

**A HEURISTIC MODEL OF COLLABORATION  
WITHIN LABOR-MANAGEMENT RELATIONS:  
PART II, THE INDIANAPOLIS EXPERIENCE**

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**ABSTRACT**

The failure to consider the collective bargaining relationship already established between labor and management constitutes a major deficiency in the research on collaboration, especially since labor unions are likely to play a significant role in organizational reform. The purpose of this research was to analyze the successful labor-management reform initiative in the City of Indianapolis using a model of collaboration developed by the authors and described in an earlier issue of this journal. The success of the Indianapolis joint labor-management partnership is currently the envy of many other cities, both in the United States and abroad. This research concludes, among other things, that the success of collaboration is closely linked with the success of the collective bargaining relationship.

The City of Indianapolis has received considerable publicity since Mayor Stephen Goldsmith began the privatization of urban services in 1992. The city's plan for mass privatization, however, never materialized. Instead, it evolved into a unique labor-management partnership (a term used regularly by both labor and management) based on cooperation and increased competition between city

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departments and private contractors. This partnership is currently the envy of many other cities, both in the United States and abroad. In fact, Indianapolis has so many requests for visits from other cities that it now holds regular seminars to accommodate the constant parade of visiting delegations.

Although the city's success in improved efficiency and service delivery is known anecdotally throughout the United States and other countries, there is little validation of this success through the detailed analysis of empirical evidence. Accounts of the Indianapolis experience tend to characterize the city's achievements as a variation of privatization. In fact, the term privatization describes only a small part of Mayor Goldsmith's service-delivery initiatives.

The purpose of this research is to analyze the labor-management partnership in the City of Indianapolis using a model of collaboration developed by the authors and described in an earlier issue of this journal [1]. That research initially developed and tested a model that established the predictive power of the collective bargaining linkage to the successful implementation of labor-management collaboration.<sup>1</sup>

## BACKGROUND THEORY

Historically, collective bargaining has not adequately addressed emerging issues in the public sector that require cooperation rather than adversarial approaches. Implementation of collaborative-management—a joint process where both employees and their employer share in management decisions—has consequently become a major topic of discussion among organizational reformers [2]. Despite current interest in collaborative efforts, however, such collaboration is poorly understood [3]. Cooke described the existing literature on collaborative management as generally descriptive, impressionistic, and piecemeal in focus [4]. He further observed that research has failed to reveal those factors that determine successful collaboration or induce the establishment of cooperative arrangements [4]. While some researchers have identified variants of collaborative management with organizational improvement, a conceptual understanding of the dynamics of collaborative management remains elusive [5].

Organization management theorists suggest that collaborative management improves labor-management relations in the public sector [6]. When designed and implemented effectively, collaborative strategies satisfy both organizational and individual needs in addition to building lasting relationships between managers and employees [7]. Nevertheless, research on the implementation of collaborative management strategies in the public sector continues to develop slowly. The failure to consider the collective bargaining relationship already

<sup>1</sup>The labor-management partnership in Indianapolis is essentially like site-based management in Louisville, as described in the earlier research. Both are collaborative processes where decision making is made by both labor and management.

established between labor and management constitutes a major deficiency in the research on collaboration [8]. Kohler [9] and Levine [10] found labor unions are likely to play a significant role in determining the initiation and outcomes of organizational improvement programs. Allen and Van Norman discussed how both employees and employers experience negative organizational effects when they fail to acknowledge the desire for collaboration [11]. Steimel also concluded that consideration of the labor-management relationship should be a fundamental component for research investigating organizational reform and collaborative management [12]. With approximately 49 percent of local governmental employees currently represented by unions [13], the role of preexisting labor-management relationships is vital to collaboration in the public sector.

### **THE MODEL**

Assessing the factors underlying successful collaborative management requires a conceptual framework that specifies the explanatory variables. The development of this model is explained fully in the authors' earlier article [1]. Essentially, the model has three main elements: a dependent variable that measures the success of labor-management collaboration, five stages that summarize the implementation process, and eleven independent variables within these five stages that are predictive of successful collaboration. The model is summarized in Table 1.

