WHY UNFAIR BUSINESS IS BAD FOR BUSINESS

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Unfair business practices appear to have become institutionalised in the construction sector, persisting for many decades despite the repeated criticisms of numerous government reports, researchers and commentators. It is argued that this intransigent culture is in part a result of no theoretical or empirical evidence to link unfair business practices with project performance. To address this problem, theories of organisational justice are used to examine how each dimension of fairness affects the behaviour of project stakeholders and to explore how this translates to overall project performance. A survey of 135 construction project participants from across the supply chain in the Australian construction industry reveals that there are three main types of unfairness in construction business relationships that are related to project performance: distributive and procedural fairness; interpersonal fairness; and informational fairness. It is significant that these categories diverge from mainstream organisational justice theory, suggesting that it needs adapting for a construction context. Based on this new evidence and refinement of mainstream justice theory, it is concluded that project managers should develop strategies to improve these three types of fairness on their projects if they wish to drive better project performance.

Keywords: business, fairness, justice, project performance.

INTRODUCTION

There is ample evidence to suggest that unfair business practices have become institutionalised in the construction industry. As far back as the 1960's reports such as Emmerson (1962) criticized the UK construction industry for its confrontational procurement practices and unfair payment procedures. In the 1980's NEDO (1983) re-exposed the same problems and in the 1990s they emerged again in Latham (1994) and Egan (1998). More recently, Wolstenholme (2009) found that despite a decade of intense analysis, debate and pressure for change in the construction industry, reform had only been 'skin-deep' and traditional confrontational ways of working were as strong as it was decades before. Similar reports in other countries which draw on the UK system have mirrored these findings. For example, in Australia, The Gyles and Cole Royal Commissions into the Building and Construction Industry (RCBCI 1992, 2003) exposed numerous examples of low integrity and probity, corruption, sham contracting, bullying and intimidation in the industry. While a few studies have addressed the issue of intra-organisational fairness (Raidén and Sempik 2013), there is a dearth of research into the fairness of inter-firm relations. The few exceptions include Kadefors' (2005) study of justice on two Swedish projects and Aibinu *et al.*'s (2011) investigation of the effect of fairness on the behaviour of Singapore contractors. While useful in using the theoretical concept of justice to understand the

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construction sector, no researchers have yet explored how this may affect project performance. To this end, the aim of this research is to examine this relationship.

LINKING FAIRNESS WITH PROJECT PERFORMANCE

The link between the concepts of fairness and justice are well-established in the social sciences where four dimensions of organisational justice have been identified: (1) procedural; (2) distributive; (3) informational; and (4) interpersonal justice. Distributive fairness is the perceived fairness about the allocation of an outcome based on the inputs given (Tyler 2000). In a construction project context, we define distributive justice as the perceived fairness of contractual compensation based on the risks allocated. Procedural fairness is concerned with the perceived fairness of the policies, processes and procedures through which decision are made (Thibaut and Walker 1975). In a construction project context, procedural fairness can be defined as the 'processes' by which rewards, risks and opportunities are determined, and how disputes have been resolved around those issues. Interpersonal fairness relates to perceptions of being treated with dignity, politeness and respect and whether people feel valued (Tyler and Bies 1990). In a construction project context interpersonal fairness can be defined by how well project participants feel treated in terms of safety and human rights, politeness, dignity and respect; freedom of expression and association and; whether their opinions were valued. Informational fairness is related to the adequacy and quality of informational exchange among people and is built on the rules of truthfulness and justification (Luo 2007). In a construction project context, informational fairness is defined as the quality of information exchange during the enactment of decisions in construction projects and whether communications were open and transparent.

