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Installing Management by Objectives in a Public Agency: A Comparison of Black and White Managers, Supervisors, and Professionals

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The current climate of "resource reduction" has intensified the search for motivational programs which will increase productivity of public sector managers and employees. Programs to increase goal clarity, participation in planning and decision making and clarification of individual performance expectations are typical of management by objectives (MBO) programs and have been related to public management processes. Attention also has been paid to differences between public and private sector managers in terms of organization commitment, and generic content of their work.

Both industry and public managers have intensified their search for more valid knowledge concerning the installation of motivational programs and relevant moderators of program effectiveness.

Surveys of management practices report that management by objectives (MBO) is widely used in industry and government. Empirical research indicates that MBO has a positive influence on organizational effectiveness and employee attitudes. Researchers have found that installation of an MBO program has resulted in increased productivity, improved individual performance, more effective planning, communications, and performance appraisal, and increased job satisfaction among managers involved in MBO.

Yet, even though MBO is widely used and in many cases evaluated favorably, writers have expressed concern that in racially mixed organizations, MBO may not be an appropriate management process because of cultural differences between blacks and whites. This issue will become increasingly important as more blacks enter the ranks of management. It is also especially important in the public sector which has frequently led the way in areas such as affirmative action efforts and equal employment opportunity.

The purpose of this study is to examine the differences between blacks and whites in their reaction to MBO. The City of Detroit Department of Transportation (D-DOT) where these data were collected is racially mixed through top management, has employed blacks since the early 1930s, and has seen blacks in managerial roles for more than 20 years.

The presumption that blacks and whites will respond differently to MBO is based on several documented differences between the races. First, cultural differences between blacks and whites have been widely noted. Katz attributes these differences to discrimination against blacks which has created chronic unemployment, restrictive entry into the labor market, lower educational levels and income, lack of successful role models, and mistrust of authority figures. With this background, blacks would be expected to have different attitudes toward people and the employment situation than would whites, as indicated by Triandis and Malpass and Katz and Gurin.

Interpersonal trust is one illustration of an attitudinal difference that could affect how MBO is perceived. Switchen and Gynther found black college students had significantly lower scores on Rotter's Interpersonal Trust Scale than did white college students. Wrightman has found consistently lower trust levels between blacks and whites on the trust scale of Wrightman's Philosophies of Human Nature questionnaire. Since

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trust has been found to predict how managers, supervisors, and professionals assess the value of MBO; differences in trust levels between blacks and whites should influence how these racial groups evaluate MBO. To the extent that the racial groups differ in trust, they are also expected to differ in the degree to which they value MBO.

Second, the effect of race on the relationship between supervisors and subordinates could well influence the acceptance and value of MBO because this management process requires joint goal setting and performance review. Based on an extensive literature review, King and Bass predict that leader behavior will differ where a white supervises white subordinates, where a black supervises blacks, where a black supervises whites, and vice-versa. King and Bass hypothesize that the white-black situation is the condition of highest trust on the basis of the presumption that black superiors of predominantly black subordinates will have a difficult time establishing trust relationships because subordinates will tend to see them as co-opted by the white power structure. In other words, black supervisors may have sold out to "Whitie." In the situation where a black supervises predominantly white subordinates, the supervisors will exercise general rather than close supervision and will encourage subordinates to initiate interactions. King and Bass base this prediction on the intention that black supervisors will "attempt to minimize any feelings of status incongruency on the part of white subordinates by making their supervisory status less conspicuous." Finally, in the situation where whites supervise groups where blacks predominate, white supervisors will be uneasy in their role because of changing roles of blacks in society. Furthermore, black subordinates will be unwilling to discuss personal problems because the white supervisor is perceived to have a lack of knowledge about and empathy with black values. As a result, King and Bass predict that trust will be more difficult to develop in this situation than in the white-white relationship.

Although King and Bass presented persuasive arguments that race of subordinates and supervisors will affect leader behavior, the empirical evidence is mixed. Parker and Richards and Jaffee found significant leadership differences between races, whereas others have concluded that there was little difference between the behavior of white and black leaders. Furthermore, there are relatively few blacks in management, and they are often isolated in predominantly white organizations. Accordingly, researchers have been forced to survey blacks and whites across a number of organizations or perform experimental research using students in simulated work settings that have very little resemblance to actual managerial situations.

