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# **Organizational Justice Predicts In-role and Extra-role Performance Differently for Men and Women**

Denise M Jepsen\*

*University of New South Wales, Kensington NSW 2052 Australia*

Email: [d.jepsen@unsw.edu.au](mailto:d.jepsen@unsw.edu.au)

John J Rodwell

*Macquarie University, North Ryde NSW 2109*

Email: [john.rodwell@mgsu.edu.au](mailto:john.rodwell@mgsu.edu.au)

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## **Profile of presenting author:**

Denise Jepsen is an organisational psychologist and lecturer in organisational psychology at the School of Psychology at the University of New South Wales. She received her PhD from the Macquarie Graduate School of Management on her findings from the study of social exchange model of organisational behaviour in a large public sector organisation. She continues to research and teach in areas including psychological contract, organisational justice, organisational citizenship behaviour and leader-member exchange.

## **Using Organizational Justice to Predict In-role and Extra-role Performance Works in Different Ways for Men Relative to Women**

### **ABSTRACT**

Distributive, procedural, interpersonal and informational justices were included in this study of gender differences in in-role and extra-role behavior. Distributive justice predicted performance, organizational commitment and OCB for men but only performance and job satisfaction for women. Procedural justice predicted job satisfaction for men and did not predict any outcomes for women. Informational justice predicted job satisfaction for both male and female respondents. Informational justice predicted female but not male organizational commitment and in-role performance. Interpersonal justice predicted male but not female organizational citizenship behavior. The study demonstrates important distinctions between the four organizational justice types and how men and women respond differently to those distinctions. The differences in the drivers of in-role performance between men and women may also have practical implications for managers. For example, distributive justice was a direct in-role performance driver for both genders, but informational justice provides an incremental direct effect for women.

**Keywords:** work performance, attitudes, job & work design

Organizational justice refers to employees' perceptions of the fairness of decisions on the allocation of resources or rewards. Some of the domains in which organizational justice have been applied include perceived organizational support (Rhoades and Eisenberger, 2002, Rhoades et al., 2001, Kickul et al., 2005), pay rise decisions (Folger and Konovsky, 1989), personnel selection (Truxillo et al., 2004, Dineen et al., 2004, Bell et al., 2004), employee development (McDowall and Fletcher, 2004), stress (Judge and Colquitt, 2004), team effectiveness (Sinclair, 2003), social loafing (Murphy et al., 2003), organizational citizenship behavior (Tepper and Taylor, 2003, Moorman and Byrne, 2005, Farh et al., 1990, Konovsky and Organ, 1996, Ehrhart, 2004) and turnover intentions (DeConinck and Stilwell, 2004). Reviews (for example, Cropanzano et al., 2001, Colquitt et al., 2001, Shaw et al., 2003, Cropanzano and Greenberg, 1997) and reflections (Colquitt et al., 2005) of the field have highlighted two perspectives on organizational justice. Either a generalised organizational justice conceptualisation that reflects the origins of the field (Leventhal, 1980, Lind and Tyler, 1988) or a multidimensional perspective of justice reflecting increasing levels of detail (Colquitt, 2001) may be used to investigate the organizational justice phenomena.

Where a multidimensional perspective of organizational justice is used, the three factors are well established in the literature. The first factor of distributive justice (Adams, 1963, Deutsch, 1975) refers to the evaluation of the fairness of an outcome of an allocation decision. The second organizational justice factor, procedural justice (Leventhal, 1980, Thibaut and Walker, 1975), has also been well supported in the (Fields et al., 2000, Alexander and Ruderman, 1987, Folger and Konovsky, 1989, Ehrhart, 2004, Kim and Mauborgne, 1996). Procedural justice predicted evaluations at the global or organizational level such as the judicial system (Lind and Tyler, 1988) or satisfaction with supervisor and organizational commitment (Sweeney and McFarlin, 1993), while distributive justice predicted personal evaluations such as pay satisfaction and job satisfaction (Sweeney and McFarlin, 1993). Distributive and procedural justice remained dominant even when the third justice factor, interactional justice, was introduced (Bies and Moag, 1986). Interactional justice is characterised as the perception of how management behaves towards the recipient of the allocation decision (Cohen-Charash and Spector, 2001). Interactional justice has been distinguished from procedural justice (Cropanzano et al., 2002, Skarlicki and Folger, 1997) and is generally thought to be directed at a person, usually the supervisor, rather than the organization generally (Bies and Moag, 1986, Masterson et al., 2000).

