

# Team Trust Performance Relationship Revisited: A Moderated Mediated Model Using Level and Dispersion of Different Trust Targets

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## Abstract

This study examines how trust at team level of analyses affects and is affected by the level of shared perceptions of team mates. Most research at this team-level of analysis has primarily focused on average levels of trust within teams. There is growing recognition, however, that models estimated using only average levels (mean) of trust within teams may be underspecified, including both mean and dispersion of trust within teams is critical. Therefore, in this study, we explicitly incorporate both operationalizations in examining the relationship between team trust and team performance. We also distinguish between two distinct sources where trust may manifest: trust in team members and trust in the direct manager. Specifically, we examine whether the dispersion in team trust moderates the relationship between team trust (mean) and team performance.

We investigate these research questions using data from 700 athletes playing in 74 semi-professional basket teams in a South European country. Athletes provided reports of trust with their team mates and also with their manager. Following conventions in analyzing group-level phenomenon, we constructed mean and dispersion measures of these trust constructs. Team performance was measured objectively through two ways: team winning percentage and teams' final rankings in their respective leagues. In addition, a subjective measure of team performance was assessed using peer ratings provided by teammates.

Consistent with our hypotheses, preliminary findings suggest that the within-team level of dispersion moderates the relationship between team trust and team performance. The expected contribution of this research is in providing a stronger understanding of the role of both the level of trust of the team (i.e., mean) and the extent to which within-team perceptions diverge (i.e., dispersion) in influencing team performance. A related managerial implication is that for team performance it is essential to focus on both absolute and relative levels of trust within teams.

## Introduction

The sport field offers a wide range of examples of teams that over perform in terms of dynamics and outputs, and others that despite having good professionals do not work appropriately together and are not able to achieve success [1]. Between several contextual reasons, empirical results confirm that team trust is a good predictor of future team performance [e.g., 2].

Can differences in a team's performance be explained by the trust relationships between different trust referents (i.e., coworkers, direct manager), and different levels of agreement between team members? Management literature on trust and teams deals with how teams can achieve effective performance and the role of trust for improving it [3, 4, 5]. Trust will be an integral part of teamwork when team tasks require a high level of interdependence such in interactive sport settings like basket. This mutual dependency may generate synergy in the form of cooperation and interaction amongst team members [6, 7], and subsequently may explain variations in team performance.

### **Literature review**

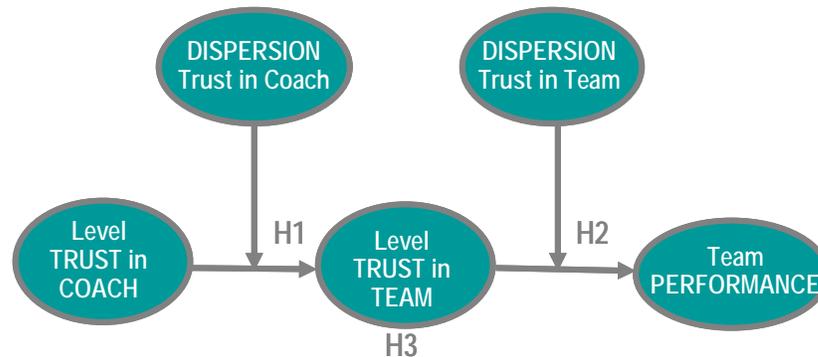
Meta-analytic results indicate that trust is positively related to many organizational outcomes (e.g., job performance and job satisfaction) [3, 8]; research at the team-level of analysis also suggests that trust is associated with positive organizational outcomes [e.g., 9]. But most research at this team-level of analysis has primarily focused on average levels of trust within teams. That is, team trust is computed by taking an average of individual perceptions of trust within the team. There is growing recognition, however, that models estimated using only average levels (mean) of trust within teams may be underspecified; including both mean and dispersion of trust within teams is essential [10, 11].