Perceived unfairness is a consequence of perceived injustice and over the last decade a considerable amount of research has documented how people in organisations respond to these transgressions. Cropanzano et al (2001) demonstrated a link between perceptions of unfairness and various worker responses, conceptualising it as a 'social reciprocation' where people tend to repay the actions of others with corresponding actions of their own. More recent research by Choi and Rainey (2013) show that these reciprocations are correlated with many cognitive, affective and behavioural reactions which in turn have been shown to affect organisational outcomes. These include: job satisfaction; work quality; productivity (work slower, do the minimum); safety (take short-cuts, ignore safety instructions, lower compliance); communications (reduced communications, ignoring instructions etc.); teamwork (damaged interpersonal relations, don't collaborate, don't communicate, don't participate); conflict (get your own back, fight back); disharmony (lack of trust in management) and; morale The relationship between different types of perceived justice and organisational outcomes is quite complex. For example, Cohen-Charash and Spector (2001) showed that work performance is strongly related to procedural justice but only marginally to distributive and interactional justice.

In explaining this, they postulated that when rewards are distributed unfairly, people examine the process and procedure to see if it was fair before making a decision about how to respond. Cohen-Charash and Spector (2001) also found that procedural and distributive justice are related to organisational citizenship behaviour such as conscientiousness, altruism, commitment, engagement, loyalty, willingness to go the extra mile, willingness to give discretionary effort and intention to quit. They also found that all types of justice are related to job satisfaction and levels of trust but that

organisational commitment and counterproductive behaviours such as withdrawal, reduced effort, aggression/anger, theft, sabotage, selfishness and retribution were was more strongly related to procedural justice than to distributive and interactional justice. Simons and Robertson (2003) show how it is not only individual perceptions of justice that influence organisational outcomes but aggregated group perceptions. They found that if more than one person feels aggrieved then effects on organisational outcomes can be magnified by as much as 10%. Collet (2008) found that perceptions of procedural justice influence a whole range of attitudinal emotions which include feelings of being respected, loyalty and identification with companies, levels of trust in a company and commitment, engagement and cooperation. Other attitudinal (affective) reactions associated with perceptions of justice have been found to include: job dis-satisfaction; de-motivation; increased suspicion; reduced respect for others; reduced self-esteem/respect and; stress and hostility. Finally, Suliman (2007) shows how distributive justice can influence levels of efficiency and productivity and disputes, and Dayan and Benedetto (2007) found that interactional justice affects teamwork which in turn affects a person's willingness to contribute to an organisation.

METHOD

Using the theories of organisational justice outlined above an anonymous on-line self-report survey was undertaken to investigate the constituents of and dimensions of fairness in construction and examine how each dimension of fairness affects the behaviour of project stakeholders and how this translates to overall project performance. The population for the survey was the entire construction supply chain in Australia and New Zealand and the sample frame was provided by our industry partner (BCI http://www.bciaustralia.com/) who distributed the survey, using random sampling to targeted senior managers in their extensive data base of companies from across the construction supply chain. An online survey was used because it afforded anonymity to our respondents, because of the potential sensitivity of the data collected (fairness), because our respondents were senior managers who work extensively on line and because of the geographically distributed nature of the sample frame from across Australia and New Zealand.

The survey comprised three sections, where respondents were firstly requested to provide general information about their current job title, company's annual turnover, and the type of construction work they had worked on last project and its value. They were also asked to rate 51 statements reflecting their perceptions of fairness, their behaviour (organisational citizenship and positive and negative affectivity) and experience on their last project and to rate its overall performance, based on a seven-point Likert Scale '1 (strongly disagree/ very low) to 7 (strongly agree/ very high)'. According to Dawes (2007), a seven-point scale has a higher scale reliability and validity than those with fewer scale points, while more finely graded scales (for example, 9-point and 10-point scales) do not improve reliability and validity further. In this study, the analytical procedures proposed by Lim *et al.* (2011) and (2012) were adopted.

Exploratory factor analysis was firstly conducted towards exploring the pattern of relationships between measurements and their corresponding constructs and thus assesses the dimensionality of blocks of measurements within their corresponding constructs. Therefore the composition of the individual constructs were confirmed by the confirmatory factor analysis on the basis of the t-statistics generated for the individual measurements. We focussed on the respondent's last project to minimise

recall error and although we recognise that this may have been a good or bad project, this approach enabled random sampling of projects by avoiding them self-selecting projects that were good or bad for any particular reason. Generally, there is a tendency for people to recall bad experiences more easily than good experiences (negativity bias), so our results would have been negatively biased if we had allowed self-selection. See Table 1 for how these dimensions were operationalised in the survey by combining various measures from the literature. In the last section, respondents were also given an opportunity to share any examples of unfair treatment that their company had encountered on past projects. The questionnaire was pilot tested and refined before an industry-wide survey was conducted from a targeted stratified sample of architects, contractors, consultants, subcontractors and suppliers.