Another reason that blacks and whites could assess the value of MBO differently is because they might respond to the goal-setting process differently. Two studies in actual organizational settings indicate that blacks and whites, in fact, respond differently to MBO. Latham and Yukl compared assigned goal setting, participative goal setting, and the "do your best" condition for two samples of logging crews. Members of one sample (n = 24) were primarily black, typical marginal performers with a mean education of 7.2 years. Members of the other sample of logging crews (n = 24) were all white and had a mean education of 12.9 years. For the black crews, performance and goal difficulty were significantly higher in the participative goal setting conditions than in the "assigned" or the "do your best" conditions. Furthermore, goal attainment occurred significantly more often in the participative condition than in the assigned goal condition. There were no significant differences in performance, goal difficulty, and goal attainment under the three goal setting conditions for the white logging crew.

Ivancevich and McMahon examined 40 black technicians and 150 white technicians who participated in an assigned goal setting program. The technicians completed a self report questionnaire which assessed their perceptions of task-goal attribute measures. Blacks were found to have significantly higher mean perception on three task attributes: goal clarity, goal feedback, and goal participation. Goal challenge was found to be significantly lower for blacks. Significant differences were not found between races in goal program commitment or personal commitment to the goals.

Although both studies indicate that blacks will respond differently to MBO, several questions are left unanswered. First, were the differences the result of goal setting conditions, education, the substantial performance differences, or some other unidentified variables? Second, these subjects were from relatively low levels in the organization; will managers, supervisors, and professionals respond to MBO in the same way? Finally, do variables idiosyncratic to the organization, the MBO program, and the research instruments influence how blacks and whites respond to MBO?

Methodology

Sample

The research was conducted in the City of Detroit Department of Transportation which serves the Detroit metropolitan area. Even though the department is responsible for all public transportation within the city, its primary focus is on the bus system. The system has 800 buses in operation which travel more than 100,000 miles a day, and thus this department operates one of the largest city bus systems in the United States. Although the department has approximately 2,200 employees, there are only 160 classified as managers, supervisors, and professionals. The bus drivers and mechanics in this operation are unionized. Promotion from within has been the traditional policy except for the director and assistant director positions, which are appointed by the mayor. As a result, the average age and tenure levels of the managerial staff are high, 47 and 20 years respectively. Salaries range from $25,000 to $50,000 annually and all employees are required to live within the city limits.

The organization is racially mixed, with blacks con-
stituting 55 percent of the managers, supervisors, and professionals while whites constitute the remaining 45 percent. Even though prior to 1965 blacks were restricted from certain functional areas, this type of discrimination eroded due to several factors: (1) there was a substantial number of competent blacks at lower levels of the organization, (2) the passage of the Civil Rights Act and subsequent court rulings made it illegal to discriminate on the basis of race, and (3) black leaders were elected to many of the high level positions in city government. Very few women hold positions other than traditional clerical ones.

Questionnaires were distributed to the 160 employees classified as managers, supervisors, and professionals. The questionnaires were designed such that the individual respondent could not be identified. Of the 155 questionnaires returned, 138 responses (86 percent) were usable in this analysis. Although MBO assessment scales were completed in every case, some respondents either did not indicate their own race or there was a lack of consistent response to the reverse scored items.

MBO Installation

Faced with serious productivity problems and a managerial staff with little formal education or management training, the director decided to install a comprehensive MBO system. Since no one in the organization employed by the city possessed the expertise to develop and install an MBO system, the work was contracted to an outside consultant who had considerable experience with MBO. The consultant devised a five-phase program which was to be installed over a 21-month period. This plan consisted of the following: (1) situational analysis, (2) data analysis and system development, (3) three sets of formal MBO training sessions for all participants, (4) development of mission statements and objectives with management, and (5) follow-up.

