

The effect of budgetary participation on procedural justice perception and goal commitment: evidence from Algeria

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تأثير المشاركة اعداد الموازنة على إدراك العدالة الإجرائية والالتزام بالأهداف: دليل من الجزائر

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Abstract

This paper examines the motivational role of budgetary participation. Based on prior literature, budgetary participation should enhance managers' commitment to achieving their organisational goal. Also, managers' perception of procedural justice is identified as a mediator that could possibly explain such relationship. Using survey data collected from 124 middle-level managers of industrial firms in Algeria, PLS-SEM results show that budgetary participation enhances managers' goal commitment indirectly through the mediating role of procedural justice perceptions. However, this mediation is only partial, as we find that budgetary participation still influences managers' goal commitment directly after considering the effect of procedural justice perceptions. These findings are consistent with the extant literature and can guide top management on how to design their management control systems.

Keywords: Budgetary participation; procedural justice; goal commitment

Jel Classification: M19; M49; L21

ملخص

يتناول هذا البحث الدور التحفيزي للمشاركة في اعداد الموازنة. استناداً إلى الأدبيات السابقة، ينبغي للمشاركة في اعداد الموازنة أن تعزز التزام المديرين بتحقيق هدفهم التنظيمي. كما تم تحديد إدراك المديرين للعدالة الإجرائية كوسيط بإمكانه أن يفسر هذه العلاقة. باستخدام البيانات التي تم جمعها من 124 مديراً متوسطي المستوى في الشركات الصناعية في الجزائر، تظهر نتائج PLS-SEM أن المشاركة في اعداد الموازنة تعزز التزام المديرين بأهدافهم بشكل غير مباشر من خلال الدور الوسيط لإدراكات العدالة الإجرائية. لكن، هذه الوساطة جزئية فقط، حيث نجد أن المشاركة في اعداد الموازنة لا تزال تؤثر على التزام المديرين بهدفهم بشكل مباشر بعد الأخذ في الاعتبار تأثير إدراك العدالة الإجرائية. تتوافق هذه النتائج مع الأدبيات الموجودة ويمكن أن توجه الإدارة العليا حول كيفية تصميم أنظمة مراقبة التسيير الخاصة بهم.

الكلمات المفتاحية: المشاركة في اعداد الموازنة؛ العدالة الإجرائية؛ الالتزام بالهدف

تصنيف JEL: M19؛ M49؛ L21

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I- Introduction

Building on organisational justice theory and goal-setting theory, this study aims to investigate the positive outcomes of middle-level managers' participation in the budget-setting process. Budgetary participation is assumed to have a motivational effect on managers by reinforcing their commitment to achieving the defined goals due to the intervening effect that the perception of procedural justice has on this relationship. Accordingly, a mediation model is proposed and tested using the "structural equation modelling" (SEM) approach, which is suitable for testing mediation relationships between latent constructs (see Hoyle, 2012; Hair et al., 2022).

This study is conducted on relatively new ground, as it encompasses industrial firms established in Algeria. Thus, we add to the extant literature by contributing to the sparse non-western research on the influence of budgetary participation on managerial behaviour (Her et al., 2019). Replicating previous research in a new context is insightful, as it allows us to see if previous findings hold in a new field that is characterized by its own cultural differences (see Hofstede et al., 2010), the importance of replication was highlighted by Chenhall (2003). Hence, in the current paper, we aim to replicate previous studies on the links between budgetary participation, procedural justice, and goal commitment in order to see if their findings hold in the Algerian context.

We find that that middle level managers' participation in the budgetary process enhances their commitment to achieving the defined goals. Also, this relationship is mediated by managers' perceptions of procedural justice. However, this mediation is only partial, as we find that budgetary participation still influences managers' goal commitment directly after considering the effect of procedural justice perceptions.

The remainder of this paper includes a literature review and the research hypotheses (II); a description of the research method (III); the empirical results and findings (IV); and it ends with a discussion and a conclusion (V).

II – Theory and hypotheses development

In this section, "organisational justice" and "goal-setting" theories are succinctly reviewed and the research hypotheses tested in this study are developed.

