

The effect of performance-evaluation schemes on predicted transfer prices: Do leadership tone and perceived fairness concern matter?

1. Introduction

Vertically integrated firms use transfer-pricing negotiations to manage information asymmetry between independent divisions. A potential disadvantage of negotiating transfer prices is that negotiation breakdowns can lead divisions to trade with outside firms against the best interests of the integrated firm. Senior management might prefer that divisions trade internally at a different price from the market price to put price pressure on external suppliers (Arya and Mittendorf, 2010) or to allow the upstream division to enter new markets (Cools and Slagmulder, 2009). An equitable distribution of gains is an important condition for the successful continuation of a relationship (Dekker, 2004). We follow prior experimental research and operationalize an equitable distribution as an equal-profit split in our experiment (Chang et al., 2008; Kachelmeier and Towry, 2002; Luft and Libby, 1997). We investigate how headquarters can motivate divisions to agree on a transfer price close to the equal-profit split and away from the market price (and an unequal-profit split).

Senior management can incentivise divisions to consider the effect of their behaviour on other divisions (e.g., Abernethy et al., 2004; Bouwens and Van Lent, 2007). However, joint profit incentives are noisier and less controllable by the division than divisional profit incentives, which makes joint incentives less attractive for division managers (Bouwens and Van Lent, 2007; Holmstrom, 1979). Moreover, performance evaluations based on the profit of other divisions can run against the idea of decentralisation where entrepreneurial managers run independent units. Ghosh (2000a) shows that with joint profit incentives, transfer price negotiators are less motivated to search for integrative solutions and they free ride on the effort of their negotiation partner.

Thus, we investigate leadership tone as an alternative, low-cost management tool. Leadership tone is defined in this study as the extent to which the top of the organisation supports the development of social relationships between employees. Leadership style has been found to have a direct effect on a firm's strategic priorities and its implementation of formal control systems (e.g., Abernethy et al., 2010; Nguyen et al., 2017). To date, despite the empirical evidence to suggest that performance-evaluation schemes (Ghosh, 2000a, 2000b; Ghosh and Bodlt, 2006; Greenberg et al., 1994; Ravenscroft et al., 1993) can affect managers' transfer-pricing judgements, it is not known precisely how the type of performance-evaluation schemes influence managers' predicted transfer-pricing decisions in the presence of different leadership tones. Leadership tone can evoke concern-for-others and motivate divisions to accept a transfer price closer to an equal-profit transfer price.

Prior studies have demonstrated that managers' transfer-pricing decisions are affected by fairness concern (Kachelmeier and Towry, 2002; Luft and Libby, 1997). Fairness concern refers to the expectation of transfer prices formed by managers, where incentives for wealth maximisation tend to override fairness expectations in equilibrium-price predictions (Kachelmeier and Towry, 2002). Prior studies have demonstrated that managers' perceived fairness concern is an important social factor in negotiations (Lewicki et al., 2006; Masschelein et al., 2012). Our research question is as follows: Do leadership tone and performance-evaluation schemes affect managers' perceived fairness concern and managers' predicted transfer prices? We hypothesise that a more supportive leadership tone increases the likelihood that managers of divisions will predict a transfer price outcome closer to an equal-profit price, particularly when these managers are working under a competitive performance-evaluation scheme. We further hypothesise that these effects are mediated by fairness concern.

We ran an experiment where participants adopted the role of either a buying or a selling division. The participants read a transfer-pricing scenario adapted from Chang et al. (2008), and were asked to predict the expected transfer price. Given that the outside-market price is higher than the equal-profit price, selling participants had an advantage over buying divisions. We find that selling divisions are more likely to compromise with their negotiating counterparts to the extent of predicting a price lower than the market price, and closer to the equal-profit price, when the leadership tone is more supportive under competitive performance evaluation. Buying divisions do not exhibit this interaction effect and predict lower transfer prices with a more supportive leadership tone independent of the type of performance-evaluation scheme (i.e., competitive or cooperative). An explanation for the difference between buying and selling divisions is that the buying divisions fail to consider the effect of the cooperative performance-evaluation scheme on the selling divisions. Surprisingly, further analysis shows that the effects of the performance evaluation and leadership tone are not mediated by the participants' fairness concerns.

Our main contribution is that we show that firms can manage transfer-pricing negotiation conflicts with a supportive leadership tone in the presence of competitive performance evaluation. This finding shows that firms with a supportive leadership tone can reap the benefits of decentralisation and competitive performance evaluation such as improved decision making and increased effort while minimising the cost of interdivisional conflicts.

The remainder of this paper is organised as follows. Section 2 develops the hypotheses of this study. Section 3 describes the research method and statistical techniques used to test the hypotheses. Section 4 discusses the results of the study. Section 5 presents the conclusions and discusses the limitations of the research.

2. Theoretical development and hypotheses

2.1. Social exchange and transfer pricing

Behavioural literature suggests that people are social creatures and have a social need to feel part of a group. Research in social psychology (e.g., Leary et al., 1994; Tice et al., 1995) argues that organisations have norms of acceptable behaviours, and that people learn to conform to those norms to be seen favourably by others. Therefore, social concerns affect judgements and behavioural outcomes in organisations. For example, Mas and Moretti (2009) find that workers are not only motivated by social considerations, but that they are also willing to give up monetary benefits to conform to the social environment.

