

THE STUDY OF ORGANIZATIONAL EFFECTIVENESS

Basil S. Georgopoulos

Survey Research Center
University of Michigan

Paper delivered at the Annual Conference of the American Association for
Public Opinion Research, Washington, D.C., May 11, 1957.

THE STUDY OF ORGANIZATIONAL EFFECTIVENESS*

Basil S. Georgopoulos

Survey Research Center
University of Michigan

One of the most complex and least tackled problems in the study of social organizations is that of organizational effectiveness. Many difficulties in this area arise with attempts to define the concept of effectiveness adequately. Some of these stem from the closeness with which this concept becomes associated with the question of values (e.g., "management" versus "labor" orientations). Other problems arise when researchers choose a priori criteria of effectiveness which seem intuitively right, without trying systematically to place them within a consistent and broader framework. In effect, specific criteria which might be proper in one case may be entirely inappropriate to other organizations. In this respect, the question arises as to whether it is possible to develop a definition of effectiveness and to derive criteria which are both applicable across organizations and can be meaningfully placed within a general conceptual framework. The present paper deals with one attempt in this direction.

The Concept and Related Issues

The concept of organizational effectiveness (sometimes called organizational "success" or organizational "worth") is ordinarily used to refer to goal-attainment -- to "how well" an organization is doing, or to its relative "overall success" and to the adequacy with which it operates

* The author wishes to thank Dr. Arnold S. Tannenbaum for his assistance and collaboration in parts of the present study.

given certain facilities and resources. Traditionally, in the study of industrial organizations, effectiveness has been viewed and operationalized mainly in terms of productivity. In this connection, Thorndike has noted a general tendency on the part of personnel and industrial psychologists to accept as "ultimate criteria" of organizational success the following: organizational productivity, net profit, the extent to which the organization accomplishes its various missions, and the success of the organization in maintaining or expanding itself (9). Other variables which have been used in various contexts as criteria of effectiveness include "morale," commitment to the organization, personnel turnover and absenteeism, and member satisfactions (3, 4, 5, 6, 7, 8).

With the exception of organizational productivity, practically all variables which have been used in research as criteria of organizational effectiveness have been found inadequate and unsatisfactory. For example, previous findings regarding "morale" and member satisfaction in relation to effectiveness (effectiveness having been measured on the basis of productivity) have frequently been inconsistent, nonsignificant, and difficult to evaluate and interpret. The case of turnover and absenteeism is similar. A major problem in using these two variables as criteria of effectiveness is their differential sensitivity to such "third" considerations as the nature and volume of work to be processed, organizational level affected, and season of occurrence apart from the degree of such occurrence. Net profit is likewise a poor criterion in view of many unanticipated fluctuations external to the system, e.g., fluctuations in the general economy, markets, sales, and prices.

In view of these and related inadequacies, the role of other potential criteria of organizational effectiveness should be studied. On this point, and in addition to productivity, Kahn and Morse have suggested the variables of organizational flexibility and of maximization of member potential (4), but no work has been done in this direction. Elsewhere, Bass has proposed as criteria the extent to which an organization is of value to its members and the extent to which the organization and its members are of value to society (1). For theoretical reasons, however, most would prefer to look at the concept of organizational effectiveness from the point of view of the system itself -- of the total organization in question rather than from the standpoint of some of its parts or of the larger society. Furthermore, proposed criteria should be system-relevant as well as applicable across organizations. It is most satisfactory, moreover, if such criteria are derived from a common framework to which the concept of organizational effectiveness can be meaningfully related.

General Criteria of Organizational Effectiveness

A distinguishing characteristic of nearly all variables which have been used as criteria of effectiveness is that, whether directly or indirectly, they tie in with organizational objectives. This relationship, however, is only a necessary condition. As we have indicated, not all criteria which may fulfill this requirement are appropriate. Many cannot be applied across organizations (e.g., some organizations have no problems of turnover and absenteeism or may even be overstaffed), and many do not logically conform to any generally accepted conception of organizations.