More recently and following earlier ideas (Greenberg, 1993), the three factor justice conceptualisation has been extended by the finer distinctions of interactional justice into interpersonal and informational justices (Cropanzano and Greenberg, 1997, Colquitt, 2001). Interpersonal justice refers to the extent to which employees are treated with dignity and respect by authorities (Colquitt, 2001) and informational justice refers to the extent to which employees receive adequate information regarding procedures and outcomes (Colquitt, 2001). A valid measure of the four factors has been established (Colquitt, 2001) and supported by independent studies (Kernan and Hanges, 2002, Brockner and Wiesenfeld, 1996, Roch and Shanock, 2006, Judge and Colquitt, 2004, Colquitt and Shaw, 2005). Targets of those studies have been stress (Judge and Colquitt, 2004), survivor reactions (Kernan and Hanges, 2002) and perceived organizational support, pay and leader-member exchange (Roch and Shanock, 2006).

The degree to which the four justice types are similar is the subject of much discussion (Colquitt and Shaw, 2005), with high correlations commonly found suggesting that “combination seems justified and separation seems problematic” (Colquitt et al., 2005). Possible solutions to the high correlation dilemma offered include the use of overall justice measures, justice as a latent construct, or, consistent with organizational commitment and OCB literature domains, the acceptance of high correlations between the identified justice types. Further studies would be expected to shed new light on the correlations.

Returning to the issue of the impact of the perception of organizational justice on employee performance, justice has been hypothesised and demonstrated to have an effect on employee behavior in organizations, both in the required component of an employee's job, their in-role behavior (Adams, 1965, Brockner and Wiesenfeld, 1996, Greenberg, 1987), and in the discretionary or extra-role aspects of an employee's performance at work (Organ and Moorman, 1993). Results of studies on the effect of procedural justice on in-role performance have been mixed, demonstrating both positive effects (Konovsky and Cropanzano, 1991) and negative effects (Kanfer et al., 1987). Positive behavioral effects have been found from perceptions of interactional justice (Masterson et al., 2000, Settoon et al., 1996, Wayne et al., 1997). Some of the results of studies on the effect of justice on extra-role performance have demonstrated procedural but not distributive justice has an effect on four out of five dimensions of OCB (Moorman, 1991). In a meta-analysis, OCB was predicted similarly by both procedural and distributive justice (Cohen-Charash and Spector, 2001). Notable in these studies demonstrating the effects of justice on in-role or extra-role performance is the use of either the two factor distributive-procedural model of organizational justice, or the three factor, distributive-procedural-interactional model. The development of the four factor model presents an opportunity for the further delineation and fine-tuning of analyses of the impact of organizational justice in predicting in-role or extra-role performance.

With finer distinctions on organizational justice and performance being made, it is appropriate to make finer distinctions on the characteristics of the populations under examination. Males and females have been long known to adhere differently to the equity rule of justice (Leventhal and Lane, 1970) with males protecting their own interests while females aim to maintain group welfare. Gender differences relating to perceptions of justice (for example, Kahn and Gaeddert, 1985) include differences in reactions to inequity (Brockner and Adsit, 1986) and differences in reward allocations (Major and Adams, 1983). Women, either because of their relationships perspective or out of necessity due to a history of discrimination or fewer informal networks, tend to focus more on process-oriented issues than do men, who tend to focus on outcomes (Sweeney and McFarlin, 1997). Indeed, a substantial body of research reflects women's generally lower wage expectations compared with men (Major and Adams, 1983, Major, 1987, Major et al., 1984, Crosby, 1982, Major and Konar, 1984, Cannings and Montmarquette, 1991).

