

**DIFFERENCES IN DECISION MAKING BETWEEN
EXPERIENCED JUDGES AND INEXPERIENCED
JUDGES IN DISPUTE RESOLUTION: THE CASE
OF FINAL-OFFER INTEREST ARBITRATION**

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ABSTRACT

The study compared the decision-making patterns of professional arbitrators and nonprofessionals, using hypothetical final-offer arbitration cases. The results showed: first, there appeared to be no individual differences among professional arbitrators, while their counterparts consistently showed individual differences; second, nonprofessionals placed more emphasis on the comparability standards in decisions than professional arbitrators. This study raises questions about the validity of previous research.

This study sought to enhance understanding of the arbitral decision-making process, particularly interest arbitration. Interest arbitration is often used in the public sector to settle contract disputes, and it has received considerable attention over the years [1]. While previous studies were primarily concerned with procedural rules or the quality of the final award, recent studies of interest arbitration have focused on how arbitrators make their decisions [1-9]. These studies have identified the important elements in determining fair awards and whether or not arbitrators' beliefs can be influenced by the parties' final offers [9].

Recent research has employed two research methodologies: field settings and experimental design. The former uses data on actual arbitration decisions, whereas the latter strategy is to ask arbitrators to decide one or more hypothetical disputes in which the facts or offers are experimentally varied. The three major findings in

these studies are 1) the importance of comparability criteria in decision making [1, 6-8, 10]; 2) the arbitrator's reliance on the parties' offers as well as the facts of the case [4-5]; and 3) individual differences among arbitrators in terms of utilizing different criteria for arbitral awards [3, 6-7, 10].

Despite the contributions of recent research to the understanding of arbitrators' decision processes, however, we are not sure about whether such research findings about arbitrators' decision-making behaviors are unique to this particular group of professionals. In other words, until we understand how differently professional arbitrators behave from nonarbitrators, previous research findings could be viewed as any decision-makers' behaviors, not professional arbitrators' behaviors. In this sense, comparison of decision-making behaviors between professional arbitrators and nonarbitrators can be useful for better understanding of distinctive decision-making behaviors as well as for confirming (or disputing) previous findings about professional arbitrators.

This issue is interesting as academic research, but it is also important in a practical sense for parties who put considerable effort and resources into selecting an arbitrator, since the understanding of how arbitrators actually decide cases could help the parties assess their likelihood of winning a case. Although there are no absolute qualifications for arbitrators, parties usually want someone with experience and expertise in dispute resolution. Arbitrators are chosen with the parties' expectations that s/he will render a "fair" final award [1]. An assumption in selecting a professional arbitrator is that the decision will be better than one from someone who lacks arbitral experience. It is evident experienced arbitrators have more knowledge of procedural matters, yet it is still unknown how the experienced arbitrator differs from people who do not have such experience and expertise in ruling on substantive issues.

We compared the decision-making patterns of professional arbitrators, who had made numerous decisions under Wisconsin's two interest arbitration statutes, and graduate students (or inexperienced arbitrators) of industrial relations at a large university, using thirty-two hypothetical final-offer interest arbitration cases dealing with a wage dispute between a police union and a city. Since in the three previous findings mentioned earlier the arbitrators' reliance on the parties' offers is relevant only to conventional interest arbitration, this study focuses only on the other two issues: comparability and individual differences.

PREVIOUS EMPIRICAL STUDIES AND RESEARCH HYPOTHESES

Individual Differences

Arbitrators were reported to differ significantly in the weight assigned each criterion in arbitral decision-making processes. Bazerman, in his seminal experimental study of arbitral decision making, examined differences between

arbitrators in the weight assigned to various factors when making arbitral awards [3]. In his experiment, members of the National Academy of Arbitrators made conventional and final-offer decisions in twenty-five hypothetical wage disputes. He asked sixty-nine practicing arbitrators to render decisions using seven criteria in a set of experimentally created and manipulated wage disputes. Using a multiple regression analysis (or a policy capturing approach), he found the participating arbitrators were very consistent individually in making awards, as measured by the multiple correlation coefficient, R^2 . Across all sixty-nine arbitrators, the average R^2 was .69, so that 69 percent of the variation in their award behavior was explained by his empirical model. However, when he compared the relative importance (relative weights) of each criterion for each arbitrator's overall wage judgments, arbitrators significantly differed from one another in how they used the criteria.

In fact, how individuals make decisions has been studied with several different kinds of judges, such as employment interviewers [11], radiologists [12], clinical psychologists [13], stockbrokers [14], equal employment opportunity officers [15], and managers dealing with employee substance abuse [16]. These studies found wide individual differences in decision making in a variety of settings. Therefore, it is believed inexperienced arbitrators as well as their experienced counterparts will show individual differences in arbitral decisions. From this, the first hypothesis of this study was formulated:

H1 Within both the experienced and inexperienced groups of arbitrators, there will be individual differences in decision making.

