is to get statistical units to making living and vital reports instead of old stale figures. What the boss wants to know together with how well we are doing is where are we falling down. Whenever a report shows a failure it should be underscored so that when the boss looks it over it stands out and will lead him to ask a lot of questions as to why isn't the job getting along on schedule.

There has been considerable discussion during the past few weeks in official circles about the adoption of performance budgeting. There is no question that the old line item budget of the government is outmoded and does not provide management with another effective tool. But the adoption of a performance budget requires measurement of performance and progress in the attainment of program objectives. The agencies of the government at the present time are not in a position to supply these data. This is not to imply that they cannot supply the data required for performance budgeting because they can after the guides and requirements have been established.

The reporting system that can be established will be valuable not only for top officials of the government but will serve as a basis for the development of fiscal controls through performance budgeting. Finally a good reporting system will let the people know where the country stands in terms of progress goals. Some guiding principles for a reporting system can be suggested as follows: (1) it should be comprehensive enough to cover all phases of economic and social development;

(2) the information should be sufficient to cover the basic needs for regular information; (3) reports should be standardized insofar as possible; (4) procedures for the preparation of each report should be designed with clear instructions.

Important decisions pertaining to the collection, analysis and presentation of statistics will most certainly be made in the Philippine Government in the not too distant future. The development of standards will probably be placed in the National Economic Council. Decisions will also be made as to what agencies will collect what data and for what purposes. It may be possible to develop a central management over decentralized collection and reporting.

If reports are to be read and used by the busy manager as well as by the non-statistically minded official, it is essential that they be kept simple. Too many times reports are written not for the purpose of satisfying a need of management but for other statisticians to read and admire. I hope that the day does not come when the Philippine Statistical Association will be charged with being a mutual admiration society.

In reporting, the problem should be explicitly stated to which the analysis is pertinent. Many times one central idea in a single report will be useful to the executive — we should avoid overwhelming management with voluminous and complex reports. The operating statistician who develops reports for “publication” soon ceases to play an important role in the operations of the concern or of the government organization. Remember the story I told at the outset — get the figures — know what they mean — find out what can be done about them.

I often think that we try and make things more complicated than they really are. I would like to close with a quotation from Sir Henry Deterding of the Royal Dutch Shell Oil Company:

“There is a master key to success with which no man can fail. Its name is simplicity; simplicity I mean in the sense of reducing to the simplest possible terms every problem that be-sets us. Almost every man can succeed if only he will simpli-

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fy everything in his life. That has been my working theory for 40 years. As a young man, I stumbled upon this great fundamental truth, that everything that is complicated is wrong. Simplicity rules everything worthwhile. Whenever I have met a problem which, after taking thought, I could not reduce to simplicity, I have left it alone.”