Merit Pay, Responsibility and National Values: A U.S.-Taiwan Comparison

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Abstract

The extant U.S. domestic literature provides evidence that if administered in an unbiased manner, merit pay can be a significant motivator. However the same literature shows that judgment biases can lead to over-rewarding of ‘favored failures,’ individuals who receive favorable treatment despite their poor performance.

The cross-cultural literature provides evidence that collectivist societies treat some portion of “merit” pay as salary rewarding both successful and unsuccessful performers with some merit pay. There has been no test in this literature of the treatment of ‘favored failures’ but theoretical arguments and evidence from the cross-cultural escalation of commitment literature suggests that collectivist societies may be less subject to the ‘favored failures’ control problem. A “face” effect may offset the effect of collectivism in Chinese societies.

Using a behavioral experiment and subjects from countries that are at the extremes of Hofstede’s (2000) individualism-collectivism spectrum (Taiwan, United States) this paper finds that evaluators (subjects) from the more individualist U.S., overall provide less merit, less often, to poor performers than collectivist Taiwanese. The U.S. evaluators also display significantly greater judgment biases than Taiwanese for poor performers to whom they have a prior commitment. Thus, both societies have biases but from different angles and, as such, present employers with different control issues.

Keywords: merit pay; responsibility; culture; escalation.

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I. INTRODUCTION

The extant U.S. domestic literature provides evidence that if administered in an unbiased manner, merit pay can be a significant motivator which can induce persons to strive towards corporate objectives (see Tosi et al. 1997 and Locke 2004 for recent summaries). However the same literature shows that judgment biases can lead to over rewarding of ‘favored failures,’ individuals who receive favorable treatment despite their poor performance. Specifically Brody, Frank and Kowalczyk (2001) find that personal involvement in the hiring of an employee leads to: (1) a greater likelihood of that the manager will award merit pay to that employee even if the employee fails to meet the standards for merit pay; and (2) larger amounts of merit pay will be awarded to these ‘favored failures’ with whom the decision maker has had prior involvement.

Both the generalized study of merit pay and the judgment bias streams of U.S. domestic literature assume the paramountcy of the individual’s needs over those of the group. This, in turn, can be traced to the underlying economic models, primarily agency theory. This is natural given that the U.S. is one of the most individualistic countries in the world (Hofstede 1980; Schwartz 1992). However, it may not a realistic assumption outside of the individualist cultural areas (e.g., Chow et al. 1997; Geletkanycz 1997; Kachelmeier and Shehata 1997; Allmon et al. 1997; Chow et al. 1996; Merchant et al. 1995; Ho and Chang 1994; White and Rhodeback 1992; Boyacigiller and Adler 1991).

With respect to compensation, the preponderance of the cross-cultural literature (e.g., Hundley and Kim 1997; Ramamoorthy and Carroll 1998; Schuler and Rogovsky 1998) argues that for different value systems, different levels and types of rewards apply. In collectivist

countries, such as those of Greater China¹, individual incentives like merit pay appear to matter far less and be far less effective than in individualist countries such as the U.S. or Australia (Sparrow and Wu 1998).

In examining the effect of prior commitment in the psychology and organizational behavior literature, we find no direct test of the effect of a prior commitment-culture interaction on merit awards. However, the escalation of commitment literature on project continuation cross-culturally indicates national cultural values affect the willingness to escalate to projects. Collectivist countries are generally less willing to escalate than individualist countries (Harrison et al. 1999; Sharp and Salter 1997) but the effect of a sense of honor and shame referred to as “face” may offset this collectivist will (Chow et al 1997). Theoretically, the award of merit pay disproportionately to undeserving individuals who one has previously hired can be seen as a form of escalation in which the evaluator rewards that employee rather than admit an error in the hiring decision. In this situation, one might expect similar cross-cultural differences in behavior between merit awards and escalation decisions with collectivist cultures being less willing to award merit to such ‘favored failures’ but the possibility that the face dimension acts as a countervailing force in Chinese cultures. Thus, it is possible that in societies that are both collectivist and high face, all failures will receive more than in an individualist society (for the purpose of harmony) but favored failures will receive an additional amount as the evaluators’ “face” requires these persons to be rewarded as if they were more successful than they really were.