This suggests that besides performance evaluation, social concerns can shape managers' negotiation behaviours, and it highlights the importance of social controls in shaping managers' behaviour. Social exchange theory suggests that individuals weigh the potential costs and benefits of social relationships. Continuation of these social relationships is based on a process of negotiated exchange between parties (Sabatelli and Shehan, 1993) in which the parties decide whether to continue or discontinue the social reciprocity and sustenance of the relationship, which translates to the decision to trade internally and not to go with the market price in a transfer-pricing setting. Similarly, Dekker (2004) describes relational trust as an expectation that an individual will perform in the best interests of the relationship even if it is not in their personal interest to do so. This implies an element of reducing self-interest for the benefit of the relationship, and illustrates the preference for relationship preservation in social interaction.

The importance of social concerns has been highlighted in prior transfer-pricing research (e.g., Chang et al., 2008; Kachelmeier and Towry, 2002; Luft and Libby, 1997). In particular, Chang et al. (2008) find that managers negotiate lower transfer prices when they are negotiating with a partner with a high level of concern-for-others than when they are

negotiating with a partner with a low level of concern-for-others. Chang et al. (2008, p. 706) argue that “this is because managers tend to reciprocate the perceived social concerns of their negotiation partner”. Thus, managers behave in a socially desirable manner to conform to the social norm of the environment to sustain long-term and trusting interpersonal relationships. This means that senior management can manage divisions by shaping the work environment to stimulate concern-for-others. Our study differs from prior literature in that it investigates how performance evaluation and leadership tone can stimulate such concern-for-others.

2.2. Effect of leadership tone on predicted transfer prices

Prior studies have demonstrated that there is a strong link between leadership and the work environment (e.g., Bashshur et al., 2011; Dragoni and Kuenzi, 2012; Eisenbeiss et al., 2008; Kozlowski and Doherty, 1989). For example, Kozlowski and Doherty (1989) find that leadership is major driver of the organisational climate. This suggests that employees’ behaviours can be influenced and motivated by senior management (leaders) of organisations because such leaders set the tone for the organisation’s internal environment. Indeed, prior studies (e.g., Chong and Ferdiansah, 2011; Chong and Loy, 2015; Cianci and Kaplan, 2010; Francis et al., 2008; Rogers and Stocken, 2005) have suggested that a leader’s reputation influences employees’ intentions and behaviour.

In the context of a negotiated transfer-pricing decision, a leadership tone supportive of a collaborative work climate motivates divisions to focus on the outcomes of both divisions. For example, Chang et al. (2008) demonstrate that when divisions show a greater concern-for-others, they are more likely to reach an agreement close to the equal-profit outcome and less likely to exploit the market price as a leverage to increase their own profit. Therefore, we predict that managers’ predicted transfer prices are closer to the equal-profit price and further from the outside-market price under a supportive leadership tone that endorses a workplace

climate that promotes a collaborative work environment. We thus test the following hypothesis:

H1: Predicted transfer prices are closer to an equal-profit price under a supportive leadership tone than they are under a non-supportive leadership tone.

2.3. Effect of performance-evaluation schemes and leadership tone on predicted transfer prices

Research (e.g., Ackelsberg and Yukl, 1979; Anctil and Dutta, 1999; Ghosh, 2000a, 2000b; Ghosh and Boldt, 2006; Ravenscroft and Haka, 1996) has suggested that using performance-evaluation and compensation schemes can influence managers' transfer-pricing decisions. Our study distinguishes between a cooperative performance-evaluation scheme and a competitive performance-evaluation scheme. Under a cooperative performance-evaluation scheme, divisions are evaluated based on firm-wide profits and under a competitive performance evaluation, divisions are evaluated based on divisional profits (Anctil and Dutta, 1999). Prior studies have found that under a cooperative performance-evaluation scheme, employees are encouraged to cooperate with others because their incentive payment is based at least partially on the performance of their co-workers (Nalebuff and Stiglitz, 1983; Ravenscroft and Haka, 1996). Indeed, with cooperative performance-evaluation schemes based on firm-wide profits, individuals exhibit cooperative behaviour because cooperative performance-evaluation systems reward joint accomplishments (Ackelsberg and Yukl, 1979; Ravenscroft and Haka, 1996). Hence, we expect that a cooperative performance-evaluation scheme promotes trust and mutually supportive behaviour among co-workers, which in turn, encourages individuals and groups to work towards achieving the organisational goal. Under such conditions, it is expected that divisions

will avoid transaction costs with the outside market in a transfer-pricing setting. In contrast, with a competitive performance-evaluation scheme, employees are motivated to increase the profit of their own division, even if the firm as a whole would benefit more if they focused on joint outcomes (Bull et al., 1987; Hufnagel and Birnberg, 1994; Ravenscroft and Haka, 1996). Competitive performance-evaluation schemes motivate managers to focus on divisional profits, which encourages divisional inequalities and win–lose negotiation outcomes (see Lewicki et al., 2006). In other words, the need for a supportive leadership tone is more pressing when divisions are evaluated based on divisional performance.

As discussed (see H1), managers' predicted transfer-pricing decisions may depend on whether the leadership tone is supportive or non-supportive. We expect that a supportive leadership tone will have a stronger effect when divisions are evaluated under a competitive scheme. Under a cooperative evaluation scheme, divisions are rewarded for maximising the firm's total profit and have no incentive to fight for a larger part of the pie. The leadership tone will matter more when divisions are financially rewarded based on their own performance. As a result, we test the following hypothesis.

H2: Under competitive performance evaluation, the effect of a supportive leadership tone on the predicted transfer price is greater than it is under cooperative performance evaluation.