However, the decision-making process in arbitration, where the parties select their own judges, is much different from other kinds of decision-making situations. Interest arbitrators can be regarded as dispensers of fairness. At the same time, the importance attached to a fair award is closely related to the fact that arbitrators are chosen by the parties in a competitive arbitral labor market, and thus their awards not only affect the parties but also their own continued acceptability as arbitrators [1].

Therefore, arbitrators, as individual judges, must maintain fairness in terms of both the notion of dispensers of distributive justice normatively and perceived fairness by the parties for the sake of their own careers. Because the arbitrator's own judgment of fairness is not always the same as perceived fairness by the parties, the arbitrator must not only render fair decisions, but also endeavor to ensure that the parties perceive the decisions as fair, an accomplishment that requires experience. As a result, it can be assumed experienced arbitrators, despite individual differences as judges, appear to have commonalities among them, which make them distinguishable from inexperienced arbitrators. Hence the following hypothesis was drawn about experienced arbitrators and inexperienced arbitrators:

- H2 The difference among experienced arbitrators will be smaller than the difference among inexperienced arbitrators.

Comparability Standard

In interest arbitration fairness arises from two sources: the arbitrator's own judgment (or socially perceived role) and the parties' perceptions. This fairness is often demonstrated by arbitrators through their emphasis on comparability standards such as wage comparisons in arbitral decision making. The important role wage comparisons play as a standard of equity in collective bargaining has long been recognized [17]. The conventional wisdom that such comparisons also play an important role in interest arbitration has been supported by early descriptive studies [18, 19].

Recent findings are also consistent with those of early studies. For example, using data on 271 arbitration awards involving police contracts in sixteen states from the period 1975 to 1982, Schwochau and Feuille examined a multi-state set of arbitration awards for clues to arbitrator decision-making behavior [1]. They found that comparability is important in the arbitral determination of salaries and that the parties' offers have a significant influence on awards. Specifically, arbitrators were more likely to compare the police salaries in disputes with other police salaries in the same state and to other city employees' pay in the same city.

Olson and Jarley investigated comparable settlements on actual arbitrator decisions in a field setting [8]. Using data on final-offer wage disputes between Wisconsin teachers and school boards in 1977-1986, the authors found wage increases agreed to earlier by comparable school districts had a strong influence on the arbitrators' decisions. As a result, it is expected that arbitrators, under the pressure of their role as dispensers of fairness and the need for the parties to perceive them as such, will behave differently from inexperienced arbitrators, who do not have such pressure. Accordingly, the following hypothesis was formulated:

- H3 Experienced arbitrators will emphasize comparability standards more than inexperienced arbitrators.

METHOD

Subjects and Procedure

The instrument of this study was originally used by Dell'Omo for his dissertation [6]. Thirty-two hypothetical cases with nine criteria were exactly replicated for the current study. Since the main purpose of this study was to compare decision-making processes between experienced and inexperienced arbitrators, it was important for both kinds of arbitrators to deal with exactly the same cases

with the same instructions. Each decision maker was asked to judge thirty-two hypothetical final-offer interest arbitration cases in which the only unresolved issue was wages.

Experienced Arbitrators

In his study, Dell'Omo selected twenty-two arbitrators who had extensive experience with public sector interest arbitration, particularly under the Wisconsin Police and Firefighter Arbitration Act [6]. These arbitrators decided approximately 82 percent of all public sector interest arbitration cases in Wisconsin between 1979 and 1985. The average number of interest arbitration cases decided was 53.7 cases, and the average number of total arbitration cases decided was 464.8 cases (see Dell'Omo [6] for additional details).

Inexperienced Arbitrators

A survey, containing the same thirty-two hypothetical cases with a brief description of the nature of the study, was distributed through departmental mailboxes to forty-two graduate students in industrial relations at a large university. Graduate students in industrial relations were chosen in this study because they are likely to have some knowledge of interest arbitration, yet lack any real experience as arbitrators. To increase the response rate, one week after the first mailout, a follow-up reminder was sent to all forty-two students. Seven surveys were undeliverable. Of the thirty-five students who received the survey, sixteen surveys were completed and returned, representing a 46 percent response rate.

Variables

The thirty-two hypothetical disputes were between a police union and city and dealt with only a single issue, the hourly wage for police officers. The dependent variable was the arbitrators' selection of the final offer in each case: 1, if union offer was selected; 0, if management offer was selected. Both the current wage (\$10/hour) and the offers of the parties (union = \$10.80/hour or 8% increase; management = \$10.30/hour or 3% increase) were constant across all disputes.