¹ Greater China includes the Peoples Republic of China and countries dominated by the members of the Chinese diaspora. This list would include, at a minimum, Hong Kong, Singapore and Taiwan.

This study thus retests U.S. domestic research in a very different environment. As part of Greater China, Taiwanese are the cultural mirror of the Americans on two crucial dimensions that affect how the manager judges and rewards performance: Individualism and Face (Hofstede 2000; Fernandez et al. 1997; Ho 1976). Taiwanese are collectivists while Americans are individualists. Taiwanese set great store by maintaining face and Americans do not. . Thus we have the possibility of testing both the face and collectivism dimensions in two countries. Our study starts by controlling for and reconfirming the willingness of collectivists to convert merit pay to base salary to enhance harmony. Secondly, by manipulating prior commitment after controlling for differences in initial preferences for merit pay allocation, we test the differences in the willingness to reward the undeserving. The results indicate that evaluators from these different cultures not only have different reward patterns, but also react differently to their commitment to employees. Taiwanese seek group harmony and reward a greater percentage of employees, including failing employees, with at least some merit pay. As a result, they tend to have a smaller range of merit reward dollars per employee. Americans, in contrast, follow the merit-for-performance model more strictly. They reward high performers much more than low performers and, as a result, tend to have a smaller range of merit reward dollars per employee.

Further examination of the merit-commitment interaction shows that Americans are subject to judgment biases that Taiwanese do not exhibit. The U.S. subjects in this study increase the number and amount of merit awards to poor performers in direct proportion to their prior commitment to these individuals. Taiwanese, by contrast, exhibit a much lower level of bias to persons they have selected who subsequently fail. Cultural explanations for these results and implications are discussed but it seems that individualism dominates the U.S. Subjects and collectivism (but not face) the Chinese.

The remainder of the paper proceeds as follows. In the next section, we summarize the results of the relevant literature and develop our research hypotheses. The third section describes the methodology employed while the fourth section presents our results. Our conclusions and limitations associated with our experiment are discussed in the final section.

II. LITERATURE REVIEW AND HYPOTHESES

As discussed above, a key tenet of any management control system is that reward and control are linked such that a financial reward can be used to persuade persons to strive towards corporate objectives. Total compensation can be viewed as a mix of basic salary and incentive/merit both of which may affect effort. The question is why national culture/values would affect compensation in either component and how. We begin with a brief description of culture and follow with the likely impact of culture on merit awards generally and the merit award process in the circumstances where an individual has failed.

Culture - A Primer

Culture represents the deepest values and rituals of a society. The value portion of culture affects all persons within the society and all its structures. Hofstede (2000) identified five work value dimensions on which countries differ. Those of primary interest to this study are Individualism/Collectivism and Face. Individualism was measured directly in Hofstede (1980), while Face forms a portion of Hofstede's (2000) Confucianism/Long Term Orientation (LTO) dimension. This dimension was incorporated by Hofstede (2000) from earlier work by Bond (1988), Chinese Culture Connection (1987) and Ho (1976). These dimensions are defined as follows:

1. Individualism/Collectivism refers to the significance of the group to decision making. High individualism "pertains to societies in which the ties between

individuals are loose: everyone is expected to look after himself or herself and his or her immediate family" (Hofstede 1991, 51).

2. Face is defined in Ho (1976, 867) as a sense of shame or a concern that personal worth may be lost "when the individual fails to meet essential requirements placed upon him by virtue of the social position he occupies." Thus, persons disappointing either a superior or a group may lose face. The concept of face is a component of the Confucianism or LTO dimension developed by Michael Bond and his colleagues (Chinese Culture Connection 1987; Bond 1988) and accepted into the culture framework by Hofstede (2000). Countries with strong Confucian values and a long term outlook (high LTO) have face as "a common concern" (Hofstede 2000, 360). As Redding and Wong (1986) argue, one of the features which distinguish the Chinese cultures is the sheer degree of concern with face. It is not that westerners are never embarrassed, for example, by making a bad decision; it is just that face is far more powerful to Chinese than simple shame is to westerners.