Subsequently, women's work outcomes are more likely to be predicted by procedural than distributive justice, while men's work outcomes are more likely to be predicted by distributive than procedural justice. This proposition was evaluated and found convincingly in a study of more than 13,000 federal government employees (Sweeney and McFarlin, 1997). Making distinctions between distributive and procedural justice, Sweeney and McFarlin (1997) found that for men distributive justice was stronger in

predicting commitment than it was for women, while for women procedural justice was stronger in predicting commitment than it was for men. Sweeney and McFarlin (1997) call for further investigation into why there are different responses to distributive and procedural justice by men and women. A meta-analysis of the justice literature did not find gender's effect on responses to organizational justice, but proposed that the relationships between justice types and gender is complex and warrants further attention (Cohen-Charash and Spector, 2001). A possible explanation for the differential male and female responses to organizational justice may exist when finer distinctions are incorporated rather than simply the distributive-procedural dimensions of organizational justice that have been used previously.

The purpose of the current study is to use the four factor model of justice (Colquitt, 2001) to investigate the distinctions between men and women's perceptions of justice relative to job satisfaction, commitment and in-role and extra-role performance (summarised in Figure 1 below). The resulting hypothesis is:

Hypothesis 1: That the four types of justice will have different relationships with the outcome variables of job satisfaction, affective organizational commitment and performance, both in-role and extra-role, for females and males respectively.

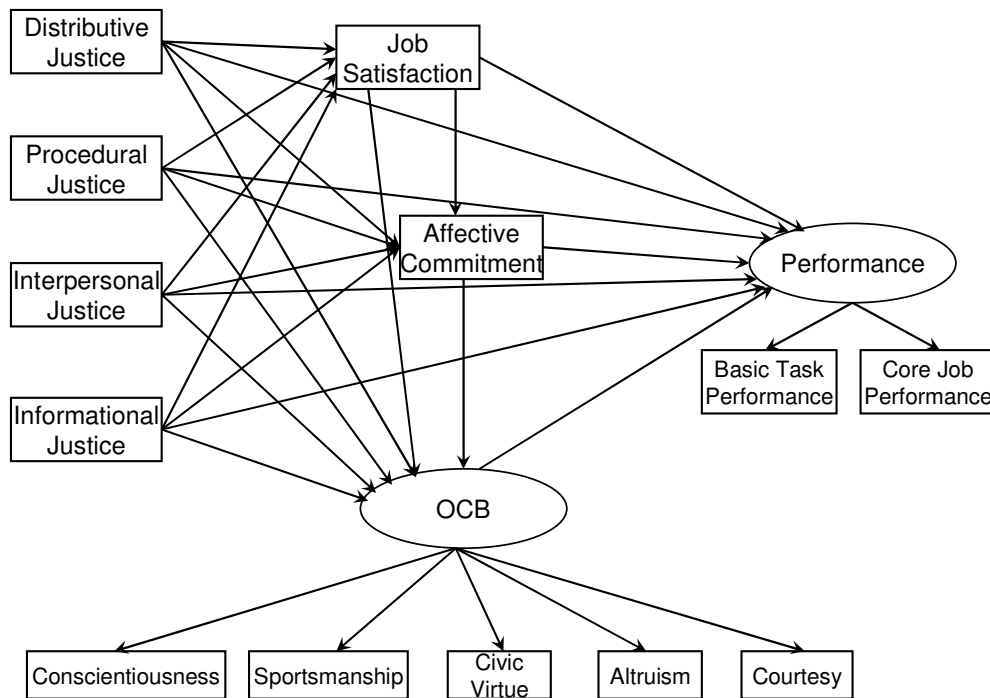


Figure 1. The Hybrid Path Analyses Investigated to Determine the Differential Impacts of Justice Type on Employee Outcomes and Behaviors.

Note: The intercorrelations between the justice scales and the outcomes' error terms have been removed for clarity from this and later model figures.

## METHOD

### Sample

Employee survey data was collected from a local government Council as part of a wider study. A variety of both skilled and unskilled occupations were employed at the council and the respondents included park rangers, engineers, professional, construction, clerical and child care workers. Employees were asked to attend one of a number of group sessions if they were interested in participating in the study. A total of 496 surveys out of 560 distributed were returned, representing an 88% response rate. The responses comprised 341 male (68.2%), 134 female (26.8%) and 21 undeclared (4.2%) responses with an average age of 42 years and average tenure of 8 years. There were 54 responses removed for missing demographic information or missing data or outliers, reducing the sample for this study to 322 males and 120 females.

