# A HEURISTIC MODEL OF COLLABORATION WITHIN LABOR-MANAGEMENT RELATIONS

BARRY M. RUBIN RICHARD S. RUBIN

Indiana University, Bloomington

#### **ABSTRACT**

Despite the currency of site-based management in public schools, researchers indicate that little is understood about how such collaboration works. While variants of site-based management have been identified as promising means of education reform, an understanding of the dynamics of site-based management is lacking. A major deficiency in the research has been a failure to consider the collective bargaining relationship between teacher unions and school administrators. The purpose of this research is to develop and test a conceptual model of site-based management for public schools that is predicated on the labor-management relationship. This interdependency premise asserts collaboration cannot be implemented successfully unless the collective bargaining relationship is satisfied.

Discontent with the overall quality of public schools as expressed in A Nation at Risk [1] and A Nation Prepared [2] has generated strong pressures on states to improve the effectiveness of our public schools. As a result of the marginal progress toward improving schools, researchers now believe that successful organizational change within schools must originate at the building level [3]. The implementation of site-based management, defined as a collaborative process where decision-making in an individual school is made by both teachers and building administrators, has been a major topic of discussion among school reformers [4]. However, with approximately 80 percent of classroom teachers currently represented by unions [5], the collective bargaining relationship

between unions and school officials must, realistically, be a fundamental component in school reform [6].

Despite the currency of site-based management in public schools, researchers indicate that little is understood about how such collaboration works [7, 8]. While variants of site-based management have been identified as promising means of education reform, an understanding of the dynamics of site-based management is lacking. A major deficiency in the research has been a failure to consider the collective bargaining relationship between teacher unions and school administrators [9]. Mitchell et al. recognized the potential of collective bargaining to implement change:

... [researchers] recognize that the legislature has been trying to change schools with reform measures that look like pop-guns compared with the howitzer of collective bargaining [10, p. 147].

Bullock et al. found unions are likely to have a significant role in the initiation, conduct, and outcomes of organizational change programs [11]. Shedd noted the general acceptance of the importance of collective bargaining to implement change:

Most recent studies conclude that collective bargaining has had much more of an impact on educational programs and the management of school districts than earlier observers had expected, but descriptions, interpretations, and explanations of that impact vary dramatically [12, p. 405].

Clearly, educational reform must be viewed within the context of the labor-management relationship.

The purpose of this research is to develop and test a conceptual model of site-based management for public schools that is predicated on the teacher union-school administrator collective bargaining relationship. This interdependency premise asserts site-based management cannot be successfully implemented unless the preexisting collective bargaining relationship is mutually satisfied [13]. After a theoretical justification is presented for the development of the model, the stages of the conceptual framework are discussed. Finally, the research methodology, empirical results, and recommendations for further research are presented.

#### **BACKGROUND THEORY**

Organizational behavior can be viewed as aggregated individual behavior [14]. Therefore, understanding an individual's motivation is useful in understanding organizational behavior [15]. This perspective makes the theories of Maslow, Alderfer, and Trist useful in understanding reforms associated with site-based management.

Maslow argued that individuals turn their attention to higher order needs after lower order needs are satisfied [16]. He identified lower order needs as physiological and safety concerns, while categorizing higher order needs as love, esteem, and self-actualization. Cutcher-Gershenfeld's observation that distributive collective bargaining routinely deals with wages, hours, and working conditions responds to Maslow's lower order needs of physiological and safety concerns [17]. On the other hand, Lawler and Herrick cited the needs of control, competence, and achievement as the concerns satisfied by collaborative participation [15, 18]. These concerns correspond to Maslow's higher order needs.

Although the concept of a hierarchy of needs offers important insights into individual behavior, Maslow's theory should not be viewed as a "lock-step process." Alderfer addressed this issue when he consolidated a needs hierarchy into three clusters: existence, relatedness, and growth [19]. These clusters correspond respectively to Maslow's physiological and safety concerns, love and esteem, and self-actualization. Rather than supporting Maslow's sequential approach to needs satisfaction, Alderfer argued that a "sublimation effect" allows a satisfied need to serve as a motivating factor to fulfill an unsatisfied need. Interestingly, Alderfer applies his theory to individuals as well as groups which, in turn, allows Trist to form the basis of his theory of organizational behavior.