Empirical research on trust neglects the fact that trust in work settings is a multi-foci phenomenon. Social relations in social systems are characterized horizontally by peers' social interactions, and vertically by management interactions [12, 13, 14]. At the same time, previous research designs did not succeed to capture the social-contextual strengthening of the trust-performance relationship, calling for more comprehensive investigations [15]. Furthermore, there is a growing interest in the question of whether typical individual-level findings are representative of corresponding higher-level relationships [16] because group dynamics may have been diffuse with the aggregation of members' perceptions. That is why, in order to take a social-contextual view of trust-performance relationship, it would be important to include on the analyses both the strength (the mean level) and the level of agreement (distribution or dispersion) of individual perceptions [10, 17]; in doing so the likelihood of misrepresentation of unexplained variance will be reduced [18]. Along with others [19, 20], we confront the assumption that groups' inputs would be always perceived homogeneously by its members and we will considerer within-group variability among group members' ratings not as a precondition for aggregation but as a higher level variable.

This paper proposes and tests a model where team trust influences team performance, through employees' trust agreement toward their coworkers and their direct manager. We examined the impact of trust level on team performance in sport team's settings, moderated by team member's consensus. Our hypothesis is that the levels of trust dispersion between group members' agreement would play a major role in explaining criterion's variance. We want to address whether the positive but modest relationship found in individual-level meta-analyses of trust extrapolates to the team level [3, 8]. Furthermore, we will explore how levels of trust (members' average responses) might differ depending on trust foci and levels of team members' agreement (distribution of team members' responses) and how they apply to team objective performance and to subjective performance assessed by other team mates.

## Research model and Hypotheses

Figure 1: Hypothesized model and hypotheses



The main objective of this research is to highlight the importance of dispersion composition model (within-group variance) and to test whether the effect of agreement of trust (in their team mates, or in their direct manager or coach) moderates employees' level of trust (average of group members' response) on team performance. The hypothesized conceptual model posits that team's consensus about trust would moderate the indirect relation of Trust in Coach on team performance through trust in team mates.

### Sample

A summary of the sample characteristics can be seen in *Table 1*. The sample includes 709 players (belonging to 74 different clubs) playing in regular Spanish Basket leagues on the region of Catalonia (2007-2008 season); 52 teams belong to 4 male leagues (2 professional and 2 amateurs leagues) and 22 more teams to 2 female leagues (one of each, professional and amateur). The 70.27 % of teams sample are male. The average age of players is 24 (S.D. = 4.73), and the average tenure on the team is 3 seasons (S.D. = 3.4).

Table 1: Team's sample

<i>Leagues:</i>	<i>Male (4 leagues)</i>	<i>(*)</i>	<i>Female (2 leagues)</i>	<i>(*)</i>	<b>Total</b>
<b>Professionals</b>	LEBs (18 teams) EBA (16 t.)	8 12	Female League (14 teams)	6	26 teams
<b>Amateurs</b>	<i>Copa Catalunya</i> men (16) + (16 teams)	16 16	<i>Copa Catalunya</i> women (16 teams)	16	48 teams
<b>TOTALS</b>	70.27 %	52	29.73 %	22	<b>74 teams</b>

*Note:* (\*) Teams surveyed for each league (only Catalan territory).

### Research design and data collection

Research design involves a cross-sectional survey. Field work was carried out at the beginning of the second half of the tournament (February-March 2008). Players were asked to answer a survey measuring trust to two different foci (team mates, and coach) after a training session. In addition, some performance indicators and control variables were collected for each team via other independent sources (specialized sports databanks).

## Measures

*Performance:* Two measures. a) Objective Team Performance: The team’s final ranking at the end of a normal league. b) Subjective performance: (Round robin” assessment) A 4-item custom design scale Cronbach’s alpha = 0.91 and ICC(1)= .30 ; ICC(2)= .81.

*Trust:* The 9-item Trust Questionnaire developed by McAllister [21], as adapted to sports settings by Dirks [22], was used to assess “trust in team-mates” and “trust in coach”. Cronbach’s alpha were 0.84 and 0.92, respectively. ICC(1)= .21 and ICC(2)= .73 for Trust in Teammates; ICC(1)= .31 and ICC(2)= .81 for Trust in Coach. Trust level was operationalized as the mean of all team members’ responses. Trust strength (or dispersion) was operationalized as “separation” [23], the Euclidean distance among team members’ trust levels.

Constructs were appraised at individual-level and used to create descriptive team level trust means score and dispersion score variables [24]. Data was aggregated at the team level (averaging the scores for the different team members into its 74 teams). This is consistent with Rousseau’s recommendation [25] to adjust the analysis level to the focus of the unit under study: the team, in this case [see also 1]. Data was also used to calculate within-group variation or distribution of members’ responses. This is consistent with callings to use dispersion scores measure to not obscure the true group’s share perceptions [18, 23, 20].