Using the method recommended in Fernandez et al. (1997), Table 1 presents the standardized z values of all of the Hofstede (2001) expanded set of cultural dimension for several Asian and Anglo countries including the U.S. and Taiwan. The U.S. and Taiwan are less than one standard deviation apart on all but the Individualism and Confucianism/LTO dimensions. Taiwan is 2.96 standard deviations lower on Individualism and 2.36 standard deviations higher on Confucianism/LTO than the U.S.

Clearly, Taiwan and the U.S. are quite different on Face and Individualism; therefore, the question is: how do these affect societal attitudes to merit pay and the behavior of the decision

maker making the merit pay decision? The next section of the literature review examines the question of how value differences affect the societal attitudes to merit pay and the mix of compensation.

[Insert Table I about here]

Compensation and Culture

The preponderance of the literature provides evidence of a relationship between high individualism and the preference for, and efficacy of, merit pay. The U.S. domestic literature which assumes a motivational value of cash incentives is based on the assumption of the paramountcy of the individual over the group. While there are dissenters (see for example, Lindholm 2000)², individual incentives appear to matter far less in collectivist countries and far more in individualist countries (Hundley and Kim 1997; Ramamoorthy and Carroll 1998; Schuler and Rogovsky 1998). In an empirical study of collectivist Taiwanese, Sparrow and Wu (1998) conclude that Taiwanese have a high preference for collectivism and believe that compensation should be determined by seniority, long service and specific skills rather than performance. Thus, any attempt to introduce individual merit pay in a highly collectivist culture such as Taiwan would be resisted. Further, even if companies implement an individual based merit pay system in a collectivist society like Taiwan, a significant portion of “merit” pay becomes flat pay as everyone is found to be meritorious in the search for harmony.

² Lindholm (2000, 66) concludes “this should not detract from the study's overall finding that PM (*which includes compensation*) has a broadly similar impact on the job satisfaction of host-country employees in different subsidiaries.”

Given the existing literature, we begin by controlling for attitudes to base pay by including a nationality variable and expect that for the base number of merit awards: Taiwanese managers will place more value on the impact of individual merit pay on group harmony and will award a larger percentage of poor performers and a larger percentage of the overall sample a merit bonus. Individualist U.S. managers, in contrast, will place more value on the impact of individual performance and less on group harmony. Thus, there will be fewer low performers receiving merit pay. Further, in dollar terms, U.S. managers will have a larger range in dollars awarded in merit bonuses than Taiwanese managers.

Culture, Escalation of Commitment and Merit Awards

A precondition to the success of a reward system is that a supervisor or manager's judgment has no systematic bias (Lindholm 2000). U.S. research in organizational behavior and management control has shown that this assumption is sometimes voided by actual experience. Brody et al. (2001) show that when an individual is personally involved in both the hiring and subsequent merit allocation process for an employee, this significantly increases the amount of merit money allocated to the employee. Thus, much as a manager may become committed to a project or decision (see Keil et al. 2000 for a summary of the escalation literature) and escalate/reinvest when s/he should abandon it, a manager may become committed to a person s/he hires and continue to reward them even if they fall below objective standards for merit.

In the U.S. domestic literature, two main theories have been used to explain escalation: (1) responsibility for the initial decision (self-justification theory (Staw 1976, 1981)) and (2) an incorrect or perverse incentive structure (adverse selection/agency theory). In these theories, the individual either chooses their own view of reality (self-justification) or personal benefit

(Agency Theory - Jensen and Meckling 1976; Kanodia et al. 1989; Baiman 1990; Harrison and Harrell 1993) over the decision which benefits the firm.