### Measures

*Organizational Justice.* The four factor model of justice (Colquitt, 2001) was used. The stem of the procedural and distributive scales referred to the “fairness of the procedures used for your pay and procedures” and the stem of the interpersonal and informational scales stems referred to “your business unit manager”. An example of a procedural justice item is “Have you been able to express your views and feelings during those procedure?” and a distributive justice example is “Are your benefits appropriate for the work you have completed?” An interpersonal justice example is “Have they treated you in a polite manner?” and an example informational justice item is “Have they been candid in their communications with you?” A five point Likert scale from *Not at all* (1) to *To a great extent* (5) was used.

*Organizational Citizenship Behavior.* All 24 items from the five factor measures of organizational citizenship (Podsakoff et al., 1990) were used. An example of one of the five items in the altruism subscale is “I help others who have heavy workloads”. Five items in the conscientiousness subscale were used, including “I obey the organization’s rules and regulations even when no one is watching”. An example of one of the four items from the civic virtue subscale is “I attend meetings that are not mandatory, but considered important”. One of the five courtesy items was “I am mindful of how my behavior affects other people’s jobs” while an example of the five reverse scored sportsmanship items is “I tend to make mountains out of molehills”. A seven point Likert response scale from *Disagree strongly* (1) to *Agree strongly* (7) was used.

*In-role Behavior.* Two measures were used to assess the behaviors recognised by the organization’s formal reward system: basic task performance and core job performance. For basic task performance, five items were adapted to assess employee’s perceptions of their own overall ability, judgement, accuracy, job

knowledge and creativity. The items were based on work by early researchers looking to distinguish between task and relationship aspects of an employee's performance (Greenhaus et al., 1990). The items were found to load on a separate task factor to items relating to the relationship aspects of an employee's performance. The items were: "My ability to perform core job tasks", "My judgement when performing core job tasks", "My accuracy when performing core job tasks", "My knowledge of core job tasks" and "My creativity when performing core job tasks". To measure core job performance, six items adapted to be self report measures were used (Tsui et al., 1997). Employees indicated the degree to which their own performance on their core job requirements was higher than other employees. The items were "My quantity of work is higher than average", "The quality of my work is much higher than average", "My efficiency is much higher than average", "My work quality standards are much higher than this job's formal standards", "I strive for higher quality work than required", and "I uphold the highest professional standards". A seven point Likert scale from *Disagree strongly* (1) to *Agree strongly* (7) was used for both basic task performance and core job performance measures.

*Job Satisfaction.* The three positively-worded items from the Job Diagnostics Survey (JDS, Hackman and Oldham, 1975) were used to assess general job satisfaction. An example from this scale is "I am generally satisfied with the kind of work I do in this job". The negatively worded items were not used because they reflect intent to quit, an issue strongly linked to commitment (e.g., see Caught et al., 2000). Those items could spuriously inflate the relationship between satisfaction and commitment as well as corrupt the relationships of those variables with other variables. A seven point Likert response scale from *Disagree strongly* (1) to *Agree strongly* (7) was used.

*Organizational Commitment.* To assess affective organizational commitment, eight items (Allen and Meyer, 1990) were used. An example item is "I really feel as if this organization's problems are my own". A seven point Likert response scale from *Disagree strongly* (1) to *Agree strongly* (7) was used.

## **RESULTS**

Scale means, standard deviations, alphas and intercorrelations are presented in Table 1. All scales demonstrate acceptable internal reliabilities.

[Insert Table 1 about here]



All measures demonstrate acceptable internal reliabilities. All of the further analyses were conducted using AMOS 7.0 (Arkbuckle, 2006). The summary statistics of the models analyzed for the two gender sub-samples respectively are presented in Table 2.