2.4. The mediating role of fairness concern

Perceived fairness has been found to be an important factor in general negotiations (Lewicki et al., 2006), transfer-pricing negotiations (Ghosh, 2000a; Kachelemeier and Towry, 2002; Luft and Libby, 1997), and interfirm negotiations (Masschelein et al., 2012). Fairness concerns affect both the expected transfer price and the costs of arriving at the negotiated price (Kachelemeier and Towry, 2002; Luft and Libby, 1997). Negotiators tend to rely on their

perceptions of distributive and procedural fairness before deciding whether to reach an agreement or end negotiations, and that concerns of fairness and unfairness affect bargaining behaviour and outcomes (Fisher et al., 2000; Fisher et al., 2002b; Selten, 1987; Thompson and Loewenstein, 1992). Therefore, the perception of concern of fairness has implications for the negotiation process and its outcomes.

In transfer-pricing negotiations, distributive fairness concerns refer to managers' expectations of the equality of profits in the presence of a benchmark such as a market price being different from the equal-profit transfer price (Kalchemeier and Towry, 2002). We propose that performance-evaluation schemes can affect managers' predicted transfer prices because they can influence employees' perceived levels of concern of fairness. Prior studies have suggested that firms' performance evaluation and compensation schemes can affect employees' perceptions of the fairness of the transfer pricing policy (Ghosh, 2000a, 2000b; James, 1993; Walker et al., 1977). We predict that cooperative performance evaluation schemes will focus the divisions attention on each other's profit and consequently on a fair distribution of profit. Indeed, Chang et al. (2008) show that negotiators who are held accountable for their own outcome are less likely to use negotiation tactics that take into account the counterparty's interests.

Incentives and accountability are not the only managerial tools to increase distributive fairness between divisions. The negotiation literature suggests that fairness, reputation and trust are interrelated (Brockner and Siegel, 1996; Lewicki et al., 2006). For example, Lewicki et al. (2006, p. 296) suggest that "acting fairly leads to being trusted and also enhances a positive reputation [...] Unfair treatment is likely to lead to distrust and a bad reputation". For example, relying on impression management theory, Chong et al. (2017) predict and find that when subordinates believe there are benefits in creating a positive impression (i.e., appearing to be honest), they are more willing to reveal private information. Kachelmeier and

Towry (2002) find that negotiating partners are willing to forgo profit for fairness reasons in a face-to-face negotiation setting. They attributed their findings to the humanizing aspect of face-to-face communication compared to computer mediated negotiations. In summary, when working in an environment that values maintaining a positive reputation with co-workers, managers care more about each other's outcome. Thus, in the context of transfer-pricing decisions, we expect that managers' fairness concerns will be influenced by the leadership tone, which will affect their predicted transfer price. Accordingly, we propose the following hypothesis:

H3: The effect of leadership tone and performance evaluation on predicted transfer prices is mediated by fairness concern.

Figure 1 summarises the :three hypotheses.

[Insert Figure 1 here]

3. Research method

*3.1. Task overview*¹

The experimental instrument comprised two parts: Part A: a negotiated transfer-pricing decision; Part B: an exit questionnaire. The main experimental task (Part A) was adapted from Chang et al.'s (2008) instrument. The case described the organisational structure of a manufacturing company, Company XYZ, that had two divisions: Parts and Assembly. In the case, managers of each division could choose to work with each other or

¹ The case material for the primary study was formed based on revisions made from two pilot tests.

with outsiders in selling or buying products manufactured by the Parts Division. Participants assumed the role of either a parts (selling) or assembly (buying) manager. They were presented with a hypothetical scenario describing the leadership tone of the organisation (manipulated at two levels—a leadership tone that supports or does not support a workplace climate that encourages social relations between divisions). This was followed by a description of Company XYZ’s performance-evaluation scheme, where managers were either compensated based on their division’s profit (competitive) or the company’s overall profit (cooperative).

Participants were randomly assigned to one of four treatment conditions—leadership tone (supportive or not supportive) and performance-evaluation scheme (competitive or cooperative). A profit table that depicted how much each department would earn as a result of the transfer was presented. At the end of the case scenario, participants were asked to indicate what they expected (1) the transfer price to be; (2) the lowest (highest) price they thought the other manager would accept (offer); and (3) the lowest (highest) price they would accept (offer). This was followed by manipulation checks and demographic questions.

3.2. Participants

A total of 129 university business students participated in six experimental sessions over a one-week period. Participants consisted of second-year and third-year undergraduate business students enrolled in the Bachelor of Commerce programme at a large Australian university. These students were enrolled in or had previously completed courses in management accounting, auditing, and applied financial management.² The participant pool

² Note that the course in management accounting include a transfer pricing lecture and therefore participants would have a general understanding of transfer pricing decision.

was similar to pools used in previous experiments for transfer-pricing negotiation (Chalos and Haka, 1990; Chang et al., 2008; Ghosh, 2000a, 2000b; Greenberg et al., 1994; Kachemeier and Towry, 2002; Luft and Libby, 1997). Recruiting university business students as surrogates for managers in this behavioural accounting study was appropriate because the observed tasks involved simple information processing and decision-making (Ashton and Kramer, 1980). Numerous accounting studies (Chow et al., 1988, Chow et al., 1991; Fisher et al., 2000, 2002a, 2002b; Libby, 1999; Stevens, 2002; Waller, 1988; Webb, 2002) have recruited students for their experimental studies, and found the use of students did not violate the internal validity of the experiments. Each participant was given AU\$10 for their participation in the experiment as compensation for their time (45 minutes).