## Data analyses and model testing

### The results of testing Hypothesis 1

Hypothesis 1 stated that *Trust in Coach Dispersion* would moderate the relationship of *Trust in Coach* with *Trust in Team mates*. Specifically, we posit that the relationship between *Trust in Coach (level)* and *Trust in Team (level)* would be stronger when agreement is high than when dispersion is high between team members. As shown in table 2, the interaction term between *Trust in Coach level* and *dispersion* (coefficient = -.54;  $p < .05$ ;  $\Delta R^2 = .04$ ) was significant in predicting the level of *Trust in Team mates*. What the significant interaction term enlightens is that the association between level and dispersion of *Trust in Coach* is significantly different between the two groups.

Table 2: Hierarchical Multiple regression for Trust in Coach

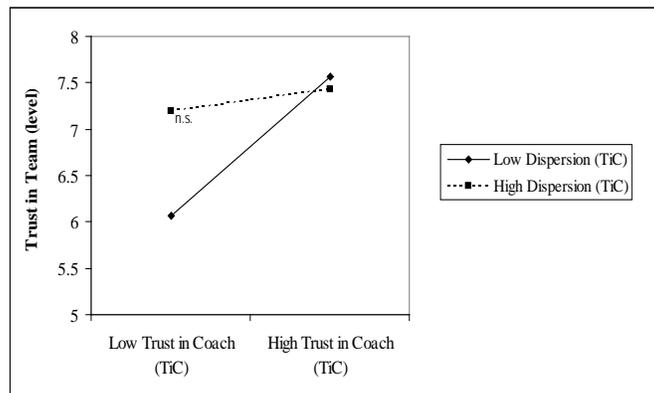
Predictors:	Trust in Team mates (level)		
	$\beta$	$R^2$	$\Delta R^2$
<b>Step 1 - Controls:</b>			
Gender	.23*		
League	-.28*	.12	
<b>Step 2 - Direct effect:</b>			
Trust in Coach level (TiC level)	.53**		
Trust in Coach dispersion (TiCdisp.)	.14	.31	.19
<b>Step 3 - Curvilinear terms:</b>			
Trust in coach (level) squared (TiC <sup>2</sup> )	.27*		
Trust in Coach (dispersion) squared (TiCd <sup>2</sup> )	-.33*	.38	.07
<b>Step 4 - Two-way interactions:</b>			
TiC level_x_TiC dispersion	-.54*	.42	.04

Legend:  $n = 74$  basketball teams; \*  $p < .05$  ; \*\*  $p < .01$

The form of the interaction between level and strength of *Trust in Coach* in predicting *Trust in Team mates* is depicted in Figure 2. We first plotted the regression lines at one standard deviation above and below the mean value of *Trust in Coach* (*dispersion*). When group's consensus about *Trust in Coach* is relatively high (*low dispersion*), the slope of the relationship between levels of *Trust in Coach* with *Trust in Team* was visibly / noticeable positive. Whereas, the slope of the relationship between levels of *Trust in Coach*, and *Trust in Team mates* was relatively flat, when consensus about *Trust in Coach* is low (high dispersion). Furthermore, this latter result did not reach a significant level.

Thus, among teams with low dispersion (high agreement) in *Trust in Coach*, increases in levels of *Trust in Coach* are associated with increases in *Trust in Team mates* (level). While, when teams have high dispersion about their perceptions of *Trust in Coach*, no relationship between *Trust in Coach* and *Trust in Team mates* had been observed. Corroborating, thus, hypothesis 1.

Figure 2: Regression of *Trust in Coach* on *Trust in Team* when *Trust in Coach Dispersion* is high versus low between team members' perceptions.



## The results of testing Hypothesis 2

Hypothesis 2 state that high consensus in group members' perceptions of *Trust in team mates* would moderate the relationship between *Trust in Team (level)* with *Performance*, such that when consensus is high, the relationship between *Trust in Team mates* and *Performance* will be positive and when consensus is low, this relationship will be weakened. As shown in Table 3 the cross-product between *Trust in Team (level)* per *Trust in team (dispersion)* was related to *Performance* (coefficient = -.16 ;  $p < .05$ ;  $\Delta R^2 = .03$  ).