This conceptual model of labor-management collaboration is based on the traditional labor-management relationship of collective bargaining. Because the degree of unionism tends to be greater in public schools than in other levels of government (i.e., federal, state, county, and municipal), the model was originally developed and tested in conjunction with the Jefferson County Public Schools of Louisville, Kentucky [1]. The results of this research verified the predictive strength of the conceptual model, demonstrated the efficacy of the collaborative management approach, and encouraged extending the model to other contexts and venues. Rowan, Raudenbush, and Kang emphasized that a conceptual understanding of collaborative reforms is lacking not only in public schools but throughout the public sector [14]. The conceptual model of collaboration initially tested in the context of public education provides a framework for analyzing the Indianapolis labor-management partnership and, in turn, a blueprint for other cities interested in learning about the Indianapolis experience.

### **THE INDIANAPOLIS EXPERIENCE**

Stephen Goldsmith, who pledged to privatize a wide array of city services, was first elected as mayor of Indianapolis in 1991, despite an aggressive union campaign against him. And soon after taking office, he began implementing his privatization goals by soliciting bids from private parties to provide city

Table 1. Description of Stages and Independent Variables for a Conceptual Model Estimating Success of Collaborative Management

Stage	Variable	Rationale
Impetus	External Pressure	External pressure includes demands for change from business and civic communities, regulatory offices, the courts, or other interest groups.
	Internal Pressure	Internal pressure is defined as intraorganizational demands from labor union constituents or management officials desiring change.
	Collective Bargaining Adequacy	The existing means of joint decision making must be found inadequate before labor and management will explore alternative problem-solving methods.
Initiation	Goal Congruence	The need for shared goals to address initial pressures requires a clarification of the shared goals and mutual agreement to achieve them.
	Goal Differentiation	Both parties must have enough goal differentiation to maintain their credibility and cooperate with each other while dutifully representing their constituencies.
Implementation	Need for Representation	Unions serve as a unifying mechanism that provide credibility to the collaborative management process by encouraging labor's participation while continuing to offer the benefits of union membership.
	Parallelism	Parallelism describes the degree to which the collaboration process operates simultaneously with collective bargaining.
	Training	Training refers to the education programs and skills development available to labor representatives and management.
Integration	Commitment	Mutual commitment to change is required from both labor and management to achieve collaboration while maintaining their established collective bargaining relationship.
	Diffusion	Diffusion is the capacity of labor and management to spread their commitment to collaboration throughout their constituencies.
Institutionalization	Collective Bargaining Linkage	The collective bargaining linkage refers to collaborative management being tied directly to the collective bargaining agreement.

services. When the Department of Public Works' (DPW) trash collection was targeted by the privatization initiative, the American Federation of State, County, and Municipal Employees (AFSCME), the union representing DPW workers, began to encourage and assist its members in preparing competitive bids to provide DPW services. In addition to reducing overhead, AFSCME workers proposed ways of capturing efficiencies in trash collection.<sup>2</sup> With these improvements, all workers in the solid waste division were able to retain their jobs. The introduction of competition to trash collection represented a major change in the labor-management relationship between AFSCME and DPW, from which their partnership evolved. While the city wants to reduce its costs and increase the quality of its services, AFSCME wants to protect workers' jobs and improve their wage, hours, and working conditions. Recognizing that these goals are not mutually exclusive is an important dimension of their partnership. By competing aggressively and successfully against private-sector bids, DPW and AFSCME maintained the same number of bargaining unit employees between 1992 and 1999, protecting jobs that the union feared would be threatened by the privatization program.

### METHODOLOGY AND RESEARCH DESIGN

Our analytic model was developed from a review of the relevant labor-management relations and organizational behavior research literature [1]. The dependent variable is the perceived success of the Indianapolis labor-management partnership in which labor and management equally share in the joint decision-making process of the Indianapolis Department of Public Works. The eleven independent variables of the model, clustered in five stages, are described in Table 1 and used to explain the success of the partnership.

Since measurement is attitudinal, focus groups and extensive interviews were conducted and used to develop and refine both the model and the Likert-scale questionnaire. The results of the extensive interviews conducted with the leadership of both labor and management argued for excluding the impetus stage of the model from quantitative analysis so as not to erroneously confound the other stages' impact on the dependent variable. This argument centered on two compelling points: the time elapsed was significant between the date the partnership was created (1992) and the date the data were collected (1999), and the mayor's privatization initiative was both salient and uniformly perceived as a very serious threat by labor and management alike. The questionnaire then was distributed to labor and management employees of the Department of Public Works in Indianapolis, Indiana.