135 valid responses were collected. Sixty-seven (50%) of the 135 respondents were senior management (owner, CEO, directors), 49 (35%) were middle management (e.g. general managers, state managers and senior project managers) and the rest were from operational level (e.g. estimators, surveyors and contract administrators). Also, the majority of the respondents' companies (approx. 70%) had an annual turnover ranging from $1-50 million, and the rest with a turnover of more than $50 million. Most of our respondents were engaged as subcontractors (approx. 41%) and trade consultants (approx. 25%) in their last project, and the rest were main contractors (23%), suppliers (22%) and developers (3%). It is notable that no Architects responded.

DATA ANALYSIS

A successive 'classical-then-contemporary' validation approach was adopted in this study whereby all measurement items must successfully satisfy the criteria set for the classical validation process before going into the contemporary validation process. The former process involved the Cronbach's alpha test and exploratory factor analysis (EFA), while the latter comprised the confirmatory factor analysis (CFA) and square-rooted AVE score test. Of these, the CFA is considered as the first stage of the PLS-SEM modelling approach. The main purposes of conducting EFA followed by CFA was that the EFA could first help examining the relationships between the measurement items and their respective constructs (summarised in Table 1), and establishing the dimensionality of individual constructs.

Valid measurement items were then used for the CFA, to further validate the uni-dimensionality of respective constructs with inferential statistics. Partial Least Square (PLS)-Structural Equation Modelling (SEM) approach was chosen in this study for modelling the relationships among fairness dimensions, employee affectivity, organisational citizenship and project performance. The justifications for using the PLS-SEM approach over the covariance-based SEM approach are: (1) it is more oriented towards predictive application and best used for the exploratory nature of this study (Joreskog and Wold 1982); (2) it can analyse a more complex model than the latter, without requiring a large sample size (30 -100 datasets) and rigorous restrictions on data distribution (Fornell and Bookstein 1982); and (3) it tends to estimate constructs as linear combinations of observed variables using weight relations, thus avoiding the indeterminacy and providing an exact definition of constructs' scores (Chin 1998).

Also, in this study, several guidelines were adopted to endorse the item reliability and construct validity: (1) factor loading must be at least 0.55 (Comrey 1973) and significant at $p < 0.05$ (Anderson and Gerbing 1988); (2) Cronbach's alpha coefficient

must be at least 0.70 (Nunnally 1978); (3) composite reliability score must be at least 0.70 (Hair *et al.* 1998); and (4) average variance extracted (AVE) value must be at least 0.50 and the square-rooted AVE scores of respective pair of constructs must be greater than their correlation coefficients (Fornell and Larker 1981).

DISCUSSION OF RESULTS

The results are shown in Table 1 and show that all measurement items of respective constructs are reliable and valid, characterized by: their significant factor loadings (ranging from 0.71 to 0.950 at $p < 0.05$); their composite reliability scores of greater than 0.70 (ranging from 0.90 to 0.97); and their AVE scores of greater than 0.50 (ranging from 0.69 to 0.82). All these provide a great level of confidence in the reliability of the measurement obtained. The results in Table 1 reveal that fairness in construction is a multi-dimensional concept, comprising: (1) distributive and procedural (DPF); (2) interpersonal (IPF); and (3) informational (IMF). With regard to the first dimension 'DPF', this study found that dimensions of distributive and procedural fairness which are distinct in mainstream theory are not so in a construction project context. This is an important and new theoretical insight which suggests that mainstream justice theory might not be as transportable into a construction context as previous researchers, reviewed in earlier sections, have suggested. Nevertheless, these findings are in line with those of Tyler (2000) who found that procedural and distributive fairness are highly related because people will evaluate the extent of fairness in procedures based on the outcome they received. For example, if subcontractors receive a reasonably good outcome for their work done, they will perceive the procedure as fair and vice versa.