Table 2. Summary Statistics for the Baseline and Parsimonious Models by Gender.

| Female                 | $\chi^2$            | df | Male                   | $\chi^2$            | df |
|------------------------|---------------------|----|------------------------|---------------------|----|
| (b) Parsimonious model | 71.22               | 57 | (b) Parsimonious model | 137.934             | 55 |
| (a) Baseline model     | 54.457              | 43 | (a) Baseline model     | 127.04              | 43 |
| Difference (b-a)       | 16.763 <sup>c</sup> | 14 | Difference (b-a)       | 10.894 <sup>d</sup> | 12 |

Note: (c) has  $p=.13$ , (d) has  $p=.27$ .

The models are compared using the process logic of sequential chi-squared tests (e.g. see Anderson & Gerbing, 1988). The parsimonious model has all of the non-significant regression weight parameters removed and has been developed following the logic of sequential chi-squared tests and tests of the various nested models (e.g. for mediation).

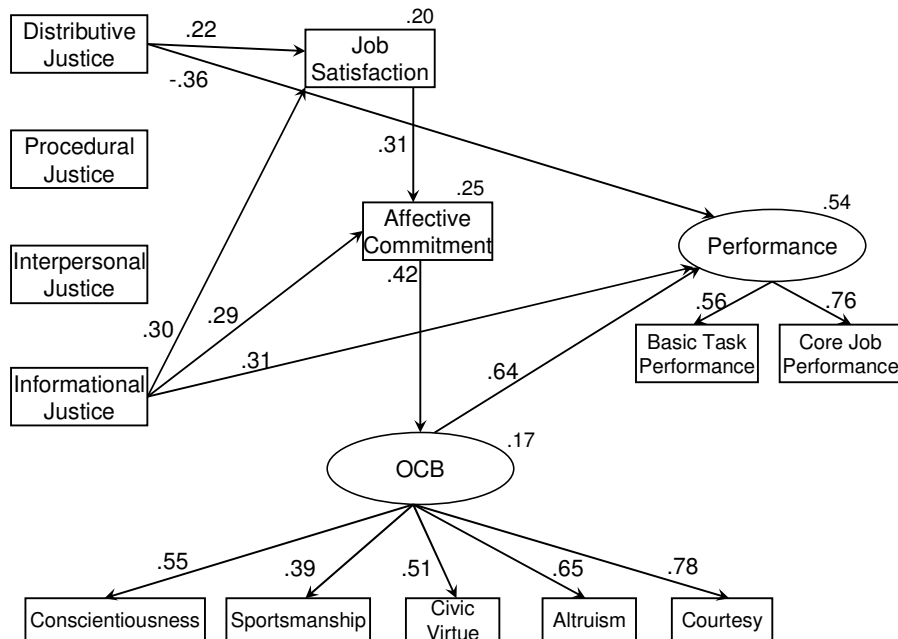


Figure 2. The resulting structural model for females.

The resultant parsimonious model for females shown in Figure 2 had Goodness-of-Fit Index (GFI) = .923, an Adjusted Goodness-of-Fit Index (AGFI) = .877, a Tucker-Lewis Index (TLI) = .959, Comparative Fit Index (CFI) = .970, and Root Mean Square Error of Approximation (RMSEA) = .046. The correlations

between scales are the same as those in Table 1. The numbers of the right hand side of the top of the outcome variables represents the proportion of variance explained of those outcomes by the model.