If escalation of commitment to an individual is the basis of merit award discrepancies, then to the extent that differences exist between cultures in the role and focus of the individual, and hence their propensity to escalate, one might expect such differences to affect the way merit pay is awarded. Both self-justification and agency theory were developed in an individualist country and present the individual as behaving in a manner at odds with the group for his/her own psychic or monetary benefit. Theoretically, in a purely collectivist value system, escalating commitment and rewards to a poor performer who one has selected would be unacceptable behavior. While it is possible in a collectivist society that undeserved rewards may flow to all poor performers to maintain collective harmony, selecting particular poor performers to whom a supervisor is committed because of prior decisions seems unlikely. These theories therefore assume the precedence of the individual desire over group ethos. Thus, on the basis of these theories, Taiwanese evaluators are less likely than U.S. evaluators to escalate and, hence, award merit to poor performers they are committed to.

However, the U.S./Taiwanese differences are not so simple. As discussed above, Taiwanese are much higher on face than U.S. subjects. The effect of the face dimension may well be the opposite in this case to that of collectivism. In a face-driven society, reputation matters above all else. Thus, tension is created where it is possible that the potential loss of face (reputation) caused by confronting the failure of an employee the evaluator had previously selected and the desire to avoid loss of face may mitigate or override collectivist instincts and a Taiwanese evaluator could very well behave similarly to an American. Thus, although face is a separate dimension from individualism/collectivism, if it overwhelms the normally collectivist

perspective of the Taiwanese it creates a result similar to that found among individualist U.S. evaluators. Thus, the role of culture/values in the decision to escalate depends on the primary cultural difference that is operating at the time in the decision to be made. For a straight collectivist vs. individualist sample comparison, the result would be lower escalation; however for citizens of greater China the final decision is indicative of the crucial cultural variable in play. Perhaps the only way to develop a reliable prediction model will be to use past experience contained in the extant literature. It is to this literature that we now turn.

As we have discussed, we are not aware of any study that specifically looks at merit pay cross-culturally but there are published cross-cultural escalation studies. In many ways, the merit pay decision is similar to escalation of commitment in that the individual becomes committed to a project (in this case a person) and continues to invest in this project (person) after it ceases to be logical. Thus, it would seem the cross-cultural escalation research may provide some guidance. Chow et al. (1997), using U.S. and Taiwanese-Chinese subjects, find Chinese have a substantially greater preference for project continuance consistent with ‘face.’

In contrast to Chow et al. (1997), Harrison et al. (1999) and Sharp and Salter (1997) find the citizens of Greater China have a substantially lower preference for project escalation than subjects from individualist cultures³. These authors argue that this non-escalation is a collectivist response, where subjects do not wish to risk hurting the group by escalating. These are also in accord with Chow et al.’s (2000) conclusions on costly information sharing. Consistent with culture-based expectation, the quantitative results in this study indicated that Chinese vs. U.S. nationals’ openness of knowledge sharing was related to their different degrees of collectivism—

³ The first two studies use Taiwanese, while Salter and Sharp (1997) use Singaporeans and residents of Hong Kong SAR. All have similar face and collectivism scores.

the relative emphasis on self vs. collective interests—as well as whether knowledge sharing involved a conflict between self and collective interests.

It should be noted that Harrison et al. (1999) and Sharp and Salter (1997) do have some caveats. Sharp and Salter (1997) report that their results for the Greater Chinese subjects are situation (case) specific. Harrison et al. (1999) find significant escalation still exists within the Taiwanese sample, explained by face, but across samples (U.S. vs. Taiwan) the collectivist effect is more powerful.

Drawing the literature together, pure theory provides for a clash of values - collectivism vs. face. However, in only one of three possible scenarios would one expect a response from the Taiwanese that is identical to that of the individualist U.S. subjects. This scenario would be one where face concerns among Taiwanese dominate their collectivist or group centered orientation. On balance, empirical work suggests that collectivism is also fairly powerful and that Taiwanese are less likely to escalate than Americans. Therefore, for the award of merit, the alternate hypotheses are:

HA 1: Escalation of the Number of Merit Awards: U.S. Managers participating in both the hiring and subsequent evaluation of a poor performing employee will respond to prior involvement with the employee and, as a result, be more likely to allocate merit to these poor performers than will Taiwanese managers.