Trist's division of work into extrinsic and intrinsic characteristics is similar to distinctions made between those issues traditionally addressed in collective bargaining and those addressed through collaboration. Trist defined the extrinsic characteristics of work as a desire for fair wages, job security, benefits, and safe working conditions [20]. These characteristics are similar to the individual needs satisfied through collective bargaining. Similarly, Trist defined the intrinsic characteristics of work as a desire for professional discretion and autonomy, continuous learning, and a positive future. These intrinsic characteristics are similar to the individual needs satisfied through collaboration. Consequently, Trist's groupings capture the distinctions between the natures of collective bargaining and collaboration much more clearly than Maslow or Alderfer.

Based on the theoretical framework developed, collective bargaining forms the basis for collaboration. Specifically, Trist argued that a relationship exists between the extrinsic and intrinsic characteristics of work such that a desire for the latter follows from either the satisfaction or lack of satisfaction of the former. Therefore, the following relationships are used to explain the interdependency of collective bargaining and collaboration:

- 1. The *less* collective bargaining is satisfied, the *more* collective bargaining is desired.
- 2. The *more* collective bargaining is satisfied, the *more* collaboration is desired.
- 3. The less collaboration is satisfied, the more collective bargaining is desired.
- 4. The less collective bargaining is satisfied, the less collaboration is desired.

These four propositions, grounded in major theories of needs satisfaction and organizational behavior, link the roles of collective bargaining and collaboration together as the basis for a conceptual model that predicts the success of site-based management.

The conceptual model developed does not suggest that site-based management will replace the infrastructure of traditional collective bargaining. Rather, the model suggests site-based management will exist as a parallel process grounded in collective bargaining [21]. Consequently, the success of site-based management will be dependent on the success of the collective bargaining relationship [22]. Site-based management, therefore, must be viewed as a supplement to and not a replacement for traditional collective bargaining.

#### THE MODEL

Even though there is no applicable theory that addresses collaboration [23], the Walton-McKersie framework has explained the collective bargaining process that serves as a foundation for collaboration [11]. Assessing the factors underlying successful collaborative efforts requires a conceptual model that specifies explanatory variables. The model developed in this study has three main elements: a dependent variable that measures the success of site-based management, five stages that summarize the implementation process, and eleven independent variables within these five stages that are predictive of site-based management success.

## **Dependent Variable**

Site-based management is the operation of an individual building through a collaborative process in which teachers and administrators equally share in the joint decision-making process. Successful site-based management is measured in terms of the degree to which participants perceive involvement in the process. Measurement is largely attitudinal, assessing whether participants feel empowered within the defined scope of the specific site-based program.

# Independent Variables

Although the existence of developmental stages in the implementation of site-based management is widely recognized, how these stages are manifested is an important element in modeling the process conceptually. The Kochan-Dyer model of organizational change has three stages [21]. Schuster used four stages in his adaptation of the Kochan-Dyer model [24]. Our study has adapted a five-stage structure to explain more clearly how eleven independent variables affect success levels of site-based management over time.

#### Stage One-Impetus

In the impetus stage, the explanatory variables are: internal pressure, external pressure, and collective bargaining adequacy. Kochan et al. argued that the first stage of reform involves a stimulus for teachers and administrators to make changes in their labor-management relationship [25]. The argument is that internal and external pressures force the disputing parties to seek resolutions. If reasonable solutions can be reached through traditional collective bargaining, the parties will continue to invest in collective bargaining. However, if collective bargaining proves to be inadequate, alternative solutions will be sought through other mechanisms.

Internal and external pressure — Power becomes shared in site-based management relationships out of necessity—not a concern for the principles of participatory democracy [26]. To begin the move toward site-based management, some type of pressure must exist to force an organization to change its power relationships. Internal pressure is defined as demands from teacher union constituents of school officials wanting some sort of change. External pressure includes demands from business and civic communities, state regulatory offices, the courts, or any other political group. In the face of these types of stresses, both parties must believe that only through joint efforts can pressure be minimized and mutually agreeable solutions found [27].

Collective bargaining adequacy — In addition to the importance of internal and external pressure, the existing means of joint decision making must be found inadequate before the teacher union and school administrators will explore alternative problem-solving methods. Only when the formal collective bargaining process is not capable of effectively responding to the concerns of both parties will they be motivated to consider an alternative strategy [21]. Supporting these assertions, Rosow et al. observed that the rigidity of the collective bargaining structure proves to be inadequate to deal with collaborative efforts [28]. Given the distinction drawn earlier between extrinsic and intrinsic characteristics of employment, it is not surprising that collective bargaining is typically found to be both a hindrance to, and a catalyst for, the development of site-based management programs.