Of the 129 responses, 14 failed the manipulation checks and were thus excluded from the analysis. We conducted a diagnostic test to identify potential outliers. Relying on the outlier-labeling rule (Hoaglin et al., 1986; Tukey, 1977), we identified five cases that exceeded the recommended threshold. We deleted these five cases from our data. This resulted in 110 responses usable for data analysis.³ Participant ages ranged from 18 to 31 years (mean = 21.3). The gender mix consisted of 48 males (43.6%) and 62 females (56.4%). Fifteen and one-half percent of participants had no working experience, while 24.1% had worked in accounting-related jobs and 60.4% in non-accounting-related jobs. Of the 110 participants that were included in the final dataset, 48.2% were international

³ The outlier-labeling rule can be used to identify outliers for normal-distribution data. Prior studies have relied on this technique to identify outliers (Huian, 2015; Ward and Steptoe-Warren, 2013). The outlier-labeling rule is based on finding the difference between the first and third quartile of the distribution and multiplying it by a parameter, g , which is equal to 2.2 (see Hoaglin et al., 1986; Hoaglin and Iglewicz, 1987). The resulting value is added to the third quartile and subtracted from the first quartile values to define the boundaries of the true distribution as shown below:

$$\text{Upper boundary} = Q3 + (g * (Q3 - Q1))$$

$$\text{Lower boundary} = Q1 - (g * (Q3 - Q1))$$

Any values outside these boundaries are considered outliers.

students (predominantly from the Asia–Pacific region) and 51.8% were Australian citizens or residents.

3.3. Experimental procedures

Participants assumed the role of either the parts or the assembly manager of the hypothetical Company XYZ. The objective of Part A of the experiment was to elicit participants' responses to a transfer-pricing scenario. The scenario stated that the Parts Division had manufactured several batches of a component 'Alpha'. Alpha was sold by the Parts Division to the Assembly Division, which would then further process Alpha into Final Product to be sold to outside customers. The participants were informed that the Parts and Assembly divisions were autonomous, and both managers were free to negotiate either a mutually acceptable transfer price or to trade with outsiders at the prevailing market price (\$700 per component). The equal-profit price was \$500. A profit schedule was included in the case, illustrating the implications of a range of transfer prices for both parties (between \$200, where profit for the seller was \$0 and \$800, where profit for buyer was \$0). Participants were free to choose any transfer price within the specified price range from \$200 to \$800.

Participants were also told that outside costs (e.g., marketing and purchasing costs) would be incurred if they traded with outsiders. That is, if the Parts Division sold to the outside market (at market price), selling costs would be incurred. Similarly, if the Assembly Division bought from the outside market, purchasing costs would be incurred. However, the exact costs were unknown, and it was stated that the company preferred them to trade internally because the combined profit would be higher due to the absence of these transaction costs.

Two experimental factors were manipulated. The exact wording of the two manipulation check questions are shown in Appendix. First, the leadership tone was operationalised by depicting a workplace climate under which senior management or leadership endorsed either a supportive environment, which promoted social activities such as relationship building among employees, or a non-supportive environment. This manipulation was introduced to capture the factor of leadership tone by framing participants' perceptions of a workplace climate that either supports or does not support relationship building. In the case in which the leadership tone supported relationship building, participants were told that senior management endorsed the idea of having social functions (e.g., sports teams, bonding sessions) to promote good working relationships within the company. In contrast, in the case where the leadership tone did not support relationship building, participants were told that senior management thought that socialising was a waste of time. Instead, a performance-review system based on meeting individual goals was implemented. This version of the case was intended to represent a remote working environment in which relationship building was not valued. Participants were subsequently told that they frequently (under a supportive leadership tone of relationship building) or rarely (under a non-supportive leadership tone of relationship building) interacted with the manager of the division with whom they were to negotiate. Second, the performance-evaluation scheme was operationalised as either competitive based or cooperative based. In the case of the competitive performance-evaluation scheme, the participants were told that the divisional manager's annual bonus depended on division profit. In the case of the cooperative performance-evaluation scheme, the participants were told that the divisional manager's annual bonus depended on overall company profit. The dependent variable, the *predicted transfer price*, was measured by asking participants to predict the transfer price at the end of the negotiation. At the end of the experiment, the participants were asked to provide

demographic information through a questionnaire, and were presented with manipulation check and fairness concern questions.

4. Results

4.1. Descriptive statistics

Perception of fairness was measured using a five-point Likert-type scale adapted from Maas et al. (2012). To test for construct validity, factor analysis was conducted on the fairness-concern scale. An initial factor analysis of the five items was subjected to a varimax rotation. The results indicated that Questions 2 and 5 had low factor loading and were thus removed.⁴ A further factor analysis revealed that the remaining three items loaded on the first factor and explained 59.14% of the total variance. These results indicate satisfactory construct validity. For the remaining three items, the Cronbach's alpha coefficient (Cronbach, 1951) was 0.65, suggesting satisfactory internal reliability (Nunnally, 1967).

Managers' perceived fairness concern is statistically significantly correlated with the managers' predicted transfer prices ($r = 0.20, p < 0.05$). This result provides evidence to support the importance of perceived fairness concern in transfer-pricing decisions (Ghosh, 2000a; Kachelmeier and Towry, 2002; Luft and Libby, 1997). Table 1 Panel A presents the means and standard deviations for the predicted transfer price for buyers and sellers across the two levels of performance-measurement evaluation and leadership tone.