Turning to the second dimension 'interpersonal fairness (IPF)', it can be seen from Table 1 that nine (i.e. F1 – F9) out of the proposed 10 measurement items are found to significantly characterise IPF (with significant factor loadings ranging from 0.709 to 0.914), while item F10 is found to have a significant factor loading on the 'informational fairness (IMF)' dimension, rather than IPF. This shows that project stakeholders perceive and evaluate interpersonal fairness based on a set of considerations involving individual and collective treatments, such as the quality of relationship among relevant parties (F5), the freedom of association and expression (i.e. F6 and F7) and level of politeness (F1), dignity (F2) and respect (F3) respect for people's opinion (F4), health, safety (F8) and dignity and rights (F9). This finding supports those of Cameron and Green (2004), highlighting that it is important for decision-makers to effectively deal with the emotion and behaviour of project stakeholders at both individual and collective levels.

The third dimension 'Informational Fairness (IMF)' was characterised by six measurement items (F10 – F15) with significant factor loadings ranging 0.853 to 0.947. The findings revealed that IMF is underpinned by a two-way open and transparent communication and information exchange (F11) where stakeholders are expected to be informed and consulted of the major decisions that affects their interest (F12 and F15), and having the decisions being explained to them (F14), as well as being given adequate information for their task performance (F13). Thereafter, they should be given adequate say to negotiate or challenge the decisions made (F10).

Table 1 Factor analysis results of measurement items

Constructs and their corresponding measurement Items	(1)	(2)	(3)
Distributive and procedural fairness (DPF) [α=0.96; CR = 0.97; AVE = 0.74]			

Constructs and their corresponding measurement Items	(1)	(2)	(3)
We were rewarded fairly for the work that we did (F16)	0.71	0.87	40.11
#The risks we were asked to take were fair and commensurate with our ability to manage them (F17)	(0.41)		
We had opportunities to share in the rewards from any improvements we brought into the project (F18)	0.66	0.74	13.26
#We were resourced adequately to do our job effectively (F19)	(0.18)		
Contracts were fair and equitable (F20)	0.60	0.82	23.18
Our rewards were commensurate with our inputs, effort, ability and experience (F21)	0.78	0.87	36.66
#Disputes were resolved fairly (F22)	(0.52)		
The processes by which risks and rewards were distributed on our last project were fair (F23)	0.83	0.95	84.96
The processes by which risks and rewards were distributed on our last project were consistent (F24)	0.74	0.72	11.51
The processes by which risks and rewards were distributed on our last project were based on accurate information (F25)	0.79	0.91	47.20
The processes by which risks and rewards were distributed on our last project were negotiable (F26)	0.76	0.85	25.48
The processes by which risks and rewards were distributed on our last project were ethical (F27)	0.80	0.93	70.60
The processes by which risks and rewards were distributed on our last project were transparent (F28)	0.72	0.90	45.88
The processes by which risks and rewards were distributed on our last project were clear (F29)	0.73	0.90	32.06
Interpersonal Fairness (IPF) [α=0.94; CR = 0.95; AVE = 0.69]			
We were treated with politeness (F1)	0.75	0.87	37.38
We were treated with dignity (F2)	0.81	0.91	50.62
We were treated with general respect (F3)	0.75	0.91	62.94
Our opinions were valued (F4)	0.60	0.80	26.81
We had a good relationship with our client (F5)	0.68	0.85	30.30
We had freedom of expression (F6)	0.62	0.81	23.46
We had freedom of association (F7)	0.69	0.79	21.53
There was respect for people's health and safety (F8)	0.73	0.71	14.91
There was respect for people's dignity and rights (F9)	0.73	0.82	27.48
Informational Fairness (IMF) [α =0.96; CR = 0.97; AVE = 0.82]			
Communications were open and transparent (F11)	0.65	0.85	33.20
We were kept informed about major decisions that affected our interests (F12)	0.77	0.93	57.58
We were given adequate information to be able to undertake our jobs effectively (F13)	0.75	0.87	33.82
Decisions that affected us were explained to us (F14)	0.77	0.93	65.98
We were consulted about decisions that affected our interests (F15)	0.75	0.93	76.32
We had an adequate say (F10)	0.64	0.91	49.37
Organisational Citizenship Behaviour (OCB) [α= 0.93; CR = 0.95; AVE = 0.79]			
Conscientiousness (B13	0.79	0.88	27.94
Commitment (B14)	0.86	0.92	53.16
Engagement (B15)	0.70	0.91	49.05
Discretionary/voluntary effort (B16)	0.76	0.87	32.92
Loyalty (B17)	0.69	0.84	28.25