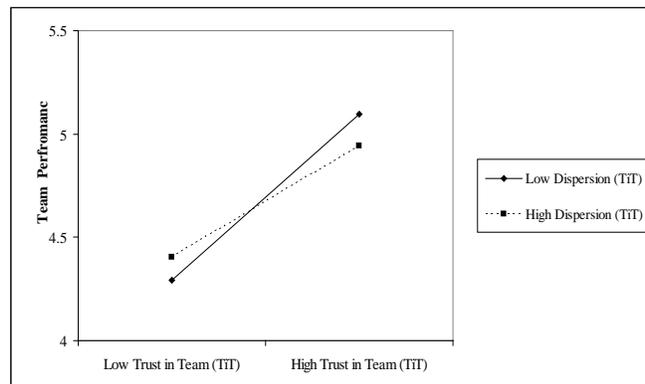
Table 3 - Hierarchical multiple regression for Trust in Team

<i>Variables</i>	<b>Performance</b>	
	<b>Model 1</b>	<b>Model 2</b>
<i>Direct effect:</i>		
Trust in Team level (TiT)	.75***	.79***
Trust in Team dispersion (TiTd)	-.001	-.031
$R^2$		.55
<i>Curvilinear terms:</i>		
Trust in Team level squared (TiT <sup>2</sup> )		
Trust in Team dispersion squared (TiTd <sup>2</sup> )	$\Delta R^2$	
<i>Two way interactions:</i>		
TiT level_x TiT dispersion		-.162*
$\Delta R^2$		.02

Note:  $n = 74$  basketball teams; \*  $p < .05$  ; \*\*  $p < .01$

Figure 3 illustrates the form of this interaction with high consensus corresponding to one standard deviation below the mean and low consensus above the mean. Consistent with expectations, the slope of the relationship between *Trust in Team (level)* and *Performance* was relatively strong and positive for teams with high consensus (lower dispersion), whereas the slope was moderate for teams with low consensus. Accordingly, *Performance* was high when a team's member perception of their *Trust in Team mates* is aligned and the mean level is high; whereas team *Performance* is low when the *Trust in Team mates* is dispersed (no consensus) and the mean level is low.

Figure 3: Regression of Trust in Team on Team performance when Trust in Team mates dispersion is high versus low between team members' perceptions.

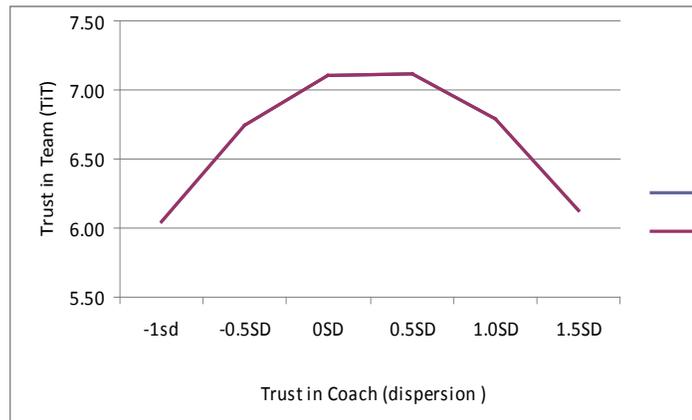


*Non linear effects for Trust in Coach Dispersion.* Following conventions of good research practices [e.g. 26], we checked the possibility of statistical dependence (through the curvilinear terms). When an interaction between the mean level and dispersion of a group-level construct is of interest, the possibility of non-linear relationships must be considered by examining higher order terms.

Thus, because we have ruled out the presence of a curvilinear effect, we are more confident in the veracity of the two-way interaction between *Trust in Coach level* and *dispersion* in predicting the *Trust in team mates(level)* (see table 3 above).

Figure 4 illustrates the form of this non linear effect. This relationship is positive when dispersion is high and negative when dispersion is low. *Trust in Team level* is low when variability or dispersion is high; whereas *Trust in Team* is high when consensus exists between members on Trust in Coach. In other words, the slope of effect of *Trust in Coach (dispersion)* on *Trust in Team (level)* changes signs as *Trust in Coach (dispersion)* increases. Put simple, increases in levels of *Trust in Coach (dispersion)* initially produce increases in Trust in Team mates level, but subsequent increases in *Trust in Coach (dispersion)* produces a decline in levels of *Trust in Team mates*.