1. Organisational justice theory

Adherence to justice is one of the main quests in any social system, including organisations. Organisational justice theory is a salient theory in the literature of management with a well-constructed body of knowledge (see Cropanzano and Ambrose, 2015). This theory suggests that individuals are concerned with justice in their workplace; consequently, they form perceptions about the authority's adherence to justice and act in accordance with these perceptions. Organisational justice is composed of: distributive, procedural, and interactional justice (Colquit et al., 2012).

In its early stages, organisational justice research was pertained to distributive justice, which is based on a predefined standard such as, but not only, the "contributions to outcomes ratio of equity" of Adams (1965). Later, in 1975, procedural justice first gained focus when Thibaut and Walker (1975; 1978) introduced the notions of "process control" and "decision control" in dispute resolution procedures. According to Thibaut and Walker (1975), disputants judge procedures as fair when they have "process control" (i.e., they are allowed to present their evidence and their arguments) even if they did not have "decision control" (i.e., they did not have influence of the final verdict of the case) (Bobocel and Gosse, 2015). Folger (1977) labelled "process control" as "voice" and later Folger et al. (1979) referred to its "decision satisfaction" effect as the "fair process effect." Another important contributor to the advent of the procedural justice theme, Leventhal (1980) suggests that procedures are perceived to be fair when: (1) they are immune to bias (*bias suppression rule*); (2) they ensure that accurate information is collected and used when making

decisions (*accuracy rule*); (3) they secure mechanisms for correcting ill-founded decisions (*correctability rule*); (4) they protect the inclusiveness of different opinions of different groups affected by the decision (*representativeness rule*); (5) they are applied consistently over time and across people (consistency rule); and (6) they comply with the prevailing standards of ethics and morality (*ethicality rule*). In addition to distributive and procedural justice, interactional justice was introduced as another dimension of the organisational justice construct by Bies and Moag (1986). Interactional justice is perceived when authorities interact with individuals: (1) with politeness, dignity, and respect when implementing procedures, reflecting “interpersonal justice,” and (2) with truthfulness and symmetric communication of information and explanations among individuals when explaining the purpose of procedures; this reflects “informational justice” (Colquitt et al., 2001).

There are multiple models that explain individuals’ consideration for procedural justice. The “instrumental model” (Thibaut and Walker, 1978; Leventhal, 1980) considers procedural justice “a means to an end” by individuals who are driven by their self-interest and aim to guarantee a fair distribution of outcomes, i.e., distributive justice (Bobocel and Gosse, 2015); in this view, distributive justice is subordinated to procedural justice. Without excluding the “self-serving” approach, the “group value model” (Lind and Tyler, 1988) adds that procedural justice has a non-instrumental value and argues that procedural justice conveys to people that they are valued by the authority, which enhances their feelings of belonging and self-worth (Bobocel and Gosse, 2015). In the “fairness heuristics theory” (Lind, 2001), procedural justice perceptions have an uncertainty reduction role; it postulates that people form justice judgments mainly to assess if they can trust that the party they are engaging with will not exploit them (Bobocel and Gosse, 2015). Procedural justice can also have a more extensive role in dealing with any form of uncertainty that individuals face in their workplace, as suggested in the “management uncertainty theory” (Lind and Van den Bos, 2002; Bobocel and Gosse, 2015).

2. Budgetary participation and procedural justice perceptions

Organisational justice research is highly concerned with the mechanisms designed to foster organisational justice. In this stream of research, mechanisms that drive procedural justice include managers’ participation in the budgetary process.

Following the thesis of Thibaut and Walker (1975), Folger (1977) advanced that providing “voice” to managers means providing them with the opportunity to participate in the process in question, to express their own opinions and views, and to provide key decision input to authority figures. This is reflected in budgetary participation, which grants managers influence and involvement (Milani, 1975) in setting the budget of their area of responsibility. Hence, due to the “voice” effect, budgetary participation is likely to promote perceptions of procedural justice. Also, Langevin and Mendoza (2014b) argued that participation in goal-setting reflects many of the “fair procedure” rules of Leventhal (1980). Indeed, early research has associated participation with morals (French et al., 1960), which is consistent with the “ethicality rule.” In addition, the “accuracy rule” is reflected in managerial participation, according to Mia (1989, p. 348): “participation as a mechanism for information exchange may enable managers to obtain and process additional information about their job [...]” Also, the “voice” effect reflects the “representativeness rule” (Kessler and Leider, 2016).