The independent variables were the nine wage criteria arbitrators would be expected to apply under the Wisconsin Police and Firefighter Arbitration Act. The criteria were manipulated in the disputes, as described in Table 1. The criteria fell into five broad categories: two comparability categories, *internal comparability* such as percentage of increase for firefighters in community, wage rate for firefighters in community, percentage of increase for nonuniformed bargaining units in the community, the *external comparability* such as percentage of increase in comparable police units, and wage rates in comparable police units; *ability to pay* such as community property tax rate and police expenditure as a percentage of

Table 1. Description of Nine Independent Variables

Variable	Treatment Values	Mean	S.D.
Community Property Tax Rate	.009, .010, .011, .012 .031, .032, .033, .034	.021	.011
Cost of Living	2, 3, 4, 5 7, 8, 9, 10	6.063	2.675
Percent Increase in Comparable Police Unit	1.5, 2.5, 3.5, 4.5 6.5, 7.5, 8.5, 9.5	5.438	2.735
Wage Rate in Comparable Police Unit	10.15, 10.25, 10.35, 10.45 10.65, 10.75, 10.85, 10.95	10.540	.280
Percent Increase for Firefighters in Community	1, 2, 3, 4 6, 7, 8, 9	5.375	2.673
Wage Rate for Firefighters in Community	10.09, 10.16, 10.23, 10.30 10.59, 10.66, 10.72, 10.80	10.434	.261
Percent Increase for Non-Uniformed Bargaining Units in Community	1.5, 2.5, 3.5, 4.5 6.5, 7.5, 8.5, 9.5	5.500	2.851
Police Expenditure as a Percentage of Government Operating Budget	8, 9, 10, 11 26, 27, 28, 29	19.094	9.128
Workload Index: Crime Rates per 1,000 Residents	16, 17, 18, 19 40, 41, 42, 43	29.469	12.276

government operating budget; *workload*, expressed as the crime rate per 1,000 residents; and finally, *cost of living*.

Experimental Design

The thirty-two hypothetical cases were constructed using a two-step process designed to minimize the correlation between the treatment levels. First, the values for each of the nine treatment variables were divided into high and low groups, with four values in each category. The criteria were then combined based on the two categories according to a 1/16 fractional replication of a 2^9 factorial design. This procedure produced a set of thirty-two scenarios in which the two ordinal levels on each of the nine variables were orthogonal. (See Dell'Omo [6] for additional detail about the design of this experiment.) This, in turn, produced a total of 1,216 scenarios for the analyses of the study: the 704 scenarios for experienced arbitrators (22 arbitrators \times 32 cases); and 512 scenarios for inexperienced arbitrators (16 students \times 32 cases).

Analyses

Initially, two simple analyses were conducted: a count of how many union offers were chosen by each arbitrator across thirty-two cases and a count of how many arbitrators selected union offers for each case. These analyses allow us to examine how much difference there is between inexperienced and experienced arbitrators in making decisions in each case and to investigate how much variance within groups exists across cases.

The arbitrator decision model was estimated using logit regression models by predicting the log odds of choosing a union offer in each case. The estimates were based on the following equation:

$$\text{Log}[p/(1-p)] = x\beta,$$

where p is the probability of choosing a union offer and x is a vector of independent variables. Maximum likelihood estimation was used for estimating parameters, β .

For hypotheses testing, separate logit equations between experienced and inexperienced arbitrators were generated with and without arbitrator dummy controls (21 dummies for experienced; 15 dummies for inexperienced). Likelihood-ratio tests were used to test how significant arbitrator dummy controls were in terms of improving goodness-of-fit for each group's model. For additional comparative analysis, another three logit equations were run, using a combined sample of two groups. For this analysis, a dummy variable for arbitrator status was created: ARB = 1 if experienced arbitrator; ARB = 0 if inexperienced arbitrator. Also, nine interaction variables between ARB and independent variables were created to investigate whether the two groups of arbitrators differed in using each of the nine criteria when they made decisions.

RESULTS

Table 2 reports how many arbitrators in each group chose the union final offer in each case. For example, 77 percent of the experienced arbitrators (17 out of 22) chose the union final offer for case 5, while 94 percent of inexperienced arbitrators (15 out of 16) selected the union final offer for the same case. The means for choosing the union final offer across all thirty-two cases were 58.8 percent (*s.d.* = 49.3%) for experienced and 58.6 percent (*s.d.* = 49.3%) for inexperienced arbitrators, respectively. As indicated by the nearly identical means and standard deviations, the overall choice between the union and management final offers was similar between the two groups. However, as seen in Table 2, there were several cases for which the two groups of arbitrators, on average, made quite different, often opposite, choices.