[Insert Table 1 here]

The averages exceed the equal-profit price of \$500 in all cells, which demonstrates the influence of the outside-market price. On average, sellers (\$556) expect a higher transfer

⁴ Initial factor loadings: Question 1: 0.62; Question 2: 0.25; Question 3: 0.76; Question 4: 0.82; Question 5: 0.50. Initial total variance explained: 39.11%.

price than buyers (\$539), consistent with the egocentric bias documented in prior research (Chang et al., 2008; Kachelmeier and Towry, 2002; Luft and Libby, 1997). Consistent with our predictions, the greatest effect of a supportive leadership tone on predicted transfer price occurs in the presence of a competitive performance-evaluation schemes with a drop in the price of \$55 (i.e., \$562–\$507) towards the equal-profit for buyers and \$70 (i.e., \$613–\$543) for sellers.

4.2. Hypothesis tests⁵

H1 predicts that under a supportive leadership tone, predicted transfer prices will be closer to an equal-profit transfer price than they are under a non-supportive leadership tone. Table 1 Panel B reports the results of an analysis of variance (ANOVA) on the predicted transfer price with leadership tone, performance evaluation and negotiator role as independent variables. We report two-tailed p-values. The results reveal a statistically significant main effect for leadership tone ($F = 6.48, p = 0.013$). This result provides initial support for H1. On average, the leadership tone decreases the predicted transfer price and brings it closer to the equal-profit outcome of \$500. In addition, Table 1 Panel B shows that the effect of leadership tone and performance evaluation might differ across roles. Although the effect of the three-way interaction does not reach conventional levels of significance ($F = 2.73, p = 0.101$), we split up the analysis for buyers and sellers to clarify the results.

Table 1 Panel C reports the ANOVA on the predicted transfer price by seller with leadership tone and performance evaluation as the independent variables. The results show a

⁵ We collected four demographic variables: the participant's age, whether they are domestic students or not, whether English is their first language or not, and their work experience. We analysed the two main ANOVAs from Table 1 Panel B and Panel C as analyses of covariance (ANCOVAs) controlling for the demographic factors. Our results presented in Tables A1 and A2 (see Appendix) reveal that controlling for the demographic factors does not meaningfully change the results for the manipulations. However, it was found that the domestic students tend to have a higher expected final transfer price (Mean = \$579) than the overseas students (Mean = \$519) as sellers ($p = 0.005$), and older buyers expect lower final transfer prices than younger buyers ($p = 0.051$).

marginally significant interaction effect ($F = 3.49, p = 0.067$), which is consistent with H2's predictions that the effect of leadership tone is stronger under competitive performance evaluation. Table 1 Panel D reports the same analysis for the buyers. The results show only a significant main effect of leadership tone ($F = 4.08, p = 0.048$). At first glance, only the results for the sellers provide support for H2.

However, further investigation reveals that the results are largely consistent with our arguments for the role of leadership tone. The descriptive statistics (Table 1 Panel A) demonstrate that the effect of a supportive leadership tone is greater under competitive performance evaluation than it is under cooperative performance evaluation for both buyers (\$55 versus \$26) and sellers (\$70 versus -\$9). An untabulated ANOVA on the predicted transfer price under competitive performance evaluation scheme with leadership tone and negotiator's role as independent variables reveals only a significant main effect of leadership tone ($F = 6.18, p = 0.017$). That is, on average, the supportive leadership tone leads the participants to predict a transfer price closer to the equal-profit price. The failure to detect an interaction effect for the buyers is driven by their failure to anticipate the effects of cooperative performance evaluation scheme. Indeed, in contrast to the sellers, on average, the buyers do not predict different transfer prices across the performance-evaluation schemes (sellers: $F = 4.84, p = 0.032$, see Table 1 Panel C; buyers: $F = 0.53, p = 0.469$, see Table 1 Panel D). While sellers realise that they have no incentive to negotiate for a transfer price close to the market price under a cooperative performance-evaluation scheme, the buyers on average do not anticipate the change in sellers' motivation. That is, our expectation that under cooperative performance-evaluation scheme, leadership tone would have a significantly smaller effect on the predicted transfer price is not true for the buyers.

In summary, we find that sellers, who have an advantage based on the outside-market price, predict that they will cede their advantage under cooperative performance evaluation

scheme and with a supportive leadership tone under competitive performance evaluation scheme. Buyers do not anticipate the performance evaluation effect on the sellers but they do expect a lower transfer price under a supportive leadership tone. From the perspective of senior management, our predictions are largely confirmed. With a supportive leadership tone, headquarters can nudge the divisions closer to an equal-profit transfer price, which could lead to easier negotiations. The role of leadership tone is less pronounced under a cooperative performance-evaluation scheme because sellers, who have the negotiation power, are willing to compromise under both a supportive and a non-supportive leadership tone.