Only managers, supervisors, and professionals were selected to participate in the study because they received the MBO training and were expected to participate in the goal setting process. Thus, those included in the sample had to be responsible for the supervision of employees employed in a position requiring professional while whites constitute the remaining 45 percent. Even though prior to 1965 blacks were restricted from certain functional areas, this type of discrimination eroded due to several factors: (1) there was a substantial number of competent blacks at lower levels of the organization, (2) the passage of the Civil Rights Act and subsequent court rulings made it illegal to discriminate on the basis of race, and (3) black leaders were elected to many of the high level positions in city government. Very few women hold positions other than traditional clerical ones.

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MBO Measures

Participants assessed the success of the MBO installation in terms of specific benefits of MBO that the conceptual and empirical literature suggested. Although the MBO measures suffer from the limitations inherent in self-report data, and the lack of individual performance measures of the MBO’s success, the fact that the primary focus of this study is individual perceptions in part justifies using perceptual measures of MBO success.

The Likert-type scale focuses on two dimensions: (1) the effect of MBO on the participant’s job, and (2) the effect of the MBO program on the organization as a whole. The items for Dimension 1 were taken directly from an instrument designed by Hollmann. These items specifically address planning and organizing of work, objective appraisal of work performance, motivation for the best job performance, coordination of individual and work group objectives, superior/subordinate communication, superior/subordinate cooperation, and overall satisfaction with MBO. Hollmann found correlation coefficients between items range from .406 to .694 at the .001 level. He did not perform a scale reliability analysis, however, because he analyzed each item separately and not as a total scale.

The items which assessed the value/success of MBO for the organization (Dimension 2) were a modified version of a set of questions that Carroll and Tosi used. These items focused upon cooperation between divisions, solutions of organization problems, effect on the organization, improvement of communication, and coordination efforts. Questionnaire items are shown on Figure 1. Items 1-7 relate to the effect of MBO on the individual’s job (Dimension 1), and items 8-11 deal with the effect of MBO on the organization (Dimension 2). The intercorrelation (.612) between dimensions was significantly less than the coefficient alpha [.837(I) and .947(II)], thus indicating discriminate validity. In Table 1, the results of the factor analysis (principal component) show that items theoretically assigned to Dimension 1 loaded on Factor 1 with values that ranged from .606 to .725. Although there seemed to be some cross loading in item 7, the factor loading of Dimension 2 indicates that a separate factor existed with the values ranging from .668 to .733. Because (1) the item assignment was consistent with factor analysis, (2) intercorrelations/alpha coefficients indicated a distinction between the dimensions, and (3) the content of items had a different evaluative focus toward MBO, the authors concluded that the dimensions were, indeed, different enough to analyze separately.

Finally, when data were collected at two points in time over a three-month period as a part of a larger study, both measures revealed significant (p < .001) correlation.
FIGURE 1
Assessment of MBO Questionnaire Items*

Here are some statements which describe how employees might feel about the MBO (management-by-objectives) form of management. Please indicate your agreement or disagreement. For each statement, please circle the appropriate number to indicate whether you:

1—STRONGLY AGREE
2—AGREE
3—NEUTRAL
4—DISAGREE
5—STRONGLY DISAGREE

Circle one and only one answer for each statement. There are no right or wrong answers to these questions. Just give your opinion.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MBO is an effective way of planning and organizing the work for which I am responsible.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. MBO provides an effective way of evaluating my work performance.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. MBO motivates me to do the very best on my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. MBO is an effective way of coordinating my work with that of other members of my immediate workgroup.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. MBO results in good communication between me and my immediate supervisor.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. MBO results in regular cooperation between me and my immediate supervisor.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. All things considered, I am satisfied with MBO as it relates to my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. The MBO program has helped DOT solve some of its serious problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. The MBO program has had little effect on DOT.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. The MBO program has improved communications at DOT.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. The MBO program has improved the coordination of efforts between divisions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

*Note that for purposes of analysis, items are scored such that the larger the value (4 and 5) the more positive the evaluation of the MBO program.

Results and Discussion

Table 2 presents the mean scores, standard deviations, and differences between mean scores for black and white responses to the questionnaire. The t-test corrected for unequal cell size indicates that significant racial differences (p < .05) exist in terms of how the MBO program is assessed. Apparently, blacks place a higher positive value on the MBO program in terms of its usefulness to their own jobs. Blacks also tend to see the MBO program as having a more beneficial effect to the organization than do whites. It should be noted, however, that both whites and blacks assess the MBO program in a positive way.