The proportion of union offers selected among the thirty-two cases by each arbitrator is reported in Table 3. It was observed that there were within-group

Table 2. Percentage Choosing Union Final Offer in Each Case

Case No.	Experienced Arbitrators (N = 22) (%)	Inexperienced Arbitrators (N = 16) (%)
1	4.5	0.0
2	100.0	100.0
3	95.5	87.5
4	0.0	0.0
5	77.3	93.8
6	72.7	50.0
7	77.3	75.0
8	45.5	50.0
9	31.8	68.8
10	72.3	62.5
11	95.5	100.0
12	18.1	0.0
13	59.1	62.5
14	86.4	93.8
15	77.3	56.3
16	45.5	43.8
17	95.5	87.5
18	31.8	56.3
19	9.1	6.3
20	77.3	93.8
21	81.8	50.0
22	54.6	93.8
23	50.0	18.8
24	63.6	75.0
25	4.6	43.8
26	100.0	37.5
27	90.9	68.8
28	22.7	81.3
29	36.4	100.0
30	77.3	25.0
31	59.1	12.5
32	68.2	81.3
Mean	58.8	58.6
S.D.	49.3	49.3

variations among both the experienced and inexperienced arbitrators. While the mean selection of the union offer, as seen in Table 2, was almost the same between the two groups, individual differences in selecting union offers were greater among inexperienced arbitrators than among experienced ones. The proportion of union offer selection for experienced arbitrators was between 50.7 percent and 66.9 percent with one standard deviation of 8.1 percent, but the proportion of union offer selection for inexperienced arbitrators fell between 46.5 percent and

Table 3. Percentage Choosing Union Final Offer across Thirty-Two Hypothetical Cases by Each Arbitrator

	Experienced (%)	Inexperienced (%)
	50.0	56.3
	53.1	59.4
	53.1	50.0
	62.5	62.5
	50.0	87.5
	65.6	65.6
	75.0	56.3
	56.3	62.5
	59.4	43.8
	75.0	65.6
	59.4	46.9
	71.9	53.1
	59.4	71.9
	59.4	34.4
	53.1	68.8
	56.3	53.1
	56.3	
	68.8	
	46.9	
	62.5	
	50.0	
	50.0	
Mean	58.8	58.6
S.D.	8.1	12.1

70.7 percent with one standard deviation of 12.1 percent. The difference of the two variances was statistically significant at the .05 level.¹

These aspects were further analyzed through the logit regression. Table 4 reports maximum likelihood estimates of the logit models for experienced and inexperienced arbitrators separately: columns 1 and 3 report the results for models that include dummy variables for each arbitrator; columns 2 and 4 report results for models without dummy variables. The likelihood-ratio tests between models with arbitrator dummy variables and without them were performed to test the first hypothesis. This test lets us investigate whether the arbitrator dummy variables, as a set, make a significant contribution to the model. This is equivalent to a

¹ The null hypothesis of $\sigma^2_{\text{inexperienced}} = \sigma^2_{\text{experienced}}$ was rejected with $F(0.95; 15, 21) = 2.18$ with test statistic $\sigma^2_{\text{inexperienced}}/\sigma^2_{\text{experienced}} = 2.23$.

Table 4. Logit Estimates of Arbitrator Decision Model for Experienced and Inexperienced Subsample (Standard Errors in Parentheses)

	Experienced Arbitrators (N = 704)		Inexperienced Arbitrators (N = 512)	
	(1)	(2)	(3)	(4)
Cost of Living (COL)	.279 (.040)	.267 (.039)	.250 (.054)	.215 (.050)
Percent Increase in Comparable Police Unit (EXTPCT)	.386 (.044)	.369 (.043)	.346 (.068)	.301 (.063)
Wage Rate in Comparable Police Unit (EXTWG)	1.541 (.403)	1.485 (.394)	4.260 (.654)	3.705 (.597)
Percent Increase for Firefighters in Community (FIREPCT)	-.076 (.038)	-.072 (.037)	.182 (.052)	.154 (.046)
Wage Rate for Firefighters (FIREWG)	.225 (.417)	.223 (.409)	3.343 (.660)	2.878 (.605)
Percent Increase for Non-Uniformed Bargaining Units (INTPCT)	.074 (.036)	.071 (.035)	.213 (.049)	.183 (.045)
Police Expenditure as a Percentage of Gov't. Operating Budget (EXP)	.053 (.012)	.051 (.011)	-.033 (.016)	-.029 (.015)
Workload Index (WORK)	.045 (.008)	.043 (.008)	.118 (.014)	.102 (.013)
Community Property Tax Rate ^a (TAX)	-.170 (.091)	-.160 (.089)	-.040 (.123)	-.034 (.114)
Constant	-24.445 (7.120)	-23.053 (6.958)	-87.830 (12.340)	-75.627 (11.140)
Arbitrator Dummies	Yes	No	Yes	No
Log Likelihood	-342.181	-356.394	-197.303	-225.690
Likelihood-Ratio Test:				
Chi-2 (d.f.)		28.43 (21)		56.77 (15)
P-value		.129		.000

^aUnit of tax rate was adjusted for convenience by multiplying 100.

simultaneous test of the null hypothesis that all of the coefficients of these dummy variables are zero against the alternative that at least one is nonzero [20]:

$$H_0: \beta_1 = \beta_2 = \dots = \beta_i = 0,$$

where β_i is the regression coefficient of i_{th} arbitrator dummy variable. The coefficients for the arbitrator dummies for experienced arbitrators as a set were not significant with a p -value of .129. On the other hand, the coefficients for inexperienced arbitrators were significant at the .01 level and a nested model was rejected against a full model with dummy variables.