Empirically, Sholihin et al. (2011) and Langevin and Mendoza (2014b) found a positive and direct effect of participation in goal-setting on procedural justice perception. Also, a positive relationship between budgetary participation and procedural justice perception is demonstrated in many studies (Wentzel, 2002; Duan et al., 2022). Accordingly, we set the following hypothesis:

H1: Budgetary participation is positively associated with procedural justice perception.

3. Managers’ goal commitment

Developed by Lock and Latham, Goal-setting theory asserts that goals have a motivational effect and can influence an individual’s actions in a positive way for the organisation. Its main

finding is that specific and difficult goals have a positive effect on the individual's performance (Lock and Latham, 2002). According to these authors, goals affect actions through four mechanisms: (01) goals have an effect on the choice of relevant actions; they direct attention and effort towards appropriate actions and away from inappropriate ones; (02) goals have an energizing function, as they lead to higher effort; (03) goals increase persistence of the effort; and (04) goals have an indirect effect as they lead individuals to the uncovering and use of task-relevant knowledge and strategies (Lock and Latham, 2002).

The positive effects that goals can have on goals and performance are highly dependent on the individual's level of goal commitment (Locke and Latham, 2002). Seijts and Latham (2011, p. 192) stated that "goal difficulty level should be more highly related to task performance among individuals with high commitment than among those with low commitment to a goal." According to these authors, commitment is the *sine qua non* of goal-setting (Seijts and Latham, 2011, p. 191).

Klein et al. (2012) provide a thorough explanation of the "commitment" experienced by individuals in their organisations. They define commitment as "a particular type of bond reflecting volitional dedication and responsibility for a target" (Klein et al., 2012, p. 130). Commitment, along with other bond types, form a continuum ranged as follows: acquiescence, instrumental bond, commitment, and identification. Also, this conceptualization is based on the assumption of the existence of multiple commitment targets; for example, managers can be committed to their organisation or committed to the goals that they are supposed to achieve (Klein et al., 2012).

4. Budgetary participation and managers' goal commitment

In management control literature, a salient antecedent of goal commitment is the managerial participation in the goal-setting process (Wentzel, 2002; Maiga, 2005; Sholihin et al., 2011; Langevin and Mendoza, 2014a). In this context, budgetary participation is supposed to strengthen managers' goal commitment. According to Maiga (2005), this effect is due to the influence that a manager will have on the goals and the information exchange that will be permitted by budgetary participation. Also, the involvement and influence dimensions of budgetary participation (Milani, 1975) lead to a better feeling of "controllability" (Bourguignon and Giraud, 2019) over the budgetary targets; this perceived control is a necessary evaluation before committing to a target (Klein et al., 2012).

According to previous research, empirical findings indicate that managers' commitment to achieving their goals is enhanced by their participation in goal-setting (Sholihin et al., 2011; Langevin and Mendoza, 2014a), and more specifically, by their participation in setting their budget (Maiga, 2005; Macinati and Rizzo, 2014; Nguyen et al., 2019). Therefore, we set the following direct relationship hypothesis:

H2: Budgetary participation is positively associated with a manager's goal commitment.