HA 2: Escalation of Merit Award Dollars: U.S. Managers participating in both the hiring and subsequent evaluation of a poor performing employee will award more dollars in merit bonuses to these poor performers than Taiwanese managers with similar prior involvement with the employee.

III. METHODOLOGY

Experimental Task

The task was developed based on the significant work experience of the authors and other colleagues in industry. The task was a realistic one that the student subjects (described in the

“sample” section) may already have dealt with or could face shortly after graduation. All subjects were given a set of materials and were informed that they were participating in a decision-making exercise⁴.

For the Taiwanese subjects, the instruments were translated into Mandarin using a fully bilingual Taiwanese citizen. The instrument was then back translated into English by a bilingual business professor and an auditor. All differences were resolved by the authors, one of whom is fully bilingual.

The instructions contained in the set of materials indicated that while the case abstracted many of the complexities of the actual business environment (to limit time demands and to aid interpretation of responses), decisions should be based on the limited available information. Further, to guard against a potential demand effect, the instructions indicated that several different versions of the case had been developed and that there was no "right" or "wrong" answer. The instructions also indicated that all responses were to remain anonymous and that no names should be put on any of the materials. Finally, subjects were instructed to work alone and they were reminded that they were to pay close attention to the specific written instructions provided in the materials.

Although all subjects were working simultaneously, the experiment can be viewed as two phases. In Phase I, subjects in the high responsibility condition made their initial decision (hiring recommendation of a "new" employee) based on a set of information for each of the three candidates and then proceeded to the merit allocation phase (Phase II). In the low responsibility (control) group, the employees to be rated had already been selected for those subjects and hence they focused solely on the merit allocation decision (Phase II). The details of both phases are described below.

⁴ An earlier version of this instrument had been utilized in a prior U.S. study.

Phase I – Creating Responsibility

High Responsibility Condition (Treatment Group)

The escalation of commitment phenomenon requires that individuals first commit to a course of action and later receive negative feedback based on their initial decision. After this occurs, it can be determined if these individuals escalate their commitment to a greater degree than is justified by the "objective" facts of the situation (Brockner and Rubin 1985). Thus, it is critical that the subject commits to his/her selected course of action.

Kiesler (1971) suggests that commitment increases with:

1. The explicitness of the act;
2. The degree of volition perceived by the decision maker;
3. The irrevocability of the act; and
4. The act's importance for the subject.

Each of these factors was considered in the development of the tasks performed. Those in the high responsibility condition (treatment group) experienced a commitment manipulation prior to completing the allocation task which the other group (control group) did not.

The additional materials provided to the treatment group subjects contained information relating to three prospective employees for the company for which the subject himself/herself was already employed. Subjects reviewed an on-campus interview questionnaire and a résumé for each of the three candidates. They were then asked to complete an Employee Selection Form. Subjects were informed that they would be making a hiring recommendation to the Human Resources Department and that they were to use this form to select one of the three candidates. They were also asked to provide at least three reasons why they selected this candidate. Further, subjects were told that the form might be used as part of their future performance evaluations as

it reflected their ability to select appropriate employees for the company. Regardless of which of the three candidates the subject selected, the subsequent performance evaluation information was exactly the same and only the name of the employee was manipulated.

These met the Kiesler (1971) guidelines as follows:

1. Subjects explicitly responded to the decision-making exercise by selecting one of the three candidates (Condition 1).
2. The instructions indicated that there was no right or wrong answer to the case; hence subjects were free to choose any candidate without prejudice (Condition 2).
3. To prevent subjects from changing their initial decision and to enhance the perceived irrevocability of the initial decision, subjects in the treatment group immediately proceeded with the merit evaluation (Phase II) materials based on their initial selection by opening one of three sealed envelopes, each dependent upon their employee selection decision (Condition 3). Any subject attempting to change his/her initial decision would have to open a second sealed envelope containing the information about one of the two candidates not initially selected, allowing the researcher to detect that the subject did not follow the proper procedures. The instructions to the subjects also indicated that their responses would affect the validity of the research and that their cooperation would help further subsequent research.
4. All subjects appeared to be conscientiously working on the materials and, thus, appeared to feel that their responses were important (Condition 4).