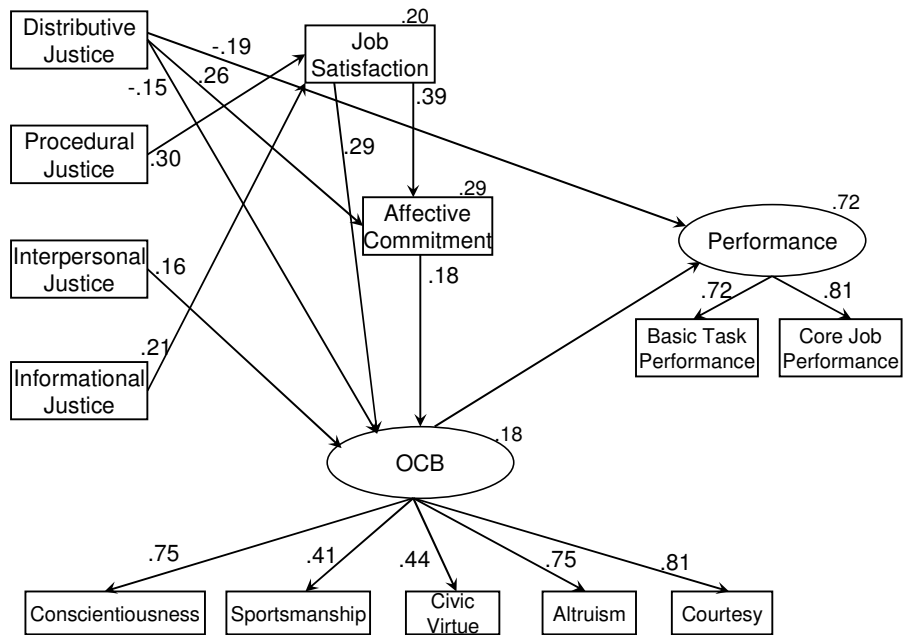


Figure 3. The resulting structural model for males.

Similarly, the resultant parsimonious model for males shown in Figure 3 had GFI=.939, AGFI=.899, NFI=.923, TLI=.932, CFI=.952, and RMSEA=.069.

## DISCUSSION

The first purpose of this study was to establish the distinctions and discriminations made by employees regarding the four types of organizational justice. Consistent with previous research (Sweeney and McFarlin, 1993, Welbourne et al., 1995), the current study found high correlations between procedural and distributive justice and interpersonal and informational justice at .75 for female and .72 for male, and .76 for female and .74 for male respondents, respectively. Beyond the pairings, however, the sex of the respondents impacted on the discrimination made between the four justice types. Males in our study often reported higher correlations between the four justice types than that found for females. The greater discrimination made by females is evident between distributive and interpersonal justices (.39 for females, .47 for males), between distributive and informational justice (.47 for females and .55 for males), between procedural and interpersonal justices (.38 for females and .57 for males) and between procedural and informational justices (.45 for females and .59 for males). We can conclude that men and women see the

four justice types, the justice types are paired similarly for men and women, but that women make slightly clearer distinctions between the individual justice types than men do.

There were significant differences between the sexes, too, beyond differences in distinguishing the different justices. A second purpose of the study was to examine how each of the four justices behaved with respect to the cognitive responses of job satisfaction and organizational commitment. A slight difference between men and women was found in predicting job satisfaction. Informational justice is a significant predictor of job satisfaction for both sexes but procedural justice adds to that prediction for men while distributive justice adds to the prediction for women. Given the high inter-correlation between distributive and procedural justice, that difference is perhaps not surprising.

The differences between males and females across the four factor justice model with respect to organizational commitment are more prominent. The only justice type that predicted organizational commitment for male respondents was distributive justice. However, for female respondents, informational justice was the only justice that directly predicted organizational commitment, although distributive justice indirectly predicted organizational commitment for females via job satisfaction. Informational justice is a significant component of the decision to commit to the organization for women but not men. Interestingly, interpersonal justice predicts neither job satisfaction nor organizational commitment for men or women.

The third purpose of the study was to examine gender differences in the impact of justice on performance. Male and female respondents differed in how the four justice types predicted performance. Both in-role and extra-role performance were predicted differently for men and women. Dealing first with extra-role performance, our results demonstrate a more complex formula to predict OCB for men than for women. The four elements of distributive justice, interpersonal justice, job satisfaction (which in turn is predicted by the other two justice types, procedural and informational), and organizational commitment all significantly and directly predict organizational citizenship behavior. Womens' OCB, on the other hand, is predicted directly only by organizational commitment. Indirectly, womens' OCB is predicted by distributive and informational justice via job satisfaction. The interesting contrast is that while men appear to make fewer distinctions between the justice types, they simultaneously take all the justice types into account when deciding their OCB contribution to the organization. This contrasts with women for whom informational justice and, via job satisfaction, distributive justice predict organizational commitment, which is the sole direct determinant of their OCB performed.