Figure 4: Non linear relationships (curvilinear effects)



As had been shown in *table 4* dispersion cross-product was significantly related to Team trust ( $\beta = -.54$ ;  $p < .05$ ,  $\Delta R^2 = .04$ ) when the curvilinear terms of *Trust in Coach* (level & strength) were included in the regression model [26]. This two way interaction was, in fact, a spurious by-product of a curvilinear effect associated with cross-product component term [26].

Results in *table 3*, do not reach statistical significance when adding squared term. The hypothesized two-way interaction may be spurious. The relation between *Trust in Team level & Performance* will be positive and linear. While the relation between *Trust in Coach* with *Trust in Team mates* will be positive and non linear (curvilinear): Had we not accounted for the possibility of statistical dependence (through the curvilinear terms), we would have misinterpreted the two way interaction between *Trust in Team consensus & Performance*.

### The results of testing Hypothesis 3- Testing for Mediation.

Hypothesis 3 states that *Trust in team (level)* mediates the relationship between *Trust in Coach (level)* and *Performance*. To test mediation we used SEM techniques and we applied LeBreton, et al. [27] heuristic model and revised test of mediations because it offers flexibility and account for recent criticisms. This model is based on the definition of mediation offered by James, et al. [28] and minimizes the risk of Type I errors [29]. We tested for the fit of the mediation path in the hypothesized model and we can confirm mediation for both performance.

Our analysis shows full mediation for *objective performance* and partial mediation for *peer rated performance* [27]. When testing the fit of the overall model (X-M-Y) and paths with the mediator (X-M and M-Y), results for *objective team performance* show that all paths are significant ( $\beta_{MX} = .45$ ,  $p < .01$ ; and  $\beta_{YM} = .35$ ,  $p < .05$ ) and a good overall fit ( $\chi^2 = .343$ ; (1df);  $p = .558$ ; CFI= 1.000; GFI= .997; RMSEA=.000) and significant Sobel test ( $z = 1.99$ ,  $p = .047$ ); When we test for *Peer rated performance* as a criteria, results also show that all paths are significant ( $\beta_{MX} = .45$ ,  $p < .01$ ; and  $\beta_{YM} = .75$ ,  $p < .01$ ) and a good overall fit ( $\chi^2 = .321$ ; (1df);  $p = .571$ ; CFI= 1.000; GFI= .997; RMSEA=.000) and Sobel test ( $z = 4.21$ ,  $p < .000$ ); Thus, corroborating in both cases *trust in team* as a significant mediator for the influence of *Trust in Coach* on *performance*. Accordingly hypothesis 3 is supported.

To test mediation, we also used *Bootstrapping* approach, a non parametric resampling procedure that does not assume normality of the sampling distribution; it entails repeatedly sampling from the data set and estimating the indirect effect in each resampled data set [30, 31].

To bootstrap the indirect effects of *Trust in Coach* and *Trust in Team mates*, we used the SPSS macro of Preacher and Hayes [31] with 10,000 bootstrap resample. Results indicate that *Trust in team mates* plays a mediator role ( $Z= 2.53$ ;  $p = .01$ ). Furthermore its 95% CI does not contain zero.

### Further analyses: Testing for Mediated moderation.

Our next goal was to test our mediated moderation model. Mediated moderation occurs when two predictor variables interactively affect a mediator, which in turn influences an outcome variable [32].

Table 4: Results of Moderated-mediation model of *Trust in coach (dispersion)* and *Trust in team (dispersion)* with *Objective performance* as a dependent.

	Trust in Coach (disp.)*	Trust in Team (disp.)*	Ind Eff	Bootstrapping						
				Product of coefficients			BC 95% CI		BCa 95% CI	
			SE	Z	p	Lower	Upper	Lower	Upper	
	.7347	.5772	4.9556	2.6360	1.8800	.0601	.3810	15.1324	.4229	15.3373
	.2581	.2681	4.7499	3.1321	1.5165	.1294	-.1832	14.7991	-.0606	15.3166
	.2581	.5772	5.7099	2.7710	2.0606	.0393	.6721	15.3430	.9790	17.0375
	.7347	.2681	4.1224	2.8854	1.4287	.1531	-.4852	13.9907	-.5149	13.9128

Legend : BC = Bias Corrected for Confidence Intervals; BCa = Bias Corrected and Accelerated Confidence Intervals. 10.000 bootstrap samples. Note: \* higher scores represent greater dispersion and zero would imply that all team member responses were identical. Only reported  $1 \pm SD$ .