5. Procedural justice perceptions and managers' goal commitment

Individuals tend to react positively when they engage their efforts in an environment that they perceive as "just." Indeed, it was found that procedural justice has several positive outcomes, such as organisational commitment (Langevin and Mendoza, 2014b); trust (Sholihin et al., 2011; Colquitt et al., 2012); organisational citizenship behaviour (Burney et al., 2009); etc. Also, Wentzel (2002) demonstrated a direct relationship between perceived procedural justice and managers' goal commitment. This relationship can be elucidated by the "instrumental model" and the "group value model." Under the "instrumental model" and based on the premise that fair procedures will necessarily lead to a fair outcome distribution, commitment to achieving the defined goals arises from the belief that their achievement is going to be associated with achieving personal and positively valued outcomes that satisfy personal interests. Alternatively, the "group value model" argues that procedural justice perceptions allow people to form judgments about their position and relationships within their organisation, their identity, and their social worth (Lind and Tyler, 1988), and not only about their self-interest concerns. According to this model, individuals will be more inclined to engage in a long-term relationship with their organisation if they perceive that decisions

are made fairly (Lind and Tyler, 1988); goal commitment can be assumed as one facet of this long-term relationship. Following these arguments, we test the validity of the following hypothesis:

H3: Perceived procedural justice is positively associated with a manager's goal commitment.

Considering the three previous "direct effect" hypotheses, we can put forward that procedural justice perception can be modelled as an intervening variable (Birnberg et al., 2006); this suggests that it mediates the relationship between budgetary participation and managers' goal commitment. Put differently, budgetary participation has an effect on managers' motivation to achieve organisational goals mainly through the procedural justice perceptions that it induces. Therefore, we test the following mediation hypothesis:

H4: Perceived procedural justice mediates the relationship between budgetary participation and a manager's goal commitment.

III- Research method

In this section, we briefly describe the research method adopted in this study.

1. Sample and data collection

In order to test our hypotheses, a cross-sectional survey was conducted. The target of this survey were middle-level managers with "budgetary responsibility" working for industrial companies established on Algerian territory. The data of this study was collected using a questionnaire written in French, all measurement instruments used in this study were already available in French thanks to previous similar studies and no translation process was required. The overall size of the questionnaire was reduced following the feedback received during the pretest.

Using a convenience sampling approach, managers from Algerian manufacturing companies were reached online using the LinkedIn social network. A total of 748 questionnaires were sent along with a participation invitation message, this message insisted on the imperative of having a budgetary responsibility. Some respondents apologised for their inability to fill out the survey because they did not meet the requirement of having a budgetary responsibility. A total of 134 answers were received, leading to a response rate of 17.91%; among them, only 124 responses were usable. The final sample did not include any missing values. It consisted of firms from different manufacturing sectors (pharmaceutical laboratories, food & beverage, oil & gas, etc.). The bulk of the firms in the sample have a size that ranges from 300 to 999. The majority of respondents were for the most part males, including 84.06% males and 16.94% females. Also, their age was predominantly between 31 and 40 years of age. Respondents' tenure suggests that most of them have been occupying their current role for a period of 3 to 10 years.

2. Variable measurement

The variables in this study are modelled as latent constructs. Each latent construct was measured with multiple items, resulting in a total of 13 questions. Respondents rated these items on a five-point Likert scale (from "totally disagree" to "totally agree"). The anonymity and confidentiality of respondents were ensured and definitions of key concepts was provided in the questionnaire. All measurement instruments are drawn from the existing literature, Cronbach's alpha is used to indicate the internal consistency of each instrument. They are the following:

Budgetary participation (BP) was measured using the ubiquitous six-item scale of Milani (1975). The Cronbach's alpha coefficient obtained for this instrument in our study is 0.912.

Procedural justice (PJ) was measured using the four-item scale used by Langevin and Mendoza (2014b). The Cronbach's alpha coefficient obtained for this scale is 0.881.

Goal commitment (GC) was measured by the three-item scale used by Wentzel (2002). This instrument has a Cronbach's alpha of 0.918.

Table 1 provides preliminary analysis of the sample based on composite scores.