Constructs and their corresponding measurement Items	(1)	(2)	(3)
Positive Affectivity (PA) [α= 0.96; CR = 0.96; AVE = 0.77]			
Harmony (B1)	0.78	0.89	43.16
Morale (B2)	0.76	0.90	52.96
Respect for others (B3)	0.67	0.82	21.99
Honesty (B4)	0.80	0.87	37.47
Satisfaction (B5)	0.84	0.90	50.84
Motivation (B6)	0.75	0.85	26.21
Trust (B7)	0.87	0.90	51.42
Self-esteem (B8)	0.80	0.87	39.12
Negative Affectivity (NA) [α= 0.86 CR = 0.94; AVE = 0.71]			
Anger (B9)	0.69	0.76	7.62
Frustration (B10)	0.90	0.87	14.58
Hostility (B11)	0.89	0.91	28.56
Stress (B12)	0.83	0.81	15.09
Project Performance (PP) [α= 0.80; CR = 0.90; AVE = 0.70]			
Productivity (P1)	0.76	0.85	27.62
Safety Performance (P2)	0.75	0.71	12.75
Communication (P3)	0.62	0.89	37.48
Teamwork Performance (P4)	0.57	0.88	46.02

α = *Cronbach's alpha score generated in SPSS; CR = Composite reliability; AVE = Average variance extracted. # Three out of the 51 measurement items which had factor loadings < 0.55 were removed (denoted by # in Table 1) so as to improve the confidence of reliability and validity of individual single- and multi-dimensional constructs. Column (1) = factor loadings generated by Exploratory Factor Analysis using SPSS. Column (2) = factor loadings generated by Confirmatory Factor Analysis using SmartPLS. Column (3) = t-statistics*
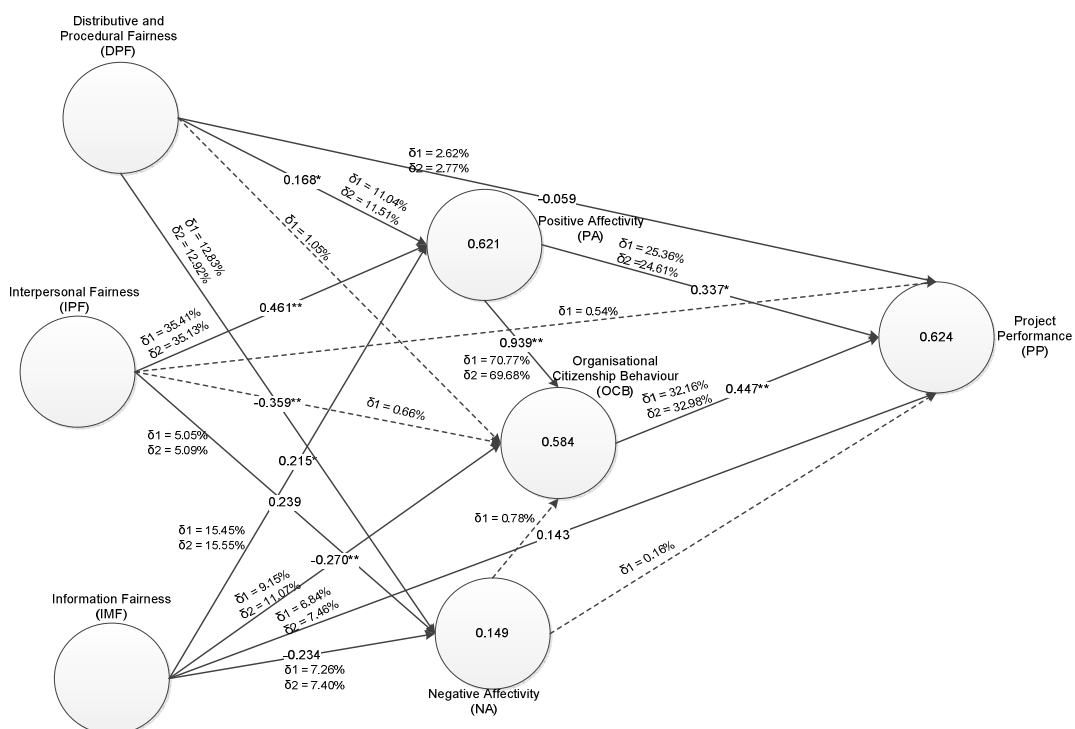