The result implies that while there are significant individual differences among inexperienced arbitrators, the difference is not significant for experienced arbitrators. This suggests the individual differences shown in Table 3 for experienced arbitrators were simply due to sampling variability. Therefore, although there might be a few arbitrators who are different from the rest, the statistical test clearly rejected the first hypothesis for experienced arbitrators, based on the group as a whole. On the other hand, the result of the likelihood-ratio test naturally supports the second hypothesis that the difference among experienced arbitrators was smaller than among inexperienced arbitrators. This is consistent with the result of the variance test reported above.

Coefficients of nine independent variables (criteria) and their standard errors are reported in Table 4. For experienced arbitrators, seven variables (6 without dummies) had a significant impact on arbitral decisions. These are: percentage of increase for nonuniformed bargaining units in the community, percentage of increase in comparable police units, wage rates in comparable police units, police expenditure as a percentage of government operating budget, workload, and cost of living. With regard to the comparability standard, two external comparability variables—percent increase and wage rates in comparable police units—were important criteria in the experienced arbitrators' decision making. However, internal comparability criteria—percent increase and wage rate for firefighters—were not statistically significant, except for nonuniformed bargaining units.

Results of Table 4 for experienced arbitrators seemed to be quite consistent with previous findings until they were compared to results for inexperienced arbitrators. As seen in Table 4, external comparability was the important criterion not only for experienced arbitrators' decisions, but also for inexperienced arbitrators' decisions as well. Interestingly, while practicing arbitrators did not place much emphasis on internal comparability, two variables relevant to internal comparability were statistically significant in logit models of inexperienced arbitrators' decision making. Consequently, the expectation that experienced arbitrators will emphasize comparability standards more than inexperienced arbitrators (H3) was clearly rejected.

Table 5 reports the maximum likelihood estimates of three logit regression models based on the combined sample. Model 1 includes a dummy (ARB) for arbitrator and nine interaction variables between ARB and independent variables

Table 5. Logit Estimates of Arbitrator Decision Model
for All Sample ($N = 1216$)
(Standard Errors in Parentheses)

	(1)	(2)	(3)
Cost of Living (COL)	.215 (.050)	.238 (.030)	.238 (.030)
Percent Increase in Comparable Police Unit (EXTPCT)	.301 (.063)	.311 (.033)	.311 (.033)
Wage Rate in Comparable Police Unit (EXTWG)	3.705 (.597)	2.207 (.306)	2.207 (.306)
Percent Increase for Firefighters in Community (FIREPCT)	.154 (.048)	.025 (.027)	.025 (.027)
Wage Rate for Firefighters (FIREWG)	2.878 (.605)	1.183 (.317)	1.183 (.317)
Percent Increase for Non-Uniformed Bargaining Units (INTPCT)	.183 (.045)	.108 (.026)	.108 (.026)
Police Expenditure as a Percentage of Gov't Operating Budget (EXP)	-.029 (.015)	.018 (.009)	.018 (.009)
Workload Index (WORK)	.102 (.013)	.060 (.006)	.060 (.006)
Community Property Tax Rate ^a (TAX)	-.034 (.114)	-.123 (.066)	-.123 (.066)
ARB ^b	52.575 (13.135)	.012 (.138)	
ARB*COL	.052 (.063)		
ARB*EXTPCT	.068 (.076)		
ARB*EXTWG	-2.220 (.716)		
ARB*FIREPCT	-.227 (.061)		
ARB*FIREWG	-2.655 (.730)		

Table 5. (Cont'd.)

	(1)	(2)	(3)
ARB*INTPCT	-.112 (.057)		
ARB*EXP	.080 (.019)		
ARB*WORK	-.059 (.015)		
ARB*TAX	-.126 (.114)		
Constant	-75.627 (11.140)	-40.865 (5.476)	-40.858 (5.476)
Log Likelihood	-582.083	-633.885	-633.889
Likelihood-Ratio Test:			
Chi-2 (<i>d.f.</i>)		103.60(9)	103.61(10)
<i>P</i> -value		.000	.000

^aUnit of tax rate was adjusted for convenience by multiplying 100.

^bOmitted category is inexperienced arbitrator.

as well as all nine independent variables. Indeed, Model 1 is a combination of column 2 and 4 in Table 4. Thus, Model 1 is exactly the same as column 4 when ARB is equal to 0, and column 2 when ARB is equal to 1. However, one advantage of this model is that it allows us to directly conduct a significance test of whether the two groups of arbitrators differ in using each criterion.

As expected from Table 4, results show that six of the nine variables have significantly different coefficients between the two groups. Interactions of these variables with ARB all have negative coefficients except expenditure. In particular, the magnitudes of the coefficients of two wage variables, wage rate in both comparable police unit and firefighters, were notably different between the two groups. For instance, as the wage rate in comparable police units is increased by 10 cents, the estimated odds of choosing the union offer are 1.17 times higher for experienced arbitrators, but 1.53 times higher for inexperienced. This implies that experienced arbitrators tend to give significantly less weight to these variables than inexperienced arbitrators when they make arbitration decisions.