The final purpose of the study was to examine gender differences in in-role performance in response to the four different types of justice. Fewer differences are apparent in this study but two aspects are worthy of note. First, while for both male and female distributive justice directly predicts in-role performance, only for women does informational justice significantly predict in-role performance. This is the second time in this study that informational justice is a significant predictor for women but not men and implies a validation of the separation of justice into four types and that the content of the interactional exchange is a key flag for women. For both men and women, OCB predicted in-role behavior. The second noteworthy in-role performance result is the extent to which OCB predicts in-role performance differently between the male (.85) and female (.62) responses - although both weights were significant. The amount of in-role behavior that is predicted also appears to be substantially different between men (.72, or 72% of variance) and women (.53, or 53% of variance), although it is high for both genders.

Future researchers can investigate the meaning behind the lack of a relationship between procedural justice and any of the outcome variables in our model for female respondents. This result is inconsistent with prior research (Sweeney and McFarlin, 1997) demonstrating women's justice assessments are based on assessments of procedural justice rather than distributive justice.

The finer distinctions of interpersonal and informational justice in this study have been shown to increase predictions of all the employee outcomes assessed. Job satisfaction and organizational citizenship behavior are directly predicted by interpersonal and informational justices respectively for men, while job satisfaction, organizational commitment, in-role behavior and extra-role behavior all demonstrated significantly improved predicted variance by the addition of informational justice for women. These results support other calls (Colquitt, 2001, Colquitt and Shaw, 2005) for all four justice types to be included in any studies where there is the possibility that any of the justice types may impact on the outcomes.

*Limitations.* The study was cross sectional and so causality can not be directly determined. All measures are self-report and as a result the data is subject to common method variance bias. Although we consider the survey to be well designed surveys and therefore not likely to be subject to common method variance bias (Spector, 1987), the risk of bias should be kept in mind when considering the implications of the findings. In-role and extra-role behaviors were determined by the employee and not validated by other sources such as supervisor or co-workers and although appropriate for and consistent with the social exchange perspective this self-report element may be subject to self-report biases.

## **Conclusion**

The differences in the drivers of in-role performance between men and women may also have practical implications for managers. For example, distributive justice was a direct in-role performance driver for both genders, but informational justice provides an incremental direct effect for women. This finding may have several applications. For example, from a cost-effectiveness perspective an informational justice intervention may be cheaper than an improvement in perceived distributive justice. An improved strategy for communicating results of reward outcomes with employees is likely to be an achievable objective for many managers. A little more management time spent on explanations that are offered to employees in the content of the communications is likely to increase employees' perceptions of fairness. Conversely, the larger proportion of in-role performance predicted for men may indicate that the model tested in this study (shown in Figure 1) has more utility for men and that the indirect levers of performance through procedural (via satisfaction and OCB) and interpersonal (via OCB) justice may be worthwhile, with the net effect being that the drivers for males are effectively more diffuse than for females. Managers are advised to keep in mind that employees take in information in complex patterns and so a single simple message when communicating about reward allocations is not likely to address all employee concerns about fairness.

This study contributes to our understanding of organizational justice, gender differences, and employee performance by using all four types of organizational justice to identify the differences in male and female responses to both in-role and extra-role behavior. This study confirms that the nature of gender differences themselves are complex and warrant further investigation (Sweeney and McFarlin, 1997) and future research will need to bear these differences in mind.

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**Table 1 Means, standard deviations (SD), alphas and intercorrelations between manifest variables in the analyses by gender.**