Results seems reinforce that is more important the agreement about *Trust in Coach* than *Trust in Team mates* (the only significant conditional indirect effect at specific values of moderator when *Trust in Coach* is low dispersed and *Trust in Team mates* is high dispersed).

## Discussion and Conclusion

This study has tested the moderated mediation relationship between two foci of Trust and team Performance. Our findings confirm that these relationships work in a complex manner; the dynamic relationship within the teams, represented as *Trust in other team mates*, mediates the relationship between the shared perceptions of *Trust in direct manager* (in the main coach) in combination with the team's overall *Performance*. Findings corroborate the multiple targets of the trust construct in organizations, and that high levels of team trust are related to team performance when there is a shared vision (agreement) between team mates.

Consistent with previous findings [14, 17, 33], our results corroborate: First, the average *Trust level* and *Trust consensus* have an interactive effect on joint outcomes (e.g., *Trust in Team mates* increases when consensus exists between team members on *Trust in Coach*). Second, low *Trust in team mates (consensus)* weakens the positive effect of *trust (level)* on team *Performance*. Third, *Trust in teammates* mediates the relationship between *Trust in Coach* and team *Performance*.

In studying basketball team performance, Dirks [22] found that *Trust in leadership* was a critical factor of team success. The present study reinforces that finding that leaders are central in teams and that their trust level affects team trust and furthers the consensus between teammates, reinforcing this positive relationship.

Finally, few researches simultaneously studied trust within teams including both mean and dispersion, although growing acknowledgment that models using only additive aggregation scores may be underspecified if both are not included [e.g. 10, 11, 17, 26]. Our research also answers calls to incorporate the social context into studies of organizational phenomena [15, 16]. Present results advance understanding of team trust and performance by explaining how their relationship differs across dispersion levels of consensus and different trust foci.

### **Limitations.**

We only gathered data from 709 players on 74 different teams resulting in a relatively small sample. Despite participation by 95% of the target population in these interactive and semi-professional teams and within this specific context (sport basket teams), examining this phenomenon among a larger sample would be ideal. Further research will serve to corroborate the consistency of these findings.

It is also important to note that the use of sports teams as a target group in this study implies some limitations in terms of external validity. Generalizing these findings to other sectors should be done with caution.

### **References**

- Katz, N. (2001). Sports teams as a model for workplace teams: Lessons and liabilities. *Academy of Management Executive*, Vol. 15, pp: 56-69.
- Dirks, K.T. (1999). The effects of interpersonal trust on work group performance. *Journal of Applied Psychology*, Vol. 84, pp: 445-455.
- Dirks, K.T., & Ferrin, D.L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, Vol. 87, pp: 611-628.
- Lewicki, R. J., McAllister, D. J., & Bies, R. J. (1998). Trust and distrust: New relationships and realities. *Academy of Management Review*, Vol. 23, pp: 438-458.
- Tzafrir, S. (2005). The relationship between trust, HRM practices and firm performance. *International Journal of Human Resource Management*, Vol. 16, pp: 1600–1622.
- De Vries, M. F. R. (1999). High-performance teams: Lessons from the pygmies. *Organizational Dynamics*, Vol. 27, pp: 66-77.
- Fiore, S. M., Salas, E., & Cannon-Bowers, J. A. (2001). Group dynamics and shared mental model development. In M. London (Ed.), *How people evaluate others in organizations*, (pp: 309-336). Mahwah, NJ: Lawrence Erlbaum Associates.
- Dirks, K.T., & Ferrin, D.L. (2001). The role of trust in organizational settings. *Organization Science*, Vol. 12, pp: 450-467.
- Hempel, P. S., Zhang, Z., & Tjosvold, D. (2009). Conflict management between and within teams for trusting relationships & performance in China. *Journal of Organizational Behavior*, Vol. 30, Issue: 1, pp: 41-65.