## Stage Two-Initiation

Teacher unions and school administrators must develop congruent organizational objectives to work together. While agreement must exist regarding joint objectives, a simultaneous differentiation of goals must also exist to satisfy their respective constituencies. In the initiation stage, the explanatory variables are goal congruence and goal differentiation. It is important to remember that collaboration requires the congruence of both parties' goals only as they relate to relieving the individual pressures identified in the impetus stage.

Goal congruence — To develop positive responses to internal and external pressure, Lewin found the ability of the parties to reach goal congruence is necessary [23]. Rosow et al. found school administrators and the teacher union must not only want to improve school performance but must also agree on the desirability and achievability of potential improvements [28]. Based on this evidence, the need for shared goals to address initial pressures requires a clarification of the shared goals and mutual agreement to achieve them.

Goal differentiation — The integrity and effectiveness of the teacher union and school administrators is based on maintaining separate interests during organizational change. If a clear differentiation of goals cannot be maintained by both parties, rank-and-file members will doubt the ability of their representatives to aggressively pursue their interests [21]. If collaboration is real, the parties cannot be coopted into displacing their constituencies' goals. There must be enough differentiation between the respective parties to maintain their credibility and cooperate with each other while dutifully representing their constituencies.

## Stage Three—Implementation

The importance of implementation is reflected in McLaughlin's observation that "implementation dominates outcomes" [29]. In the implementation stage, the explanatory variables are: need for representation, parallelism of collaborative reform to collective bargaining, and need for training. During the developmental stages of site-based management, special attention must be paid to these variables to ensure successful maintenance of the program.

Need for representation — Unions serve as a unifying mechanism that provide credibility to the site-based management process by encouraging teacher participation while continuing to offer the benefits of union membership [30]. The role of the union in reassuring teachers, mitigating teacher feelings of isolation, and providing a known channel for grievances creates an atmosphere conducive for collaboration [31]. Supporting this idea, Rosow et al. concluded that unions represent an obstacle to educational reform only when change is imposed on teachers [28]. Therefore, to move toward successful site-based management, the teacher union should be a partner in the planning of organizational change.

Parallelism — This concept describes the degree to which the collaborative process is parallel to collective bargaining. Zand indicated that collaboration improves traditional collective bargaining relationships by creating new combinations of people who develop new points of view [32]. Nonetheless, these new collaborative decision-making arrangements do not replace the teacher union-school administration relationship, even though they act collaterally to change the decision-making structure.

Training — Site-based management can easily fail as an educational reform due to a lack of organizational support or the inadequate training of participants. As the initial step in the implementation of site-based management, most researchers emphasize the importance of orientations, education programs, and training for teacher representatives and school officials as necessary strategies for effective change programs [29]. Regardless of the type of training offered, it should encourage teacher and administrator participation that enhances the site-based management process [18].

# Stage Four-Integration

Once the leader of the teacher union and school administration have agreed to implement site-based management, there must be a commitment to, and a diffusion of, collaboration throughout both organizations. Sustaining high levels of commitment and diffusion is critical for full implementation of the program to occur.

Commitment — Without the support of labor and management, participative decision-making is doomed to fail [33]. For effective implementation to exist, a sense of ownership among key participants in both groups needs to be developed. This mutual commitment is required to achieve relief from the adversarial nature of traditional collective bargaining.

Diffusion — Diffusion is the capacity of an organization to spread the leader-ship's commitment to site-based management throughout its membership. To increase the level of commitment, teacher union leaders and building administrators must foster support for site-based management [34]. Collaboration does not occur without conflict, nor will it prevent both parties from taking principled stands on issues of importance. Therefore, it is critical that the teacher union and school officials operate beyond the constraints of formal negotiations to ensure diffusion occurs.

# Stage Five—Institutionalization

Institutionalization is the process of formally negotiating site-based management into the union contract as an integral component of the traditional collective bargaining relationship. In this stage, the explanatory variable is the collective bargaining linkage. Formalization of site-based management is required to provide a concrete statement of labor and management's long-term commitment to collaboration.