There are 18 participants who reported a lower willingness to pay than the predicted final price as a buyer or a higher willingness to sell than the predicted final price as a seller. Nevertheless, we believe this does not strongly influence our conclusions. First, the number of participants who failed the test are homogeneously distributed across the eight conditions with a minimum of 1 and a maximum of 3 per condition. Furthermore, the pattern of the mean transfer price across conditions does not change when we exclude the participants who failed the test. The results change slightly when we exclude the participants from the analysis but the overall conclusions remain the same. First, the three-way interactions NR x PES x LT remains just outside conventional significant levels ($F = 2.65$, $p = 0.107$) with a main effect of the negotiator role ($F = 5.21$, $p = 0.025$), leadership tone ($F = 7.62$, $p = 0.007$), and performance evaluation ($F = 3.71$, $p = 0.058$). Second, when we split the sample based on the performance evaluation schemes, we find that a significant effect of leadership tone with the competitive performance-evaluation scheme ($F = 3.51$, $p = 0.031$) but not with the cooperative performance-evaluation scheme ($F = 2.44$, $p = 0.126$). Third, the sellers do no longer exhibit an interaction effect PES x LT ($F = 2.28$, $p = 0.139$). We attribute this to the loss of power as the result of excluding participants because we still find a significant decrease of the sellers' expected transfer price with a supportive leadership tone (Mean =

\$631 versus Mean = \$559, $F = 4.97$, $p = 0.036$) under a competitive performance-evaluation scheme while leadership tone is not significant (Mean = \$555 versus Mean = \$550, $F = 0.029$, $p = 0.868$) under a cooperative performance- evaluation scheme.

H3 predicts that managers' perceived fairness concern mediates the relationship between performance evaluation, leadership tone and managers' predicted transfer prices as shown in Figure 1. To test for the mediation effect, we relied on bootstrapping approaches as implemented in the PROCESS macro of Hayes (2013) to assess the significance of the indirect effect.⁶ The results for the sellers are presented in Table 2 Panel A.

[Insert Table 2 here]

The indirect effects of performance evaluation and leadership tone are estimated as the product of the effect on fairness concerns and the effect of fairness concerns on the predicted transfer price, controlling for the direct effects on the predicted transfer price. The results in Table 2 Panel A do not support an indirect effect of leadership tone ($z = 0.73$, $p = 0.467$), performance evaluation ($z = 0.98$, $p = 0.327$), or the interaction ($z = -0.66$) through fairness concerns for the sellers (see Figure 1). Similarly, the results for the buyers in Table 2 Panel B do not support an indirect effect of leadership tone ($z = 1.01$, $p = 0.314$), performance evaluation ($z = 0.98$, $p = 0.327$), or the interaction ($z = 0.91$, $p = 0.364$). Taken together, these results reject H3, which predicts a mediation effect of fairness concerns.

5. Conclusions

⁶ Preacher and Hayes (2004) state that the Sobel (1982) test is more reliable when testing for the mediation effect. Despite the usefulness of the Sobel test, MacKinnon et al. (2004) suggest the use of the bootstrapping method eliminates the possibility of the asymmetric-distribution problem or other related power problems.

This study experimentally examines two control mechanisms—leadership tone (an informal control) and performance-evaluation schemes (a formal control)—that firms can use to manage transfer-pricing negotiations. The results of this study indicate that under competitive performance evaluation scheme and a supportive leadership tone, division managers are more likely to settle on an equal-profit transfer price, while under cooperative performance evaluation scheme, leadership tone is less effective. The study also tests the mediating role of fairness concern on the relationship between performance evaluation schemes, leadership style and managers' predicted transfer prices. We do not find any support for the hypothesised mediation model between the management control variables and predicted transfer price through fairness concerns.

Our study contributes to the accounting literature in the following ways. First, we extend prior studies (Chang et al., 2008; Luft and Libby, 1997; Kachelmeier and Towry, 2002) by examining an important management tool that has not been considered in the literature on negotiated transfer pricing, that is, leadership tone. Better understanding of how leadership tone affects managerial transfer-pricing negotiations enables senior management to formulate effective strategies to cultivate a workplace climate that supports internal social relations and reduces the need to trade with the market. Our study offers insights into how a firm's internal environment, that is, the workplace climate, can act as an informal social control to affect negotiating managers' transfer-pricing decisions.⁷

⁷ Prior studies have demonstrated that informal social control can enhance employee performance, increase subordinates' wellbeing, trust in and perceptions about management's decisions (Sitkin and George, 2005). Further, it has been demonstrated that in a self-managing work team and a high-reliability organisation, an informal social control can enhance the coordination of tasks, employee agreement about goals and values, and organisational learning (Manz and Sims, 1987; Weick et al., 2008). For example, in the budgeting literature, Stevens (2002) finds that a social control such as reputation concern is effective in reducing budgetary-slack creation because managers are unlikely to be engaged in behaviours that are perceived as inconsistent with the social norms of honesty and fairness.

Second, our results demonstrate that leadership tone is most effective when competitive performance evaluation scheme is employed. This finding shows that firms can maintain decentralisation of decision making and divisional performance evaluation by using leadership tone to manage the relationship between the divisions. In other words, headquarters do not need to compromise with more cooperative performance evaluation scheme to avoid conflicts in transfer-pricing negotiations. A disadvantage of cooperative performance evaluation scheme is that they decrease individual effort, which can paradoxically lead to reduced joint outcomes (Ghosh, 2000a, 2000b). Therefore, our study contributes to the literature by responding to calls for further research into the growing evidence of the usefulness of socially mediated behaviours in motivating and controlling employees (Sprinkle, 2003).