| Females                    | Mean  | SD   | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13    |
|----------------------------|-------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| 1. Procedural justice      | 21.97 | 7.16 | (.92)  |        |        |        |        |        |        |        |        |        |        |        |       |
| 2. Distributive justice    | 11.51 | 4.81 | .749** | (.93)  |        |        |        |        |        |        |        |        |        |        |       |
| 3. Interpersonal justice   | 16.70 | 4.27 | .379** | .386** | (.94)  |        |        |        |        |        |        |        |        |        |       |
| 4. Informational justice   | 17.42 | 5.71 | .452** | .470** | .764** | (.94)  |        |        |        |        |        |        |        |        |       |
| 5. Conscientiousness       | 29.94 | 3.64 | .082   | .064   | .150   | .243** | (.77)  |        |        |        |        |        |        |        |       |
| 6. Sportsmanship           | 28.86 | 4.16 | -.064  | -.072  | .183*  | .099   | .286** | (.78)  |        |        |        |        |        |        |       |
| 7. Civic virtue            | 19.88 | 4.30 | .151   | .035   | .210*  | .191*  | .221*  | .104   | (.73)  |        |        |        |        |        |       |
| 8. Altruism                | 30.28 | 3.44 | -.031  | -.029  | .081   | .145   | .299** | .255** | .340** | (.87)  |        |        |        |        |       |
| 9. Courtesy                | 30.96 | 2.71 | .137   | .078   | .159   | .114   | .453** | .303** | .419** | .499** | (.81)  |        |        |        |       |
| 10. Basic task performance | 30.36 | 3.35 | .044   | -.108  | .174   | .232*  | .226*  | .243** | .234*  | .218*  | .195*  | (.87)  |        |        |       |
| 11. Core job performance   | 34.88 | 4.55 | .027   | -.114  | .144   | .174   | .409** | .209*  | .200*  | .466** | .361** | .433** | (.88)  |        |       |
| 12. Job satisfaction       | 14.78 | 3.53 | .270** | .357** | .365** | .399** | .122   | .062   | .096   | .036   | .145   | .022   | -.040  | (.74)  |       |
| 13. Affective commitment   | 32.43 | 8.30 | .286** | .349** | .375** | .412** | .155   | .161   | .354** | .266** | .337** | .068   | .145   | .429** | (.80) |
| Males                      | Mean  | SD   | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13    |
| 1. Procedural justice      | 21.61 | 7.26 | (.91)  |        |        |        |        |        |        |        |        |        |        |        |       |
| 2. Distributive justice    | 11.65 | 4.81 | .722** | (.91)  |        |        |        |        |        |        |        |        |        |        |       |
| 3. Interpersonal justice   | 15.65 | 4.30 | .570** | .473** | (.92)  |        |        |        |        |        |        |        |        |        |       |
| 4. Informational justice   | 17.20 | 5.34 | .594** | .553** | .738** | (.92)  |        |        |        |        |        |        |        |        |       |
| 5. Conscientiousness       | 28.82 | 4.52 | .156** | .083   | .169** | .123*  | (.79)  |        |        |        |        |        |        |        |       |
| 6. Sportsmanship           | 28.03 | 5.17 | .222** | .199** | .342** | .254** | .368** | (.82)  |        |        |        |        |        |        |       |
| 7. Civic virtue            | 18.47 | 4.76 | .106   | .062   | .051   | .086   | .337** | .106   | (.77)  |        |        |        |        |        |       |
| 8. Altruism                | 28.94 | 4.05 | .100   | .015   | .103   | .114*  | .500** | .359** | .326** | (.88)  |        |        |        |        |       |
| 9. Courtesy                | 29.77 | 3.78 | .191** | .077   | .200** | .136*  | .591** | .448** | .372** | .655** | (.87)  |        |        |        |       |
| 10. Basic task performance | 29.12 | 4.07 | .074   | -.061  | .108   | .002   | .453** | .314** | .196** | .455** | .497** | (.90)  |        |        |       |
| 11. Core job performance   | 33.49 | 5.25 | .022   | -.089  | .060   | .023   | .595** | .311** | .284** | .501** | .484** | .587** | (.92)  |        |       |
| 12. Job satisfaction       | 15.01 | 3.61 | .420** | .365** | .311** | .385** | .285** | .195** | .156** | .315** | .239** | .224** | .227** | (.76)  |       |
| 13. Affective commitment   | 32.53 | 8.23 | .364** | .404** | .266** | .347** | .339** | .136*  | .275** | .183** | .167** | .102   | .148** | .480** | (.76) |

Note: The Cronbach's alphas are given in brackets on the diagonal and \* = p<.05 and \*\* = p<.01.