Collective bargaining linkage — A well-developed linkage must exist between the collaborative enterprise and the bargaining process that supports it. The collective bargaining linkage refers to site-based management being tied to the collective bargaining agreement. Hanlon et al. emphasized the importance of the prevailing labor relations climate for the success of site-based management to

occur [35]. Wishnick and Wishnick found that how teacher union leaders view future power relationships determines their willingness to participate in site-based decision-making [9]. These results indicate that clarifying power relationships is important to sustaining collaboration.

# **METHODOLOGY AND RESEARCH DESIGN**

Our model is developed from a review of relevant labor-management relations, organizational behavior, human motivation, and educational research literature. Focus groups and interviews were used to develop and refine a Likert-scale questionnaire. After making adjustments suggested by factor analysis, the questionnaire was distributed to all school principals, site-based management chairpersons, union building representatives, and union officers from the Jefferson County Public Schools in Louisville, Kentucky. Finally, the variables in our model were analyzed using univariate and multiple regression analyses.

# **District Description**

The school district selected to test the site-based management model was the Jefferson County Public Schools in Louisville, Kentucky. This district has been widely recognized as a pioneering district for site-based management [36]. With approximately 91,000 students enrolled in 160 schools, the Jefferson County Public Schools is the seventeenth largest school system in the United States and has a bargaining unit of 5400 teachers [37]. Although a number of case studies on site-based management previously have been conducted here, they were primarily descriptive in nature [38].

#### Questionnaire

Seven focus groups, including fifteen teachers, eight principals, and two union staff members, were interviewed to test the validity of the questionnaire [39]. The district's superintendent and his special assistant were interviewed separately. In each interview session, participants were encouraged to respond frankly to openended questions that were based on the five stages of the model. Information from these sessions was analyzed to refine and focus on the survey. An eighth focus group was comprised of members from the executive board of the Monroe County Teachers Association in Bloomington, Indiana. Their final examination resulted in the approval of a four-page questionnaire containing twelve demographic questions and eighty-six research questions.

## Survey Population

The total population surveyed consisted of all union building representatives and officers, site-based management chairpersons, and building principals. These

groups were surveyed because they were directly involved in both site-based management and labor-management relations [40]. There were 475 union representatives, 130 site-based management chairpersons, and 170 principals who comprised the 775 individuals surveyed. Of the 775 questionnaires distributed, 307 were returned, accounting for a response rate of 39.6 percent.

#### **Statistical Procedures**

All of the variables were operationalized by Likert-scale questions. The scales were intended to produce additive values for each variable. All scales were handled in this manner to permit replication in future research. Factor analysis was used to validate the theoretical construction of the questionnaire. The scales representing commitment and diffusion were found to measure administrative commitment and teacher commitment, respectively. As a result, these two scales were redefined. The variables representing internal and external pressure were found to lack specificity and were combined into one scale measuring the existence of pressure. The variable representing parallelism was dropped from the analysis due to high collinearity with the collective bargaining linkage. Other than these adjustments, factor analysis statistics suggested only minor changes. Finally, the independent scales were subjected to univariate and multiple regression analyses to measure their explanatory power in predicting site-based management success.

# **EMPIRICAL RESULTS**

Correlational results measuring the strength of the relationship between collective bargaining and collaboration supported the interdependence propositions. Despite the low correlation coefficients observed, the results of this analysis affirm that successful collaboration occurred when the collective bargaining relationship was satisfied. Multiple regression analyses indicated that administrative commitment, the collective bargaining linkage, goal congruence, and pressure were strongly predictive of success in site-based management. These four variables explained 49 percent of the variation in the success of site-based management, compared to the 51 percent explained when all independent variables were in the model.

#### **Analysis of Interdependence Propositions**

Interdependence was operationalized as the relationship between collective bargaining and collaboration. As a result, the propositions were analyzed using correlational analysis rather than regression analysis because they evaluated relationships between concepts and were not modeled to be directly predictive of success in site-based management (Table 1).