Results of logit regression analyses are graphically reported in Figure 1. It shows how each group of arbitrators reacts to the change in values of each criterion when controlling for the remaining criteria. Overall, graphs of

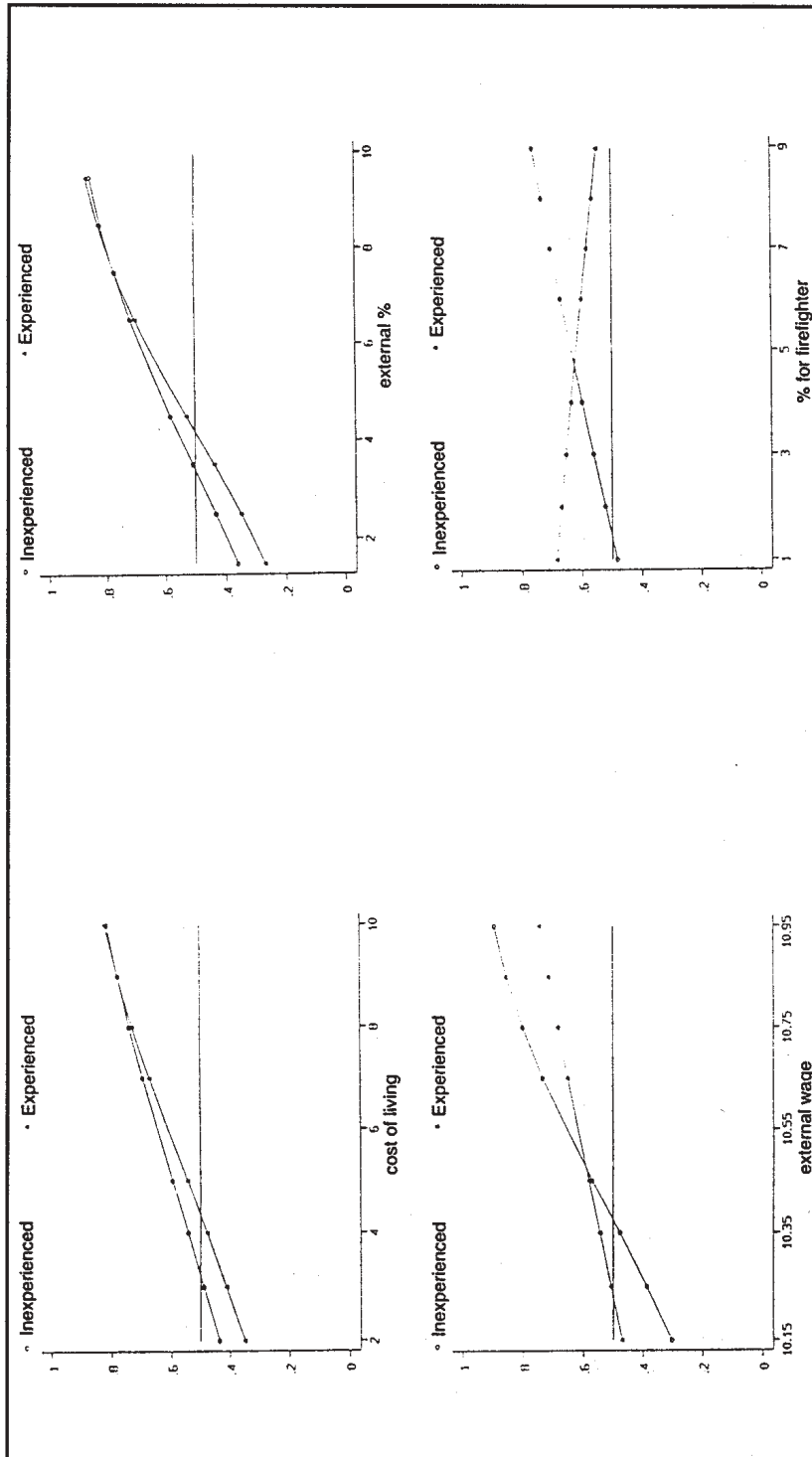


Figure 1. Comparison between two groups of arbitrators in using criteria.