In that MBO represents a special give and take relationship between superiors and subordinates, the authors were concerned that racial composition of that relationship might affect how the subordinate assessed MBO. As a result, four groups were established where blacks supervised blacks, whites supervised whites, blacks supervised whites and whites supervised blacks. A Duncan multiple range test controlled for unequal cell size, however, indicated that race of the supervisor did not significantly influence how the respondent assessed the effect of MBO.

The discovery of significant differences between how blacks and whites assess MBO is consistent with the findings that there are cultural differences between the races and with the MBO research provided by Ivancevich and McMahon, and Latham and Yukl.22 The finding that blacks are more positively disposed toward MBO than whites, however, is contrary to the prediction of King and Bass. Their theoretical notion that behavioral differences in blacks and whites who supervise mixed racial groups would make MBO less appropriate is not supported. Neither is support provided...
TABLE 1
Factor Analytic Results of MBO Assessment Questions (Principal Component)

<table>
<thead>
<tr>
<th>MBO Assessment</th>
<th>Item</th>
<th>Factor I</th>
<th>Factor II</th>
<th>h²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of Individual Job</td>
<td>1</td>
<td>.632</td>
<td>.415</td>
<td>.572</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.677</td>
<td>.385</td>
<td>.607</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>.725</td>
<td>.157</td>
<td>.551</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>.700</td>
<td>.298</td>
<td>.579</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>.694</td>
<td>.254</td>
<td>.546</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>.699</td>
<td>.284</td>
<td>.569</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>.606</td>
<td>.517</td>
<td>.634</td>
</tr>
<tr>
<td>Of Organization</td>
<td>8</td>
<td>.320</td>
<td>.689</td>
<td>.577</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>.241</td>
<td>.668</td>
<td>.503</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>.320</td>
<td>.770</td>
<td>.694</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>.232</td>
<td>.733</td>
<td>.591</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td></td>
<td>5.56419</td>
<td>.84975</td>
<td></td>
</tr>
<tr>
<td>Variance Explained</td>
<td></td>
<td>86.6</td>
<td>13.4</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 2
Differences in Assessed Value of MBO Among Black and White Managers, Supervisors and Professionals

<table>
<thead>
<tr>
<th>Participant's Race³</th>
<th>MBO Assessment for Job</th>
<th>Black (N=77)</th>
<th>White (N=61)</th>
<th>Mean Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>2.66</td>
<td>2.93</td>
<td>.27*</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.73</td>
<td>.80</td>
<td></td>
</tr>
</tbody>
</table>

for contracting with the consultant and installing the MBO program was black. Having a black director may have improved the efficacy of the MBO process.

Obviously, more field studies in public organizations comprising blacks and whites are needed to clarify whether differences exist between races in terms of their acceptance of management theories and programs such as MBO and other participatory approaches. The generalizability of the data is affected by the field location, e.g., industry, inner city location, and the exclusion of women from the analysis. The measures of the MBO assessments pose another limitation for this data since individual, group, and systematic measures of productivity were not obtained. Although the dimensions differed in focus and the statistical analysis showed that respondents perceived them somewhat differently, both dimensions indicated the same relationship with race. Thus, further work must be done on the MBO measures to clarify if, indeed, the two dimensions exist.

The results from this study have several applications.

³Note that the smaller values indicate a more positive assessment.
²p < .01, t-test.
The most obvious is that MBO is appropriate for black or racially mixed organizations. A less obvious application is the influence that top management has on the acceptance of a program such as MBO. If the higher black assessment was the result of black management initiating the program, it would be important to involve the different racial groups in a mixed organization when such program were planned. Finally, the more positive assessment of MBO by blacks opens the door to the notion that there are elements of MBO that minority groups place more importance on than do whites. Further, research to identify these elements would be warranted in terms of improving public and private sector management.

Notes

12. Presumably the most complete work linking trust and MBO is Dow Scott’s unpublished dissertation, The Influence of Trust on the Implementation of a Management By Objectives System, Michigan State University (1979), from which data used in this article were drawn.
23. Essentially the work by Allen and Ruhe, op. cit.; Hill and Hughes, op. cit.; and Hill and Ruhe, op. cit. is contradicted by our results.