Low Responsibility Condition (Control Group)

These subjects had no prior experience with either of the employees being evaluated and, theoretically, would assign merit money based solely upon the performance evaluation information they reviewed for each employee. This low responsibility serves as the control group for the experiment as these participants did not receive any commitment manipulation.

Phase II - Merit

All subjects were told that they were the Manager of the Accounting Department for a division of Technology, Inc. The division was responsible for two product lines, and each had a cost analyst who reported directly to the manager (the subject). Subjects were told that they were participating in the company's merit process and their task was to review the performance of each analyst and determine what amount, if any, should be awarded to the analyst as merit pay. In the role of manager, each subject was provided with two performance evaluation forms (one completed by the employee's supervisor and one completed by the employee's manager) and some miscellaneous evaluative comments (from the Management Information Systems Manager, the General Manager and the Warehouse Supervisor) for the two employees.

After reviewing these materials, subjects were asked to complete a "merit allocation form" on which they awarded an amount of merit money, if any, to each of the employees (between \$0 and \$3,000 per employee). The form clearly stated that monetary awards were provided to employees demonstrating "exceptional performance" and not to motivate the employee. To minimize the likelihood of awarding money out of economic hardship (rather than where it was earned), subjects were told that the employees would receive a cost of living adjustment regardless of the decision on merit. After making the monetary allocation, subjects were asked to justify their decisions (even if no money was allocated).

Demographics

After making the decision on merit, all subjects completed a debriefing questionnaire giving demographic information (e.g., age, gender, academic class, etc.). To gauge the realism of the assignment, subjects were given two additional seven point questions on the realism and difficulty of the task. Both Taiwanese and U.S. subjects regarded the task as realistic and not particularly difficult (see Table 2). A slight cultural difference was detected in that the Taiwanese sample found the instrument and task statistically less realistic (4.84 vs. 5.58) and more difficult (3.35 vs. 2.89) than the U.S. sample. In the final test of hypotheses (see ANOVA results on Table 8) these items were added as control variables and found to have no significance.

[Insert Table II about here]

Sample

The sample consisted of experienced accounting students in Taiwan and the U.S. (see Table 2). The initial U.S. sample was 204 observations, however, 26 of them had incomplete data (missing values) and therefore 178 have complete data value and are included in the analysis. The Taiwanese data originally had 220 cases. Six of them have missing values, so 214 cases have complete data values. Both groups were experienced, although the U.S. group, while approximately the same age as the Taiwanese, had more work experience (6.80 vs. 4.05). Unexpectedly, more of the Taiwanese were graduate students (66% vs. 44%). The work experience differential may reflect the 22 month active military service in Taiwan, which typically occurs from 23-25 years of age. It also reflects the nature of the institutions a full time state school in Taiwan and a school which focuses extensively on educating already working adults in the U.S. In either case these students had significant work experience and would have been in the position previously either to be evaluated or to evaluate employees. Further, the

initial analysis⁵ shows that age, level of education and work experience are so highly correlated that work experience is used as a covariate for subsequent analysis⁶. In fact, the ANOVA (Table 8) shows that work experience bears no relationship to the decisions in the instrument, making the age and level of education variables also moot. Both groups were approximately equally divided in terms of men and women and gender was included as a covariate in Table 8.

IV. RESULTS

Initial results

Table 3 shows that Taiwanese managers are more likely to provide a merit award to poor performers than U.S. managers in the control group (63.6% vs. 21.3%). A Chi Squared test confirms at $\alpha \leq .01$ this. For good performers, both Taiwanese and U.S. subjects award merit pay to almost 100 percent of subjects and there is no significant difference. This supports the findings of the prior literature. Taiwanese want to offer some form of reward to each member of the group regardless of performance, in effect converting a portion of the merit pay to a salary or consolation prize to enhance group harmony. Not only does this find an expressed preference as prior literature but also that the Taiwanese subjects manipulate the system to achieve a more collectivist end result.