It is our assumption that all organizations attempt to achieve certain objectives and to develop group products through the proper manipulation of given animate and inanimate facilities. Accordingly, definitions of organizational effectiveness must take into consideration these two aspects: the objectives of organizations and the means through which they sustain themselves and attain their objectives, particularly those means which usually become functionally autonomous (i.e., such means as those which come to assume the character of and function as organizational goals). In short, the study of organizational effectiveness must contend with the question of organizational means and ends.

Assuming that the organizational system maintains itself, the most general and most important common objectives of organizations are:

- (a) high output in the sense of achieving the end results for which the organization is designed, whether quantitatively or qualitatively;
- (b) ability to absorb and assimilate relevant endogenous and exogenous changes, or the ability of the organization to keep up with the times without jeopardizing its integrity; and (c) the preservation of organizational means and resources, of human and material facilities.* We believe that it should be both feasible and fruitful to study organizational effectiveness by gearing our criterion variables to these general aspects of organization.

* In connection with this objective, such considerations as satisfaction of member needs beyond some minimum critical level, and the maintenance of sufficient member motivation and of an effort-reward balance constitute important problems for all organizations. And, it is under this concept of preservation (or incapacitation) of means and resources that such variables as turnover, absenteeism, morale, and satisfaction could be used, in certain cases, as criteria of effectiveness.

In line with this thinking, we have conceptually defined organizational effectiveness as: the extent to which an organization as a social system, given certain resources and means, fulfills its objectives without incapacitating its means and resources and without placing undue strain upon its members. This conception of effectiveness subsumes the following general criteria: (1) organizational productivity; (2) organizational flexibility in the form of successful adjustment to internal organizational changes and successful adaptation to externally induced change; and (3) absence of intraorganizational strain, or tension and conflict between organizational subgroups. These three criteria both relate to the means-end dimension of organizations and, potentially, apply to nearly all organizations. In an attempt to evaluate the present approach, we have used these criteria in the study of a large-scale organization. This organization, we feel, is particularly suitable to our investigation because of the simplicity of its structure.

Method, Operations, and Measures

The organization studied is an industrial service specializing in the transportation and delivery of retail merchandise. It is unionized and operates in several metropolitan areas, on a contract basis with department stores. In each area there is a company plant, under a plant manager, which is divided into a number of divisions, each division encompassing a number of smaller organizational units called stations. These constitute the basic operating units of the company.

The plant structure is replicated in every case in that the stations are structurally homogeneous and organizationally parallel, or replicated groups. They all perform the same kind of activity, employ uniform-standard

equipment, draw upon the same type of resources, and function on the basis of uniformly established work-standards. In terms of personnel, a typical station consists of a station manager, a day supervisor, a night supervisor, and about 35 workers. Approximately three-fourths of the workers are drivers whose task is to transport and deliver packages of merchandise to private residences; the remaining workers sort and load the same merchandise on trucks prior to delivery. Thirty-two such stations, representing five company plants, are included in the study.

In each case, data were collected from all station members, supervisory as well as non-supervisory. The average questionnaire return rate for supervisory personnel was 97% and for non-supervisory 87% (the questionnaires were administered on location). No station of a return rate lower than 75% of its non-supervisory members is represented in the sample. The operations and measures for the concept of organizational effectiveness and for the three criteria used are based on this sample and will be presented next.

We were able to obtain independently judgements from a group of experts concerning the relative overall effectiveness of the various stations in the five plants. It was on this basis that the 32 stations were selected for study. The experts chosen had first-hand knowledge of the stations they rated, while not being directly involved in station operations. Included among the raters were the plant manager, the assistant plant manager, some division managers, and other key plant personnel, comprising a total of six to nine experts in each of the five company plants.