3. Statistical method description

Structural equation modelling (SEM) is used as our statistical method for testing the hypotheses of this study. There are two main approaches of structural equation modelling: the covariance-based SEM (CB-SEM) (Hoyle, 2012) and the variance-based SEM that includes the PLS-SEM method (Hair et al., 2022). The covariance-based SEM can estimate the model parameters using the Maximum Likelihood (ML) estimator, which relies on rigorous assumptions. Most importantly, it assumes multivariate normality of the observed data (Lei and Wu, 2012). Other estimators that make no distributional assumptions were developed, such as Browne's asymptotically distribution-free (ADF) estimator, which unfortunately requires unrealistically large sample sizes (Lei and Wu, 2012). PLS-SEM on the other hand makes little assumptions about the distributional behaviour of the observed variables (Hair et al., 2022). In our sample data, Anderson Darling's normality test has proven that each observed variable deviates from the normal distribution. Consequently, PLS-SEM was chosen as the statistical modelling approach for this study. Also, since PLS-SEM does not rely heavily on the normality assumption, a bootstrapping procedure is required in order to be able to estimate the standard errors of the parameter estimates (Hair et al., 2022). A parameter estimate is significantly different from 0 at the 5% α level if the bootstrap-based t-statistic is higher than the critical value of $z = 1.69$ (two-tailed) or if the value of 0 does not fall in the bootstrap-based confidence interval. The recommended number of bootstrap samples of 10,000 is used in this study (Hair et al., 2022). Also, the program used for statistical analysis in this study is the "SEMinR" package of R.

IV– Results and discussion

PLS-SEM is a two-step approach: the measurement model assessment and the structural model assessment (Hair et al., 2022).

1. Measurement model

All latent variables of this study have reflective indicators. According to Hair et al. (2022), the assessment of a reflective measurement model requires an assessment of factor loadings, internal consistency, convergent and discriminant validity.

The factor loadings of each latent variable and their associated bootstrap-based t-statistics and confidence intervals are reported in [Table 2](#). All factor loadings are significant at the 5% level and above the recommended cut-off value of 0,708, meaning that indicator reliability, measured as the square of the factor loading, is higher than 0.50 (Hair et al., 2022).

Internal consistency was investigated using Cronbach's alpha and the composite reliability coefficient (ρ_A). [Table 3](#), shows that all reliability measures exceed the cut-off value of 0.70 (Hair et al., 2022).

Convergent validity is established if the indicators of the same construct demonstrate a relatively high correlation. It requires that the Average Variance Extracted, i.e. the mean value of the squared loadings of the indicators of a construct, to be higher than 0.50 (Hair et al., 2022). AVE results reported in [Table 3](#) show that this cut-off value is exceeded and the condition is fulfilled; therefore, support is provided for convergent validity.

Discriminant validity, on the other hand, is the degree of dissimilarity that exists among distinct constructs. It is established if the indicators from different constructs demonstrate a relatively low correlation. Discriminant validity can be evaluated using the heterotrait-monotrait (HTMT) ratio of correlations (see Henseler et al. (2015) for a detailed description). Discriminant validity is considered satisfying if the HTMT ratio is less than the threshold value of 0.90 (or the more restrictive value of 0.85) (Hair et al., 2022). [Table 4](#) shows that the HTMT ratios of the three latent constructs are lower than 0.85, which supports their discriminant validity.

2. Structural model

First step in the structural model evaluation is to assessment of the levels of collinearity between the antecedent variables in the model. The variance inflation factor values (VIF values) for each antecedent variable in the model must be less than 3 (Hair et al., 2022). Indeed, this condition is met as we observe that the VIF value for both “budgetary participation” and “procedural justice perception” is 1.957, which shows that there are no collinearity concerns.

The structural model provides standardised estimates of the path coefficients that represent the hypothesised relationships. Testing for the significance of these path coefficients allows us to retain or reject the underlying hypothesis. Table 5 shows the results obtained from 10,000 bootstrap samples that will allow us to assess the significance of these path coefficients. Also, the R^2 and the f^2 effect sizes are used to assess the explanatory power of the model (Hair et al., 2022). The R^2 values of the endogenous variables in the model are 0.489 for “procedural justice perception” and 0.559 for “manager’s goal commitment”, both results indicate moderate explanatory power (Langevin and Mendoza, 2014a).