Table 1. Correlational Analysis of Interdependence

Interdependence Categories	CB Satisfied	CB Desired	Collab Satisfied	Collab Desired
Collective Bargaining Satisfied	1.0000			
Collective Bargaining Desired	0.0016	1.0000		
Collaboration Satisfied	0.1578**	-0.1166*	1.0000	
Collaboration Desired	0.1853**	0.3107***	0.1079	1.0000

p < .05

The strongest interdependence relationship was observed between collective bargaining desired and collaboration desired. This relationship was significant at the 0.001 level, indicating the *more* collective bargaining is desired, the *more* collaboration is desired. The second most significant interdependence relationship was between collective bargaining satisfied and collaboration desired. This relationship was significant at the 0.01 level, indicating the *more* collective bargaining is satisfied, the *more* collaboration is desired. Equally significant, the relationship between collective bargaining satisfied and collaboration satisfied indicated the *more* collective bargaining is satisfied, the *more* collaboration is satisfied. Although the relationships are associated with low correlation coefficients, these results support the proposition that once the collective bargaining relationship satisfies the distributive needs of labor and management, collaboration is required to satisfy professional ambitions.

The interdependence relationship between collaboration satisfied and collective bargaining desired was significant at the 0.05 level. The negatively signed relationship indicated that the *less* collaboration is satisfied, the *more* collective bargaining is desired. This relationship is also associated with a low correlation coefficient. Nonetheless, the result supports the notion that when collaborative efforts fail to satisfy professional aspirations, labor and management revert to the collective bargaining process to ensure distributive needs are satisfied.

The interdependence relationship between collective bargaining satisfied and collective bargaining desired *did not* indicate the *more* collective bargaining is satisfied, the *more* collective bargaining is desired. The insignificance of this relationship is consistent with the assertion that a satisfied collective bargaining relationship desires collaboration. In the Jefferson County Public Schools, the strong collective bargaining relationship allowed collaboration to occur because the distributive needs of labor and management were satisfied. Only if the needs addressed by collective bargaining were not being satisfied would more collective bargaining be desired.

<sup>\*\*</sup>p < .01

<sup>\*\*\*</sup>p < .001

# **Analysis of Independent Variables**

Explaining over 50 percent of the variation in the model, multiple regression analyses indicated that administrative commitment, the collective bargaining linkage, goal congruence, and pressure strongly influenced the success of site-based management in the Jefferson County Public Schools (Table 2). By far, the most significant factor influencing the success of site-based management was administrative commitment, achieving a significance level of 0.0001. Significant at the 0.005 level, the collective bargaining linkage was the second most influential factor in predicting site-based management success. Interestingly, goal congruence was also significant at the 0.005 level—but it was negatively signed. This relationship suggests that as the level of goal congruence increases, the success of site-based management decreases. Finally, pressure was found to be mildly significant in influencing the success of site-based management.

#### Administrative Commitment

Successful site-based management would not exist without administrative commitment. The results from the Jefferson County Public Schools indicate that the *higher* the level of administrative commitment to site-based management, the *higher* the level of success of site-based management. Consequently, schools desiring genuine reform should select personnel with care in order to find

Table 2. Multiple Regression Analysis of Independent Variables Estimating Success of Site-Based Management

Independent Variables	Parameter Estimate	t-Score	Prob >  t
Pressure*	0.2956	2.211	0.0280
Collective Bargaining Adequacy	-0.1514	-1.246	0.2139
Goal Congruence*	-0.7332	-2.905	0.0040
Goal Differentiation	0.2428	1.201	0.2309
Need for Representation	-0.2765	-1.058	0.2909
Training	0.4086	1.537	0.1255
Administrative Commitment*	1.6914	13.179	0.0001
Teacher Commitment	0.3259	1.323	0.1870
Collective Bargaining Linkage*	0.4423	2.991	0.0031
Intercept	-3.5033	-0.621	0.5353
R-Square		0.5245	
Adjusted R-Square		0.5075	

<sup>\*</sup>Denotes statistical significance.

individuals committed to change. Of course, competence is still required when implementing change, but commitment to a vision is important as well.

# Collective Bargaining Linkage

A collective bargaining contract containing language supportive of collaboration positively influences the success of site-based management. The results from our model support the assertion that the *higher* the level of the collective bargaining linkage, the *higher* the level of success of site-based management. Therefore, teacher unions and school officials should move toward institutionalizing the site-based management process into the union contract to sustain collaboration. The existence of site-based management language in the Jefferson County Public Schools collective bargaining agreement emphasized the importance of this linkage.