<sup>2</sup>There are eight divisions within DPW, of which solid waste—commonly referred to as trash collection—is the largest: solid waste, street maintenance, greenways, traffic operations, building and grounds, grass and weed maintenance, training and safety, and customer service.

### **City Description**

When Mayor Stephen Goldsmith initially took office in 1992, the City of Indianapolis had a population of 800,000 and was ranked the twelfth largest city in the United States. Full-time city employees numbered 4,700. Elected on a platform of increased privatization and improved service delivery, Mayor Goldsmith had instituted reforms that had reduced the number of city employees to 3,070 by 1995. And, as *Newsweek* recently reported:

Indianapolis is now a mecca for urban innovation. When Goldsmith took office in 1992, he made public employees compete with private contractors for city services like trash collection. The \$400 million savings helped rebuild the city [15, p. 33].

### **Questionnaire**

The questionnaire was developed initially through several interviews with labor leaders and management officials. Two focus groups, including nine graduate students, the union president and vice-president, and the DPW chief operating officer, were used to establish the face validity of the questionnaire. Information from these sessions was analyzed to refine the survey instrument. This resulted in a five-page questionnaire based on Likert scales for all the variables contained in the model.

### **Survey Population**

The DPW presently employs approximately 445 workers, of which 330 are represented by AFSCME. The total population surveyed consisted of all 445 DPW employees including labor, management, and staff who were directly involved in the labor-management partnership. Of the 445 questionnaires distributed, 237 were returned, for a response rate of 53 percent. Initial review of the returned questionnaires raised concerns about reliability and validity. A significant number of those questionnaires either were largely incomplete or perfunctorily completed. Therefore, to obtain the most valid and reliable data, the problematic questionnaires were eliminated, yielding a final data set of 110 questionnaires.

### **Statistical Procedures**

As in our previous study, analysis of the data was conducted using multiple linear regression. All variables consisted of questionnaire items designed explicitly to represent the elements of the conceptual model. The Likert scales of the questionnaire items were combined additively to define each variable. Variables were operationalized to be consistent with both the dimensions of the conceptual model and the variables used in our previous study. A statistical

significance level of .05 was established as the minimum required to retain variables in the regression equations.

The final regression model incorporated six independent variables representing stage two through stage five of the conceptual model. As previously indicated, the Impetus Stage of the conceptual model was not addressed in the quantitative analysis since this stage had occurred seven years prior to the administration of the survey instrument. Thus, the three independent variables associated with the Impetus Stage were not utilized in the regression model. Also, the training variable from the implementation stage of the conceptual model originally was utilized in the regression, but the lack of statistical significance coupled with interview data suggested that it was a superfluous variable. Significant training initially was provided in 1992 to the parties in preparing competitive bids for public service delivery. These skills have been continually reinforced and, in 1999, were regularly utilized.<sup>3</sup> As a result, training was dropped from the regression. In addition, within the Integration Stage, a high correlation between commitment and diffusion in the initial regression model indicated these variables were addressing the same underlying conceptual element. This high correlation introduced near multicollinearity into the model, which made it difficult to demonstrate statistical significance in both variables. Thus, commitment and diffusion were combined into one variable measuring both interrelated concepts. This combined independent variable was both a strong statistical indicator and consistent with the evolutionary stage of the collaborative management process during which the survey was administered.

## EMPIRICAL RESULTS

The final regression model, presented in Table 2, has an F-statistic of 127.936 with a corresponding *p*-value of .0001 and an adjusted *R*-squared of .872. This indicates that 87.2 percent of the variation in the dependent variable, the perceived success of the Indianapolis labor-management partnership, was explained by the six independent variables included in the final regression equation. All six of the independent variables proved statistically significant at the .05 level, with five of the six significant at the .001 level or better. Tolerance values demonstrated that near-multicollinearity was not an issue with the final regression model, although, as described previously, they did dictate the combining of two independent variables prior to constructing the final regression equation.

<sup>3</sup>The interview data revealed that the initial training, although extensive, focused on the task of preparing competitive bids rather than the process of collaboration. This training was significantly different from the training in Louisville, which focused on the process of collaboration. Nevertheless, the initial task orientation of the Indianapolis training also resulted in improved interpersonal skills, which did improve its labor-management relationship.