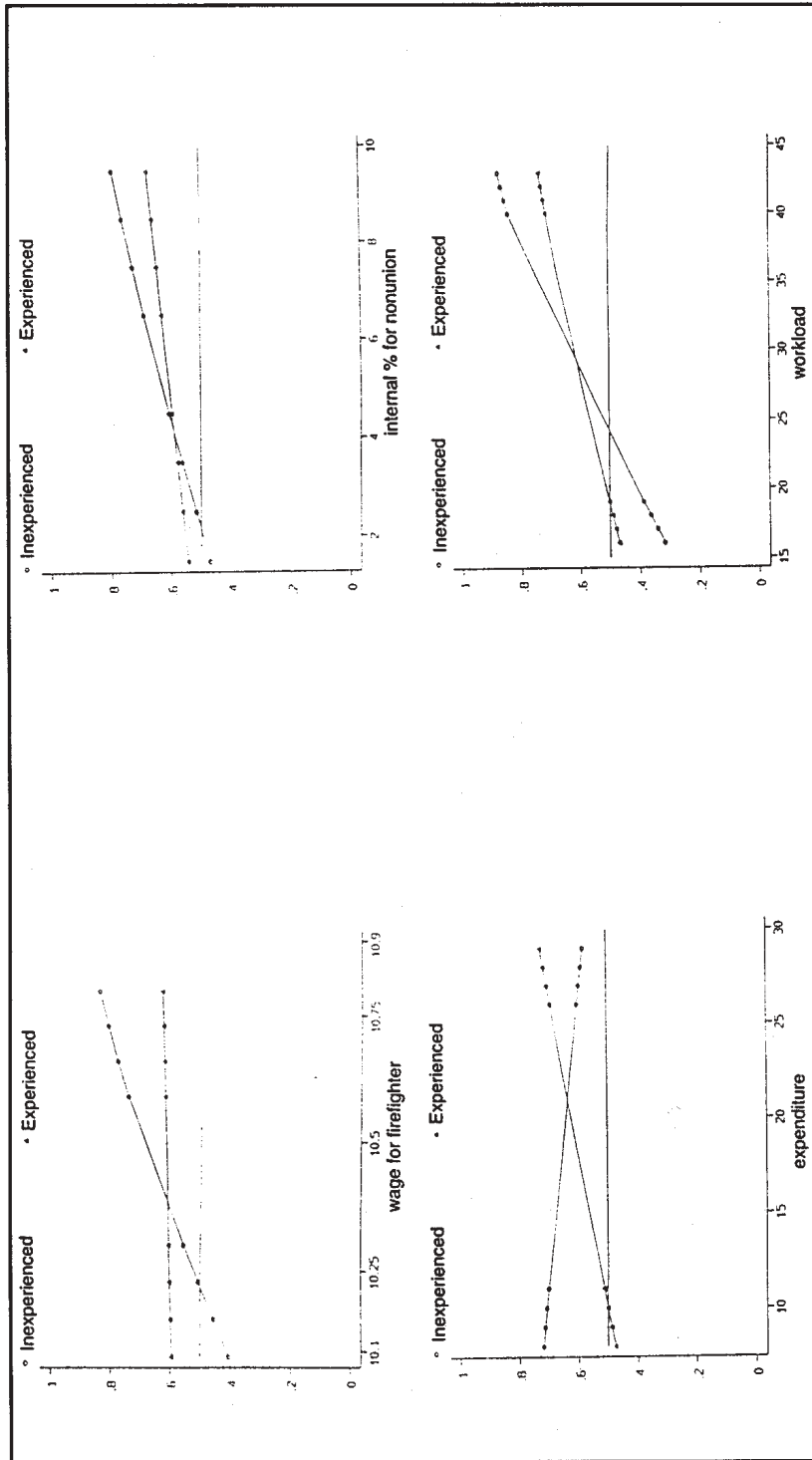


Figure 1. (Cont'd.)

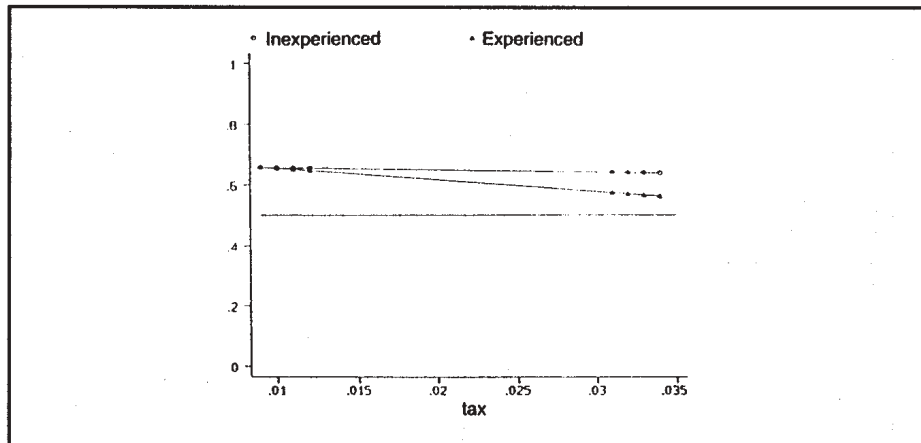


Figure 1. (Cont'd.)

experienced arbitrators have much flatter slopes than those of inexperienced ones, indicating the latter are much more sensitive to changes in values of the criteria.