## Goal Congruence

Goal congruence was the third most influential variable in the model. However, the *t*-value was negatively signed, indicating the *higher* the level of goal congruence, the *lower* the level of success of site-based management. It was anticipated that goal congruence would function during the initiation stage, a stage that Jefferson County had already passed at the time of our study. Goal congruence may have been present during this period. However, as the implementation process continued, it may have impeded the success of site-based management by suppressing a diversity of views and goals not unlike Groupthink [41].

#### Pressure

The importance of pressure was supported by regression results, indicating that the *higher* the level of pressure, the *higher* the level of success of site-based management. However, the distinctions sought between internal and external pressure were not identifiable in the Jefferson County Public Schools. Pressure created the impetus for labor and management to move toward site-based management. Unfortunately, the specific internal and external explanatory effects of this variable may have been diluted when goal congruence emerged during the initiation phase. Therefore, pressure is substantively maintained as a predictor of site-based management success, although measurement error in its scale does not allow it to be supportive of individual internal and external relationships.

# **Summary of Results**

In addition to the interdependence relationships being supported statistically, the strength of the model in predicting the success of site-based management in the Jefferson County Public Schools was also affirmed. Correlational analysis supported all four interdependence propositions, which maintain that collective bargaining forms the basis for collaboration:

- 1. The *less* collective bargaining is satisfied, the *more* collective bargaining is desired.
- 2. The *more* collective bargaining is satisfied, the *more* collaboration is desired.
- 3. The less collaboration is satisfied, the more collective bargaining is desired.
- 4. The less collective bargaining is satisfied, the less collaboration is desired.

Explaining over 49 percent of the variation in site-based management success, the findings regarding administrative commitment, the collective bargaining linkage, goal congruence, and pressure should be given serious consideration by all parties involved in collaborative reform efforts. Based on the model's predictive strength, the following assertions can be made regarding site-based management in the Jefferson County Public Schools:

The *higher* the level of administrative commitment, the *higher* the level of success of site-based management.

The higher the level of collective bargaining linkage, the higher the level of success of site-based management.

The *higher* the level of goal congruence, the *lower* the level of success of site-based management.

The *higher* the level of pressure, the *higher* the level of success of site-based management.

Despite these conclusive results, the operationalization of the interdependence propositions, the lack of specificity in the measurement scales, and the heuristic nature of this study leave a number of questions unanswered regarding the explanatory power of some key variables in the model. Other variables, besides those strongly predictive in this study, may emerge as significant when refinements to this model are developed and tested.

# **CONCLUSIONS AND RECOMMENDATIONS**

The model presented in this study showed substantial predictive strength in determining the success of site-based management. In addition, administrative commitment was shown to be the most influential independent variable in the model. The consistency and strength of this variable's operation identifies it as a topic for future investigation. If a school wishes to implement site-based management, it is clearly important to foster a high level of administrative commitment. However, how this commitment is fostered and operates so strongly as a predictor requires further investigation.

The predictive power of the collective bargaining linkage shows that the labor-management relationship is not an element peripheral to the implementation of site-based management. The collaborative process must be written into the collective bargaining agreement to ensure the success of future endeavors. The importance of goal congruence and pressure affirm the need to consider the school's external environment when instituting collaborative reform efforts. These variables indicate the willingness of the teacher union, school officials, and the larger school community to commit to change that will significantly influence the success level of site-based management.

Statistically insignificant results for some specific independent variables also raise questions that are intriguing and important. The labor relations history and unusually high commitment to collaboration in the Jefferson County Public Schools seem to have suppressed the explanatory power of collective bargaining adequacy, need for representation, training, and teacher commitment [36-38]. The result of this high level of commitment was to make any analysis of the predictive power of these four theoretically important variables impossible. These confounding results suggest that the survey instrument should be refined or even reconstructed.

Further research into the interdependence of collective bargaining and collaboration is also encouraged. The statistically significant results confused by low correlation coefficients offer an intriguing question in regard to how these two processes interrelate. These results suggest that the operationalization of the interdependence propositions should also be reevaluated and retested. Regardless of the statistical results obtained, the interdependence between collective bargaining and collaboration has been affirmed. The need now is for more research.

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Barry M. Rubin and Richard S. Rubin are professors in the School of Public and Environmental Affairs at Indiana University.

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Direct reprint requests to:

Professor Richard S. Rubin Indiana University 323 S.P.E.A. Bloomington, IN 47405