Figure 1 Structural model of fairness and project performance

Figure 1 summarises the significant relationships between distribution-procedural fairness (DPF), interpersonal fairness (IPF), informational fairness (IMF), positive affectivity (PA), negative affectivity (NA), organisational citizenship behaviour (OCB) and project performance (PP). Figure 1 shows that PA and NA are

significantly influenced by DPF, IMF and IPF. It also shows that it is the quality of interpersonal relationship (rather than processes and procedures) that is the major factor shaping people's motivation to perform on a project. Nevertheless, it was also found that DPF is a significant determinant of both positive (PA) and negative affectivity (NA), with the corresponding coefficients of 0.168 and -0.359 showing that DPF is more of a hygiene factor than a motivator since it reduces demotivation more than it increases motivational factors. It also shows that project participants are more likely to be negatively affected (i.e. becoming angry, frustrated, hostile and stressed), by DFP than by IPF and IMF.

Figure 1 also shows that the positive affectivity of individuals is the key factor shaping their organizational citizenship behaviour. However, Figure 1 also shows that IMF was found to have negative impact on OCB ($\beta = -0.270$), while at the same time, have positive influence on PA ($\beta = 0.215$). Why IMF and OCB are negatively correlated is unclear and further research is needed to explore this further.

Lastly, this study established that positive affectivity of individuals (PA; $\beta = 0.337$) and their organisational citizenship behaviour (OCB; $\beta = 0.447$) are key factors influencing overall project performance (PP). The findings reveal that OCB has a greater impact on PP than PA; however PA has both direct and indirect impacts on PP. For example, on the one hand, when individuals feel positively about the work environment then they will likely engage in behaviour which could contribute positively to project performance (as depicted by the relationship from PA $\rightarrow$ PP in Figure 1). Alternatively, positive affectivity can also act on project performance by beneficially affecting teamwork (a very strong relationship) and other citizenship behaviours, a much stronger effect that the direct impact of PA on PP.

CONCLUSIONS

The aim of this research was to examine how fairness affects project performance and we note in making our conclusion the cultural specify of this research and the possibility that our results may differ in different countries. Using theories of organisational justice the findings show that construction fairness is categorised into three dimensions: (1) Distributive and Procedural Fairness; (2) Interpersonal Fairness; and (3) Information Fairness. Using Structural Equation Modelling, a theoretical model is presented of how fairness acts on project performance through negative and positive affectivity and through organisational citizenship behaviour. While all dimensions affect outcomes in some way, the strongest path by which fairness affects project outcomes is through interpersonal fairness effecting positive affectivity, citizenship behaviour and in-turn project performance. Our results suggest that it is therefore the nature of interpersonal relationships rather than the way risks and rewards are distributed that is most important to project success. However, the research findings need to be interpreted within the limitations of this study which is exploratory in nature; especially since the majority of measurement items of the respective constructs were borrowed from cross-discipline studies and then re-contextualized into construction. Likewise, a relatively small sample size of 135 had been used to develop the predictive model. Thus, it is acknowledged that the research findings are indicative but not conclusive.

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