Model 2 of Table 5 includes nine independent variables and a dummy ARB, and Model 3 includes only independent variables. When interactions were omitted in Model 2, a dummy for arbitrator status, ARB, was no longer significant. This result is consistent with the analyses shown in Tables 1 and 2, indicating there is no difference between experienced arbitrators versus inexperienced arbitrators in terms of the probability of choosing the union offer.

LIMITATIONS OF THE STUDY

Before the interpretation of the study results are provided, some potential limitations in this study should be noted. As in other experimental studies, it is possible that having people make so many judgments at the same time may have distorted the judgment process [15]. Another problem that most experimental studies are likely to have is the lack of reality. As such, while decisions that fall outside the boundaries of the offers are rarely observed in the real world and, moreover, the offers in real cases are correlated with the facts of the case, by the nature of the design, there is almost no correlation between offers and facts in the experiment [21]. As noted, the fact that the final offers of the union and management for all thirty-two cases are identical could be another unrealistic aspect of the study.

But these concerns may not be major problems because the main purpose of the design was comparison and both subjects were asked to complete exactly the same cases. Moreover, Olson, Dell'Omo, and Jarley evaluated the external validity of experimental studies by comparing the decisions made in experimental studies

with the decisions made in actual cases by arbitrators who also were subjects of experimental studies [9]. They found that when the experimental data are compared to decisions in the sample of field cases in which wage was the only issue, the decision models are substantially the same.

A more serious limitation in this study may be a possible unfair comparison between two groups. Data from the student group were collected somewhat less rigorously than those from the professional group. Also, there is a considerable time gap between the two data collection periods, so there could be situational changes in criteria. Hence, care should be taken in generalizing from the findings of this study.

DISCUSSION

The present study examined the difference between experienced arbitrators and inexperienced arbitrators in making judgments based on a variety of criteria to determine hypothetical final-offer arbitration case. The purpose of this comparison was to enhance our understanding of the decision-making processes of arbitrators by further investigating previous findings of arbitral decision making. When we investigated decision-making patterns of the experienced arbitrators only, the results seemed to be consistent with those provided by previous studies [1, 3, 6-8, 10] in terms of individual differences and relative emphasis on comparability. This consistency with previous research provides the current article with a good basis for the comparative analysis between the two groups of arbitrators.

The results of the comparison suggest previous interpretations of decision-making behavior of arbitrators should be reconsidered. For example, when the statistical test of individual differences was performed, there appeared to be no individual differences among experienced arbitrators, based on the group as a whole. On the other hand, inexperienced arbitrators consistently showed individual differences. Moreover, when the two groups were compared, contrary to expectations, inexperienced arbitrators placed much more emphasis on the comparability standard (especially internal comparability) in arbitral decisions than their experienced counterparts.

Certainly professional arbitrators behave differently from nonarbitrators, but not as expected. Consequently, the results of this study have a number of implications. First, the parties' selection of arbitrators and the arbitrators' awards are highly involved in political processes as well as consideration of the economic interests of the parties. No individual differences as a group and smaller differences among practicing arbitrators than among student subjects are consistent with the fact that unlike other decision-making situations, arbitration is a three-party decision-making process [22]. In selecting arbitrators, the parties share a common view of what makes an arbitrator acceptable. A part of this shared view requires an arbitrator to consider the positions of both parties and demonstrate this

consideration by viewing the parties' perceptions as a constraint when making a final award.

Also, it was interesting to find that both experienced arbitrators and inexperienced arbitrators viewed external comparability standards as an important criterion in dispute resolution. However, some internal comparability criteria were not significant for experienced arbitrators while these were consistently significant for inexperienced arbitrators. As the magnitude of coefficients of comparability standards in Table 4 and slopes of the lines in Figure 1 show, inexperienced arbitrators were much more sensitive to these criteria than experienced ones. Particularly notable was the difference between the two groups in consideration of the two wage standards: wage rate in comparable police units and for firefighters. Therefore, the previous argument that wage comparisons will play an important role as a standard of equity in interest arbitration was a valid one in a sense, but we cannot say that the importance of comparability in the arbitral determination is unique only to professional arbitrators. Indeed, comparability could be a normative and practical standard to anyone, even someone with no experience in this area. Consequently, the notion of distributive justice of arbitrators' decisions seems to come from common sense in judgment, rather than from experience as arbitrators.

That experienced arbitrators were much less sensitive to the comparability criteria than inexperienced ones indicates that arbitrators may use more heuristic decision-making processes through expertise and experience, and rely less on the objective facts and logical presentations made to them. In this context, previous research appears to be limited in its contribution to understanding the arbitrators' decision-making behavior. Through their experience, arbitrators have learned to digest information and to reach opinions in unconscious ways that may determine their attitude toward the case being presented [23]. This in turn allows them to simplify information processing and leads them not to rely heavily on extreme values of any particular criterion. In conclusion, this study raises some questions about the validity of the findings of previous research in arbitral decision-making processes and, it is hoped, provides an empirical foundation for further research.

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