Another form of leadership tone common in firms is *ethical leadership*, which promotes ethical conditions in organisations (Brown and Treviño, 2006a; Mayer et al., 2012). Within a workplace environment, leaders set the ethical tone at the top of organisations (Murphy and Enderle, 1995), shape the ethical culture of an organisation (Treviño, 1990; Treviño and Nelson, 2004), and influence employees' ethical conduct (see Treviño et al., 1999). Given that leaders are in a position to control many outcomes that are important to employees (e.g., goal-setting, promotions, appraisals), employees conform to the ethical values of their leaders (Schminke et al., 2002). Further, leaders who are perceived as ethical positively influence productive employee work behaviour (Mayer et al., 2009) and negatively influence counterproductive work behaviour (Brown and Treviño, 2006b; Mayer et al., 2009). Prior studies have demonstrated that transfer pricing is complex and vulnerable to ethical misconduct (Mehafdi, 2000, p. 378) and there are many "unethical transfer pricing behaviours" among multi-international firms (Eden and Smith, 2011; Hansen et al., 1992; Sikka and Willmott, 2010). However, despite the evidence that suggests leaders are important

for organisational ethics, the specific role of leadership in influencing unethical transfer-pricing behaviour in the workplace has yet to be fully explained. Future research can explore the influence of ethical leadership on transfer-pricing decisions.

- We report different results for buyers and sellers. We attribute these differences to self-serving biases in fairness concerns (Chang et al., 2008; Kachelmeier and Towry, 2002; Luft and Libby, 1997). In our setting where the outside market price favours the sellers, we expected that sellers will be less likely than buyers to see the equal profit split as fair. As a result, the effects of the performance evaluation scheme and leadership tone on fairness concerns and the predicted transfer price should be stronger for the sellers. Future research can test the self-serving bias hypothesis more robustly by including a condition where the buyers would benefit more from outside transactions. In this condition, the effects of the performance evaluation scheme and the leadership tone are expected to be stronger for the buyers.

This study has several limitations. First, the study relies on an experimental method to examine the effect of leadership tone and perceived fairness concern on the relationship between performance-evaluation schemes and managers' predicted transfer prices. The case materials reflect simplified abstractions of real-world negotiations, and may not capture the variables in real-world negotiation practices. In addition, recruiting students as surrogates is contentious and may be a potential limitation. Therefore, care should be taken in generalising the findings from this study, and future research may employ a field study to test the variables used in this study. Second, this study utilises a case-based questionnaire that was similar to questionnaires implemented in prior studies (Chang et al., 2008; Luft and Libby, 1997). Participants in this study did not participate in a negotiation (face-to-face or via a computerised negotiation mechanism), nor were their decisions about an *actual* monetary compensation. Instead, participants were asked to make transfer-pricing decisions based on

an *expected* negotiation. Future research could employ face-to-face negotiations (e.g., Chalos and Haka, 1990; Ravenscroft et al., 1993) and computerised negotiations (Kachelmeier and Towry, 2002). Finally, this study is based on a single-period setting with a one-off final price; however, real-world negotiations occur repeatedly and over multiple rounds. Future research could shift the analysis to examine the effects of leadership tone on attitudes and transfer-pricing outcomes in a multi-period setting.

Notwithstanding the aforementioned limitations, the findings of this study have advanced the existing knowledge in the literature on negotiated transfer pricing by examining the effects of an external social factor (i.e., leadership tone) and an economic factor (i.e., type of performance-evaluation scheme) on negotiated transfer-pricing decisions. These findings have important implications for negotiated transfer-pricing decisions and performance-evaluation and compensation schemes that aim to achieve organisational goal congruence and overall organisational effectiveness.

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Figure 1
Theoretical Model

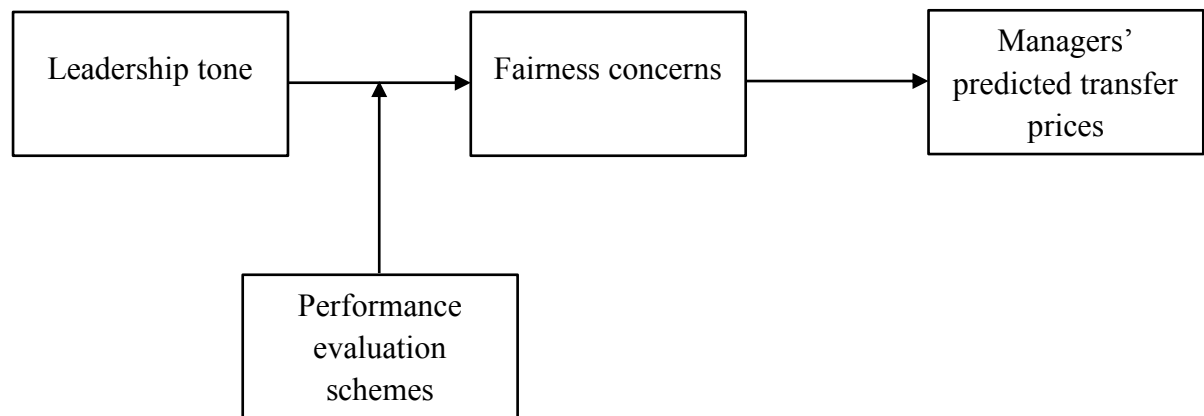


Table 1

Results for H1 and H2

Panel A: Cell frequencies mean (standard deviation) and cell size for managers' predicted transfer prices across supportive and non-supportive leadership tone, performance evaluation schemes and negotiator's role.