Table 2. Multiple Regression Analysis of Conceptual Variables Estimating Success of the Indianapolis Labor-Management Partnership

Independent Variables	Parameter Estimate	Standardized Parameter Estimate	t-statistic	Prob. >  t
Goal Congruence	0.6887	0.2357	2.923	0.0042*
Goal Differentiation	-1.0433	-0.1287	-3.619	0.0005*
Need for Representation	1.1175	0.2013	3.390	0.0010*
Parallelism	0.9217	0.1245	2.423	0.0171*
Commitment/Diffusion	0.4406	0.2619	3.424	0.0009*
Collective Bargaining Linkage	1.1864	0.2497	4.624	0.0001*
Intercept	0.0570	0.0000	0.019	0.9850*
	F-Value	127.936		
	Probability > F	0.0001		
	R-Square	0.8787		
	Adjusted R-Square	0.8718		

\*Denotes statistical significance at the 0.01 level or better.

\*\*Denotes statistical significance at the 0.05 level or better.

The multiple regression analysis indicates that almost all of the variation in the success of the partnership is associated with goal congruence, goal differentiation, the need for representation, parallelism, commitment and diffusion, and the collective bargaining linkage. Based on the standardized parameter estimate, the combined commitment and diffusion variable was the most influential factor on the success of the partnership, followed very closely by the collective bargaining linkage, goal congruence, and the need for representation variables. Parallelism and goal differentiation fall into a second tier of independent variables that had a weaker but still significant impact on the dependent variable.

### Analysis of Independent Variables

#### *Initiation Stage*

The initiation stage of the conceptual model was operationalized with two independent variables—goal congruence and goal differentiation. The goal congruence variable had a parameter estimate of 0.6887, a *t*-statistic of 2.92 with



a corresponding  $p$ -value of .0042, and a standardized parameter estimate of 0.2357. The estimation results for this variable indicate it is in the group of our independent variables that are the most critical to the success of the partnership. The positive sign on this independent variable indicates that as goal congruence increases, so does the success of the labor-management partnership, assuming that the effects of the other independent variables are held constant.

Goal differentiation also was highly significant in the regression model, but was negatively signed with a parameter estimate of  $-1.0433$ , a  $t$ -statistic of  $-3.62$ , and a corresponding  $p$ -value of .0005. These statistics indicate that as goal differentiation increases, the success of the partnership decreases. While this might make intuitive sense, the model nonetheless is predicated on the notion that successful labor-management collaboration must accommodate the differing needs of the respective constituents. Therefore, although this negative coefficient is inconsistent with the direction of the relationship predicted by the conceptual model, it is not surprising given the time elapsed between the date the partnership was created (1992) and the date the data were collected (1999). Moreover, the negative sign on the goal differentiation variable is consistent with a phenomenon known as “Groupthink.”<sup>4</sup> Also, the interviews revealed a culture within DPW of pervasive commitment to the partnership, suggesting the goal differentiation was counterproductive to its continuing success. Finally, although goal differentiation does have a statistically significant relationship with the success of the partnership, its standardized parameter estimate of  $-0.1287$  indicates it falls into the second tier of independent variables that has a lower impact on the dependent variable.

#### *Implementation Stage*

The implementation stage was operationalized with three independent variables—parallelism, the need for representation, and training. As Table 2 indicates, both parallelism and need for representation proved to be critical variables for the success of the partnership. However, as explained previously, training was dropped from the regression model as a superfluous variable. The need for representation had a parameter estimate of 1.1175, a  $t$ -statistic of 3.39, and a  $p$ -value of .0010. These results indicate that as the need for representation increases, so does the success of the labor-management collaboration. The standardized parameter estimate of 0.2013 places the need for representation among the group of independent variables that has the greatest impact upon the success of the partnership. Parallelism also proved to be statistically significant with a parameter estimate of 0.9217, a  $t$ -statistic of 2.42, and a  $p$ -value of .0171.

<sup>4</sup>A product of decision-making groups is that regular interaction between the parties may yield a Groupthink wherein the “. . . mutual influence can lead to group convergence and, ultimately, consensus” [16]. This phenomenon quite likely is present in Indianapolis, especially considering the success of the partnership along with its longevity.