Special forms and instructions, developed in consultation with the top management of the company, were sent to the various raters separately. These requested the rater to list all stations in the plant, to cross out those stations which he was not able to evaluate, and to judge the remaining stations by placing them into five categories of overall effectiveness, ranging from "best" to "poorest." The raters were to use as a time basis the six-month period preceding the evaluation. The following excerpts from the instructions indicate the frame of reference for the concept of effectiveness as presented to the raters:

You are to rank the performance of the station as a whole as distinct from the performance of any of the people in it ... You may want to take into consideration such things as: how satisfied you are personally with the total situation in the station, how well it is measuring up to the expectations and goals of (the company) considering the particular difficulties it faces, also recent progress and development, the way problems are handled, communications, costs, efficiency, morale, performance in relation to standards, etc. The important thing is that all these things taken together and considered as a whole will be the basis for the ranking ... Fill the form without checking your opinions with anyone and then send it directly to (the research staff). Your individual rankings will be treated as confidential and only the summary findings will be used for the purposes of the study.

Additional instructions were given to the raters about the mechanics of placing the stations in five effectiveness categories.

All raters submitted their independent evaluations of the stations under their jurisdiction, and their judgements were analyzed. All stations about which there was consistent agreement among raters, as judged by three members of the research staff, were retained as candidates for inclusion in the sample. A list of these stations was then submitted to each of the two regional managers of the organization. Each manager together with one more expert classified those of the listed stations with the performance of

which they were familiar as "above average," "average," or "below average" in effectiveness, using a procedure similar to that followed by the first group of raters. The above procedure finally resulted in a representative sample of 32 stations, after eliminating a few units of ambiguous effectiveness standing.

The effectiveness score for each station was computed by combining and averaging the judgements of all raters. The obtained score range on effectiveness was from 1.0, signifying units of highest possible effectiveness, to 4.8 with 5.0 being the lowest possible score. It should also be noted that the distribution of the sample on effectiveness was later found to be positively related with the mean responses of non-supervisory station personnel to the question: "How do you feel your station compares with other similar stations in getting the job done?" Apparently those directly involved with the operations of the organization can make judgements about the performance of their respective units and, in so doing, they seem to use similar frames of reference. A similar finding has been reported elsewhere by Comrie, Pfiffner, and Beam (2).

Station productivity, the first of the three criterion variables of organizational effectiveness, was measured on the basis of standard, company-wide records of individual performance vis-à-vis established work-standards. This is a metric measure, ultimately expressed in units of time consumed by the worker below or above what is "allowed" according to the standard. In effect, this represents the number of units of work accomplished during a certain time interval. For each station, the average productivity of all

members* during the month preceding the field study was taken to represent the organizational productivity of that unit. (Incidentally, it should be noted that no problems of quality of output are involved here, since quality is practically constant in that the only important criterion of quality is the act of delivering a package to its addressee.) On the basis of a standard of 2.00, the range of the obtained distribution of the sample on productivity was from .81, signifying the highest producing station, to 2.93 signifying the lowest producing station. An interval of .30 in the present scale is equivalent to 18 minutes.

Intraorganizational strain was conceptualized as the (incidence and) rate of tension or conflict existing between organizational subgroups. This criterion variable was operationalized and measured in terms of responses by non-supervisory station personnel to the following question: "On the whole, would you say that in your station there is any tension or conflict between employees and supervisors?" The respondent could choose, on a five-point scale, one of five alternatives ranging from there is "a great deal of tension" to "no tension at all." The mean of the responses in each station represents the score of intraorganizational strain characterizing that station. The range of these scores for the sample was from 2.46, signifying the highest strain station, to 4.50 signifying the lowest strain station. It is also interesting to note that station supervisors generally agree with the consensus of their subordinates as to the degree of strain characteristic of their station.

* More accurately, this is the average productivity of all station members who operate under work-standards; these are all drivers, constituting about three-fourths of all station members. The remaining workers either work under no standards or work under a group standard which may vary from station to station. Their productivity, however, is reflected in that of the drivers since the former process all of the same work volume that the latter deliver.