H1 states that budgetary participation is positively associated with procedural justice perception, the path coefficient from budgetary participation to procedural justice perception (BP-PJ) is positive and significant. H1 is therefore supported. An f^2 value of 0.957 indicates a very strong effect size (Hair et al., 2022), meaning that if budgetary participation is removed, there will be a 95.7% decline in the R^2 value of procedural justice perception. H2 states that budgetary participation is positively associated with a manager’s goal commitment, the budgetary participation-goal commitment path coefficient (BP-GC) is positive and significant, providing support for H2. The f^2 value of this relationship is 0.341, representing a strong effect size (Hair et al., 2022). H3 states that perceived procedural justice is positively associated with a manager’s goal commitment, the path coefficient from procedural justice perception to goal commitment (PJ-GC) is also positive and significant. This supports H3. The f^2 value of this relationship is 0.068, indicating a weak effect size (Hair et al., 2022).

A mediation test of hypothesis H4 is the final step in this study. The product of the two direct effects – BP-PJ path and PJ-GC path – is the estimate of the indirect effect, that is: $0.699 \times 0.241 = 0.168$. Results from the bootstrap model estimation (see Table 5) indicate that the indirect effect is significantly different from 0 at $\alpha = 5\%$, as its t-statistic (2.887) is higher than the critical value ($z = 1.96$), its CI [0.048, 0.282] does not include the value of 0. Hence, the mediation hypothesis H4 is supported. Furthermore, since the direct effect (BP-GC) hypothesis H2 is held, it can be concluded that this mediation is partial. Also, because all direct and indirect effects indicate a positive association, this partial mediation is complementary (Hair et al., 2022). Figure 1 gives a summary of the results.

V- Conclusion

Building on goal-setting theory and organisational justice theory, we examined in the present paper the motivational effects that budgetary participation could have on middle-level managers in Algerian settings. Adopting an intervening approach, we provided evidence on the existence of a positive relationship between budgetary participation and managers’ goal commitment and on procedural justice perception’s mediating role.

PLS-SEM results, based on 124 responses from middle-level managers of industrial firms established in Algeria, generally support the developed hypotheses. These results are consistent with previous research conducted in western settings and provide additional support to the body of knowledge of the behavioural effects of budgetary participation. The findings of this study suggest that budgetary participation enhances managers’ goal commitment. This result is consistent with previous findings (Maiga, 2005; Macinati and Rizzo, 2014; Nguyen et al., 2019). Also, budgetary participation has a positive influence on managers’ perception of procedural justice; this result is also in coherence with previous research (Wentzel, 2002; Duan et al., 2022). Moreover, procedural justice perception is positively associated with a manager’s goal commitment, similar to the results of Wentzel (2002). Finally, procedural justice perception is found to be an intervening variable as it

mediates the relationship between budgetary participation and a manager's goal commitment; however, this mediation is only partial.

This paper has important implications for both research and practice. For research, this study shows that previous findings of western research on budgetary participation also hold in the Algerian field, which reinforces the extant theoretical body of knowledge of management control. In practice, top level managers may find this study useful in grasping the importance of budgetary participation in fostering procedural justice perceptions in their organisations and in enhancing managers' goal commitment.

These empirical findings are subject to several limitations. First, the convenience sampling approach adopted in this study may not fully represent the population of interest, which can lead to biased and contestable results. Second, the survey approach that we adopted can suffer from "common method bias" because the data are obtained from the same rater (Podsakoff et al., 2003); this can induce leniency bias or social desirability errors when filling out the questionnaire. Hence, caution should be exercised in generalising these results. Finally, the mediating role of procedural justice perception was found to be only partial. This might be an indication of the complexity of the relationship between budgetary participation and managers' goal commitment; therefore, other important intervening variables could have been omitted; such as the other facets of the organisational justice construct: distributive justice and interpersonal justice. Despite these limitations, this study is still relevant as it provides interesting evidence about the motivational effects of budgetary participation in a relatively less investigated context.