The sign of this independent variable is in the direction predicted by the conceptual model—as parallelism increases so does the success of the labor-management partnership. The standardized parameter estimate of 0.1245 implies that parallelism belongs in the second tier of independent variables, having a lesser impact on the success of the partnership.

#### *Integration Stage*

The integration stage is represented in the regression model by combining the variables of commitment and diffusion. As noted previously, these two independent variables exhibit such a high correlation that treating them separately in the regression model results in a problem with near-multicollinearity. The combined commitment/diffusion variable has a parameter estimate of 0.4406 in the regression equation, with a *t*-statistic of 3.424 and a *p*-value of .0009. Its standardized parameter estimate of 0.2619 indicates commitment/diffusion is the most critical independent variable in the equation. Its positive sign implies that as commitment/diffusion increases, so does the success of the partnership.

#### *Institutionalization Stage*

The institutionalization stage of the conceptual model is represented in the regression equation by collective bargaining linkage. This variable has a parameter estimate of 1.1864, a *t*-statistic of 4.62, and a *p*-value of .0001. Its standardized parameter estimate of 0.2497 makes it the second most influential independent variable of the regression model. As predicted by the conceptual model, the positive sign indicates that the success of the labor-management partnership increases as the strength of its linkage to collective bargaining increases.

## **DISCUSSION AND CONCLUSIONS**

The regression results from the analysis indicate that the model explains 87 percent of the variation in the perceived success of the Indianapolis labor-management partnership. Five of the six independent variables that were derived from the conceptual model are highly significant statistically and have the expected sign. The negative sign on the remaining statistically significant variable, goal differentiation, is likely due to the timing of the data collection relative to the inception of the partnership. Thus, this result is not consistent with the conceptual model.

The research results reported in the earlier article in this journal [1] not only were confirmed by this study, but also were shown to be readily transferable to a very different public sector context. The teachers in the prior research conducted in the Louisville schools are highly educated, professional employees who have a long-term commitment to their field, while the DPW employees in Indianapolis are hourly workers with a wide variation in their backgrounds and a high

turnover rate. Thus, these results confirm the conclusion that this conceptual model provides an accurate depiction of the antecedents necessary for successful collaboration within an ongoing labor-management relationship.

In the Indianapolis research, the six independent variables that are important to the success of their labor-management partnership are commitment/diffusion, collective bargaining linkage, goal congruence, the need for representation, parallelism, and goal differentiation. The significance of these findings provides important insight into how labor-management collaboration should be structured in the public sector.

The two most significant independent variables in both the previous Louisville study and the present Indianapolis research are commitment and collective bargaining linkage. The importance of these two elements to successful labor-management collaboration cannot be overstated. Joint collaboration between labor and management is dependent on the presence of an ongoing collective bargaining relationship. It is this relationship that addresses the traditional issues of wages, hours, and working conditions. These issues historically are the most difficult elements of the labor-management relationship and, therefore, do not readily lend themselves to a collaborative process. This collaboration should restrict itself to issues that cannot be resolved through more traditional collective bargaining. Such issues, for example, might include strategic planning, productivity improvement, and service delivery. Successful collaboration between labor and management is unlikely to occur if the traditional bargaining-table issues are left unsettled.

Equally important, as evidenced by the empirical results from both cities, is the commitment that labor *and* management bring to the collaboration. The Indianapolis data further demonstrate that this commitment must not be restricted solely to the leadership, but instead must pervade the respective organizations and be internalized by their constituents.

Two important issues emerge for future research. First, rather than the competitive nature of collective bargaining and the cooperative nature of collaboration being mutually exclusive, this research also demonstrates that these processes can provide simultaneous benefits to both labor and management. Therefore, an important need for further research is an investigation of the impact of successful collaboration on the preexisting collective bargaining relationship. A second critical area for future research is the need to address the impetus stage of the conceptual model. The data collection phase of both the Louisville and Indianapolis studies occurred well after the triggering events that led to the evolution of their collaboration. As a result, the impetus stage could not be analytically investigated in either setting. A longitudinal study would be the most appropriate way to address this impetus stage. Such an approach would include data collection at the time of, or shortly after, the triggering event(s) that lead to collaboration. This would provide a before-and-after analysis of collaboration within an ongoing labor-management relationship.

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