Organizational flexibility, the third and last criterion variable, was conceptualized as the extent to which the organization is able to absorb relevant endogenous and exogenous changes, or its ability to adjust to internally induced change and to adapt to externally induced change. Two measures were used, one for each of these two aspects of flexibility, and the results were then combined into a single measure. The first was based on the following question: "From time to time changes in methods, equipment, procedures, practices, and layout are introduced by the management. In general, do you think these changes lead to better ways of doing things?" The response alternatives, forming a five-point scale, ranged from "they are always an improvement" to "they never improve things" with an additional "I can't judge" category. The second measure was based on the question: "In general, how well do you think your station handles sharp changes in volume during peak periods?" The response alternatives here ranged from "excellent" to "very poor," also forming a five-point scale. The flexibility score assigned to a given station was obtained by computing the mean of the responses of non-supervisory station personnel for each of the two questions, and by adding the two means and dividing the result by two. The obtained sample distribution on flexibility ranges from a score of 1.78, signifying high flexibility, to a score of 2.99, signifying the least flexible station on a five-point scale. Again, as in the case of strain, station supervisors generally agree with their respective subordinates as to the flexibility characteristic of their station.

Empirical Evaluation of the General Criteria of Effectiveness

We now turn to the data of this study which bear on the concept of organizational effectiveness and on the operations and measures used. These are evaluated in terms of three major considerations: (1) since effectiveness is viewed in terms of three criteria, the question arises as to whether in fact each criterion is significantly related to the appraisal of effectiveness by experts -- whether our operations correspond to such an independent standard; (2) are the criteria significantly inter-related and what is their joint reliability; and (3) since the concept of organizational effectiveness is both by definition and also logically and theoretically a group concept, or an organizational rather than an individual level concept, the question arises as to whether our criterion measures represent group phenomena.

The results of our analysis showed a correlation of .73 between station productivity and effectiveness judged by experts, a correlation of -.49 between intraorganizational strain and effectiveness, and a correlation of .39 between station flexibility and effectiveness. Based on an N of 32 stations, these rank-order correlations are significant at the .05 level or better. In short, as was expected, each of the three criteria is found to be related to an independent assessment of organizational effectiveness. These results lend support to the validity of the three criteria.

Similar findings, in the form of rank-order correlations, were obtained concerning the relationships among the three criteria. There is a correlation of .35 between station flexibility and station productivity, a correlation of -.48 between intraorganizational strain and station productivity, and a correlation of -.70 between strain and flexibility. Based

on the obtained relationships, the overall reliability of the three criteria was found to be .77. These findings provide support for the statistical reliability of the criteria, theoretically considered in combination. The question now arises as to what extent can one predict to the independently obtained measure of organizational effectiveness by combining the three criterion measures into a single index. Such a criterion index was also constructed, and the distribution of the sample on this index was found to be correlated .68 (or .77 when corrected for attenuation) with the distribution of the sample on effectiveness. This suggests that about 46% (or 59% when correction for attenuation is made) of the variance in effectiveness can be explained by means of the three criteria combined into an index.*

Finally, to provide an answer to the question of whether our criteria of effectiveness represent organizational rather than individual phenomena, the productivity criterion was chosen for further study. This was done because productivity in the present study contributes more to the amount of explained variance in effectiveness than either strain or flexibility, and because the station productivity measure was derived by averaging the productivity of individuals. Unlike the cases of the flexibility and strain measures which were derived from responses to questions that had as explicit referents organizational aspects, the station productivity criterion had as its initial referent the individual worker. Therefore, the criterion of productivity would be the most questionable of the three criteria from the standpoint of whether or not it actually represents an organizational level phenomenon.

* A less satisfactory way to answer the same question would have been to compute the multiple correlation between the three criteria and effectiveness, on the basis of the correlations above presented, without constructing an index. This was actually computed and found to be .75, suggesting that in the present study about 56% of the variance in effectiveness is explained in terms of the joint contribution of the three criteria -- productivity, strain, and flexibility.