- Dineen, B.R., Noe, R.A., Shaw, J.D., Duffy, M.K., & Wiethoff, C. (2007). Level and dispersion of satisfaction in teams: Using foci and social context to explain the satisfaction-absenteeism relationship. *Academy of Management Journal*, Vol. 50, Issue: 3, pp: 623–643.
- Kirkman, B.L., & Shapiro, D.L. (2005). The Impact of cultural value diversity on multicultural team performance, in T. Devinney, T. Pedersen, & L. Tihanyi, (Eds.), *Managing multinational teams: Global perspectives (Advances in International Management, Vol. 18)*, (pp: 33-67). Emerald Group Publishing Limited.
- Lane, C. (1998). Introduction: Theories and issues in the study of trust. In C. Lane, & R. Bachmann, (Eds.), *Trust within and between organizations. Conceptual issues and empirical applications*, (pp: 1-30). Oxford: Oxford University Press.
- Gillespie, N., & Dietz, G. (2005). Trust repair after an organization-level failure. *Paper presented at EIASM (European Institute for Advanced Studies in Management)*, Amsterdam.
- Mach, M., Dolan, S., & Tzafrir, S. (2010). The differential effect of team members' trust on team performance: The mediation role of team cohesion. *Journal of Occupational and Organizational Psychology*, Vol. 83, Issue: 3, pp: 771-794.
- Johns, G. (2006). The essential impact of context on organizational behavior. *Academy of Management Review*, Vol. 31, pp: 386-408.
- Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations. In Klein, K. J. & Kozlowski, S. W. J. (Eds.), *Multilevel theory, research, and methods in organizations* (pp: 3-90). San Francisco: Jossey-Bass.
- De Jong, B.A., & Dirks, K.T. (2011). Beyond shared perceptions of trust and monitoring in teams: Implications of asymmetry and dissensus. *Journal of Applied Psychology*, Article in press.
- Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, Vol. 83, 234-246.
- Mathieu, J.E., Maynard, M.T., Rapp, T., & Gilson, L. (2008). Team effectiveness 1997-2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, Vol. 34, pp: 410-476.
- Lindell, M. K., & Brandt, C. J. (2000). Climate quality and climate consensus as mediators of the relationship between organizational antecedents and outcomes. *Journal of Applied Psychology*, Vol. 85, pp: 331-348.
- McAllister, D. J. (1995). Affect and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, Vol. 38, pp: 24-59.
- Dirks, K. T. (2000). Trust in leadership and team performance: evidence from NCAA basketball. *Journal of Applied Psychology*, Vol. 85, pp: 1004-1012.
- Harrison D.A., & Klein K.J. (2007). What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, Vol. 32, pp: 1199–1228.
- Chen, G., Mathieu, J.E., & Blise, P.D. (2004). A framework for conducting multi-level construct validation. *Research in Multi-Level Issues*, Vol. 3, pp: 273-303.

- Rousseau, D. (1985). Issues of level in organizational research: Multilevel and cross-level perspectives. In L.L. Cummings & B.M. Staw (Eds.), *Research in Organizational Behavior* (Vol. 7, pp: 1-37). Greenwich, CT: JAI Press.
- Cole, M.S., Bedeian, A.G. & Bruch H. (2011). Linking leader behaviour and leadership consensus to team performance. Integrating direct consensus and dispersion models of group composition. *The Leadership Quarterly*, Vol. 22, pp: 383-398.
- LeBreton, J.M., Wu, J., & Bing, M. (2009). The truth(s) on testing mediation in the social and organizational sciences. In C.E. Lance, & R.J. Vandenberg, (Eds.) *Statistical and methodological myths and urban legends* (pp: 107 -141). New York, NY: Routledge.
- James, L.R., Demaree, R.G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology*, Vol. 69, pp: 85-98.
- Taylor, A.B, Mackinnon, D.P., & Tein, J.Y. (2008). Tests of the three-path mediated effect. *Organizational Research Methods*, Vol. 11, pp: 241-269.
- Preacher, K.J., & Hayes, A.F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers*, Vol. 36, pp: 717–731.
- Preacher, K.J. & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing & comparing indirect effects in multiple mediator models. *Behavioral Research Methods*, Vol. 40, pp: 879-891.
- Morgan-Lopez, A.A., & Mckinnon, D.P (2006). Demonstration and evaluation of a method for assessing mediated moderation. *Behaviour Research methods*, Vol. 38, Issue: 1, pp: 77-87.
- Tomlinson, E.C., & Mayer, R.C. (2009). The role of casual attribution dimensions of trust repair. *Academy of Management Review*, Vol. 34, Issue: 1, pp: 85-104.

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