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Appendices

Table 1
Descriptive statistics, Pearson correlations, and Cronbach's alpha coefficients

Variable	Mean	SD	Actual (theoretical) range	Cronbach's α	1. BP	2. PJ	3. GC
1. BP	4.03	0.88	1-5 (1-5)	0.912	1	-	-
2. PJ	3.58	0.92	1,25-5 (1-5)	0.881	0.68*	1	-
3. GC	4.30	0.86	1-5 (1-5)	0.918	0.71*	0.62*	1

* Pearson correlations are significant at $\alpha = 0,01$.

Note: BP = Budgetary Participation; PJ = Procedural Justice Perception; GC = Manager's Goal Commitment.

Table 2
Factor loading estimates, t-statistics, and confidence intervals

Latent construct	Indicator	Factor loading estimates	t-statistic	LL 95% CI	UL 95% CI
BP	BP1	0.901	38.855	0.847	0.937
	BP2	0.860	24.319	0.777	0.914
	BP3	0.842	20.293	0.742	0.903
	BP4	0.740	11.235	0.588	0.847
	BP5	0.874	29.497	0.804	0.919
	BP6	0.779	16.889	0.674	0.855
PJ	PJ1	0.834	27.445	0.767	0.886
	PJ2	0.880	34.821	0.823	0.921
	PJ3	0.904	49.757	0.862	0.934
	PJ4	0.815	19.825	0.725	0.883
GC	GC1	0.881	29.053	0.811	0.930
	GC2	0.950	64.357	0.913	0.971
	GC3	0.950	56.415	0.908	0.973

All t-statistics and confidence intervals are obtained from the bootstrapped model estimation (10,000 samples). All t-statistics are larger than the critical value of $z = 1.69$ ($\alpha = 5\%$) and all confidence intervals do not include the value of 0. All factor loadings are significantly different from 0 at $\alpha = 5\%$.

Table 3
Internal reliability estimates

Variable	Cronbach's α	ρ_A	AVE
BP	0.912	0.927	0.696
PJ	0.881	0.888	0.738
GC	0.918	0.888	0.738

Table 4
The HTMT ratios

Variables	1. BP	2. PJ	3. GC
1. BP	-	-	-
2. PJ	0.766*	-	-
3. GC	0.780*	0.696*	-

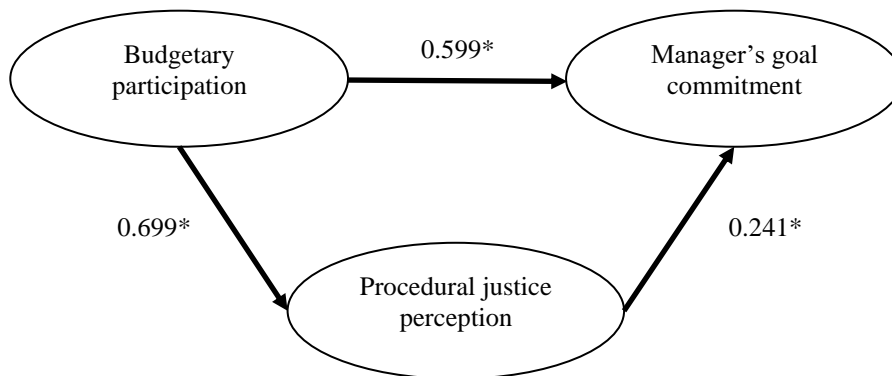
* Significantly different from 0 at $\alpha = 5\%$.

Table 5
Path coefficients, t-statistics, and confidence intervals

	Path coefficient	Bootstrap SD	t-statistic	LL 95% CI	UL 95% CI
BP – PJ	0.699	0.050	13.904	0.594	0.791
BP – GC	0.559	0.086	6.513	0.375	0.717
PJ – GC	0.241	0.083	2.886	0.066	0.399
Indirect effect	0.168	0.058	2.887	0.048	0.282

All t-statistics and confidence intervals are obtained from the bootstrapped model estimation (10,000 samples). All t-statistics are larger than the critical value of $z = 1.69$ ($\alpha = 5\%$) and all confidence intervals do not include the value of 0. All path coefficients are significantly different from 0 at $\alpha = 5\%$.

Figure 1
The structural model



The measurement model is not included.
* Significant at $\alpha = 5\%$.

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