The additional study of the productivity criterion consisted of an analysis of variance designed to determine whether the stations or the individuals in them constitute the primary source of productivity variance. For purposes of statistical analysis, 27 stations distributed among four company plants and encompassing a total of 685 individual workers whose productivity had been ascertained, were used. Suitable productivity scores were not available in the case of the remaining five stations which belong to the fifth company plant studied.

The results of this analysis indicated that the between-stations variance on productivity is far greater than the within-stations variance. The obtained F-ratio was found to be 5.82, which (for 26 and 658 degrees of freedom) is statistically significant beyond the .001 level. This confirms our initial expectation that the employed productivity criterion represents an organizational (station) rather than individual level phenomenon. This evidence, however, is not adequate for it is conceivable that the results might vary from plant to plant. To test this possibility, similar analyses of variance were also performed separately for each of the four company plants represented in the sample of 27 stations. In each case, the between-stations variance on productivity was again found to be significantly greater than the within-stations variance; i.e., grouping the stations into plants makes no difference in this respect. Therefore, we are reasonably assured that the productivity criterion measure represents an organizational level phenomenon.

Summary

The concept of organizational effectiveness is an important and widely used notion in the study of social organization. A considerable gap, however, exists between theoretical and empirical approaches in this area.

There is little theory which adequately treats this concept. Research efforts have generally proceeded unsystematically, without sufficient consideration of the conceptual aspects of the phenomenon in question, and in terms of ad hoc criteria which were not systematically related to theoretical frameworks consistent with our knowledge of organizations.

The objective of the present research was to examine and define the concept, and to investigate some of its operational aspects in the form of developing and testing certain criteria in a specific industrial setting. These criteria of effectiveness stem from a commonly accepted view of organizational requirements and are generally applicable across organizations. Based on this view, the study of organizational effectiveness would require that emphasis be placed on the means-ends dimension of organization, and that the criteria of organizational flexibility, productivity, and strain be taken into consideration.

In the present case, organizational effectiveness was conceptualized as the extent to which an organization as a social system, given certain means and resources, fulfills its objectives without incapacitating its means and resources and without placing undue strain upon its members. It was approached in terms of the criteria of productivity, strain, and flexibility which were derived from a common framework. Our analysis showed that, in the present study, the relevant operations prove reliable and the criteria used relate significantly to an independent evaluation of effectiveness by experts. These criteria represent important aspects of organizational functioning and deserve further attention in the study of organizational effectiveness.

References

1. Bass, B.M., "Ultimate Criteria of Organizational Worth," Personnel Psychology, 1952, 5, 157-173.
2. Comrie, A.L., Pfiffner, J.M., & Beam, H.P., "Factors Influencing Organizational Effectiveness," Personnel Psychology, 1952, 5, 307-328.
3. Kahn, R.L., "The Prediction of Productivity," Journal of Social Issues, 1956, 12, 41-49.
4. Kahn, R.L. and Morse, N.C., "The Relationship of Productivity to Morale," Journal of Social Issues, 1951, 7, 8-17.
5. Katz, D. and Kahn, R.L., "Human Organization and Worker Motivation," in Tripp, L.R. (Ed.), Industrial Productivity, Madison: Industrial Relations Research Association, 1951.
6. Katz, D., Maccoby, N., Gurin, G., & Floor, L.G., Productivity, Supervision, and Morale Among Railroad Workers, Ann Arbor: Institute for Social Research, 1951.
7. Morse, N.C., Satisfaction in the White-Collar Job, Ann Arbor: Institute for Social Research, 1953.
8. Seashore, S.E., Group Cohesiveness in the Industrial Work Group, Ann Arbor: Institute for Social Research, 1954.
9. Thorndike, R.L., Personnel Selection: Test and Measurement Techniques, New York: Wiley, 1949.