	Buyer ($\bar{x} = 539$, $SD = 75$, $n = 54$)		Seller ($\bar{x} = 556$, $SD = 85$, $n = 56$)	
	Competitive	Cooperative	Competitive	Cooperative
Supportive tone	$\bar{x} = 507$ $SD = 68$ $n = 14$	$\bar{x} = 531$ $SD = 61$ $n = 13$	$\bar{x} = 543$ $SD = 81$ $n = 14$	$\bar{x} = 536$ $SD = 59$ $n = 14$
Non-supportive tone	$\bar{x} = 562$ $SD = 91$ $n = 12$	$\bar{x} = 557$ $SD = 75$ $n = 15$	$\bar{x} = 613$ $SD = 82$ $n = 15$	$\bar{x} = 527$ $SD = 92$ $n = 13$

Panel B: Analysis of variance (ANOVA) results on predicted transfer price

Source	df	F-value	p-value
LT	1	6.48	0.013
PES	1	4.70	0.033
LT x PES	1	1.13	0.290
NR	1	1.14	0.228
NR x LT	1	0.14	0.714
NR x PES	1	1.18	0.280
NR x LT x PES	1	2.73	0.101
Residuals	102		

Panel C: Analysis of variance (ANOVA) results for sellers' predicted transfer price

Source	df	F-value	p-value
LT	1	2.56	0.115
PES	1	4.84	0.032
LT x PES	1	3.49	0.067
Residuals	52		

Panel D: Analysis of variance (ANOVA) results for buyers' predicted transfer price

Source	df	F-value	p-value
LT	1	4.08	0.048
PES	1	0.53	0.469
LT x PES	1	0.19	0.662
Residuals	50		

Definition of variables

NR
PES
LT
TP

Measures

0 = "Part Manager (Seller)" and 1 = "Assembly Manager (Buyer)"
0 = "Division profit" and 1 = "Company profit"
0 = "Supportive leadership tone" and 1 = "Non-supportive leadership tone"
Managers' predicted transfer prices (\$)

Table 2Results of regression for simple mediation^(a)

Panel A: Mediation analysis for sellers

	Unstandardized coefficient	z-value	p-value
LT → FC	0.10	1.30	0.243
PES → FC	0.18	2.15	0.032
LT x PES → FC	-0.10	-1.15	0.252
LT → TP	-17.7	-1.68	0.092
PES → TP	19.5	-1.91	0.056
LT x PES → TP	-17.7	-1.61	0.107
FC → TP	21.7	1.17	0.243
Indirect effect LT	2.28	0.73	0.467
Indirect effect PES	3.89	0.98	0.327
Indirect effect LT x PES	-2.07	-0.66	0.508

Panel B: Mediation analysis for buyers

	Unstandardized coefficient	z-value	p-value
LT → FC	0.13	1.54	0.123
PES → FC	0.11	1.40	0.161
LT x PES → FC	0.12	1.32	0.187
LT → TP	-23.6	-2.25	0.024
PES → TP	4.7	0.48	0.634
LT x PES → TP	1.9	0.19	0.853
FC → TP	23.1	1.68	0.093
Indirect effect LT	2.94	1.01	0.314
Indirect effect PES	2.67	0.98	0.327
Indirect effect LT x PES	2.54	0.91	0.364

Definition of variables**Measures**

NR	0 = “Part Manager (Seller)” and 1 = “Assembly Manager (Buyer)”
FC	Fairness concerns is measured using the average response of the following three questions: “Managers who act cooperatively should be rewarded”, “Managers who act in the common interest should be rewarded”, “Managers who act in the common interest should get a fair return” (Scaled from 1 = ‘Strongly disagree’ to 5 = ‘Strongly agree’).
PES	0 = “Division profit” and 1 = “Company profit”
LT	0 = “Supportive leadership tone” and 1 = “Non-supportive leadership tone”
TP	Managers’ predicted transfer prices (\$)

^(a) We report unstandardized regression coefficients. Bootstrap sample size = 5,000.

APPENDIX:

Manipulation Leadership Tone

Your Workplace (Supportive)

At an executive meeting several years ago, senior management of XYZ called for ideas on how to increase work productivity. A manager suggested one way of increasing work productivity was to have good working relationships with other employees within the company.

Senior management agreed with this view and monthly get-togethers were arranged as an initiative to promote good working relationships within the company. Soon, firm wide social events were introduced every last Friday of the month and everyone was invited to mingle and discuss informally any issues they had. In addition, a few junior managers suggested having divisional sports teams which would help in actively promoting interaction between divisions. All these initiatives were taken well and subsequently implemented by senior management.

A recent survey carried out in XYZ showed that most employees were happy and comfortable within the company. They felt valued and had good working relations within their division and with colleagues in other divisions.

At the moment, you frequently interact with Manager A of the ASSEMBLY division.

Your Workplace (Unsupportive)

At an executive meeting several years ago, senior management of XYZ called for ideas on how to increase work productivity. A manager suggested one way of increasing work productivity was to have good working relationships with other employees within the company.

Senior management disagreed with this view, declaring that the promotion of work relationships within the company was irrelevant to increasing productivity and that employees should concentrate on the work at hand instead of wasting time socialising. Senior management felt that they should be the ones setting the pace of the environment and took it upon themselves to implement a system of performance review that focused on meeting individual goals set by senior management.

A recent survey carried out in XYZ showed that most employees were unhappy and uncomfortable within the company. They did not feel valued and felt remote both within their own division and with colleagues in other divisions.

At the moment, you rarely interact with Manager A of the ASSEMBLY division.

Manipulation Performance Evaluation System

Your Total Compensation (Competitive)

Your performance is assessed by senior management based on your division's performance and efficiency. Your total compensation consists of a fixed salary and a bonus. The bonus is tied to your division's profits.

Your Total Compensation (Cooperative)

Your performance is assessed by senior management based on your division's performance and efficiency. Your total compensation consists of a fixed salary and a bonus . The bonus is tied to overall company profits.

END OF PAPER