[Insert Table III about here]

⁵ As part of the initial analysis, and in the interest of parsimony, we looked for demographic variables that were highly correlated and similar. In this case, work experience was positively correlated at the $p \leq .01$ levels for both age and level of education.

⁶ In our ANOVA analysis, we tested various combinations of work experience and graduation to control for the possibility that the graduate experience may affect the students, but neither work experience nor graduate status had any significant explanatory power in explaining merit awards.

Confirming our findings on the number of awards, Table 4 shows that for the control group (no prior commitment), U.S. subjects provide a significantly lower average merit award (\$140.00) than Taiwanese (\$563.35) to poor performers. For the treatment group, which managers have hired, the numbers are less far apart at \$428.06 for the Americans and \$705.56 for the Taiwanese. We believe and will test later that this increase in the American number is an escalation of commitment situation. For U.S. subjects evaluating good performers in the control group, there is a very large upward shift in the mean award from \$140.00 to \$2862.50, a range of \$2722.50 or an increase of 1945%. Taiwanese subjects also increase the reward for good performers in the control group but by a smaller number and percentage from \$563.35 to \$2419.38, a range of \$1856.03 or 329%. Thus, it would appear at first glance that Taiwanese are more generous to poor performers than U.S. subjects.

[Insert Table IV about here]

Examining the t-tests of Tables 5 and 6, confirms the initial perception that U.S. subjects have a significantly wider mean range of dollar merit awards than those from Taiwan (at $\alpha \leq .05$). This is true in both the no prior commitment control group (\$2722.50 for the U.S., \$1855.45 for Taiwanese) and the prior commitment treatment group (\$2165.31 for the U.S., \$1750.78 for Taiwanese).

[Insert Tables V and VI about here]

Hypothesis Testing

Hypothesis 1 posits, in the alternate, that U.S. managers participating in both the hiring and subsequent evaluation of a poor performing employee will respond to prior responsibility by escalation of the number of merit awards to these poor performers. Taiwanese managers will either not respond or respond with a much lower rate of increase. Table 3 shows that when the escalation manipulation (high responsibility) is applied, the percentage of U.S. subjects giving merit to poor performers dramatically increases from 21.3% to 59.2% while the Taiwanese subjects increase is from 63.6% to 78.5%.

Table 7 confirms formally tests the initial results using a logistic regression and shows the following significant results:

1. The Taiwanese subjects give more awards overall.
2. Both groups escalate the number of awards to persons they have selected for employment.
3. Americans with prior responsibility escalate at a significantly higher rate than Taiwanese.

This strong commitment by Americans to a selected person parallels the findings of Harrison et al. (1999) that both Americans and Taiwanese escalate commitment to projects in which they had made the initial investment decision but the escalation of American is statistically significantly higher. Thus we reject the null of H1 in favor of the alternate.

[Insert Table VII about here]

Hypothesis 2 posits in the alternate that U.S. managers participating in both the hiring and subsequent evaluation of a poor performing employee will award significantly more dollars

in merit bonuses to these poor performers than Taiwanese managers in a similar high responsibility condition. Table 8 provides a test for Hypothesis 2, using the amount of merit dollars as the dependent variable. Nationality, treatment and performance are the independent variables and gender, work experience, realism and difficulty are the control variables. The ANOVA is highly significant and has an R^2 of .773. Of the control variables, only gender is significant. While women on the whole are less generous in their awards, none of the interactions between gender, nationality, treatment and performance or combinations thereof were significant.

Following the guidelines in Davidson and Sharma (1990) and Dalal (2001), Hypothesis 2 is tested through a three way interaction, USTRTPFM, which scores one if all three experimental conditions are present (high responsibility, U.S. evaluator and poor performance by the person being evaluated) and zero otherwise. USTRTPFM is significant at the $\alpha \leq .01$ level and the coefficient is positive. This indicates that if U.S. subjects have been involved in the hiring decision of a subject, they reward poor performers among those subjects at much higher dollar levels than Taiwanese in the same situation. Thus, we reject the null of Hypothesis 2 in favor of the alternate. Again, following the guidelines in Davison and Sharma (1990) and Dalal (2001), we do not interpret the main effects or two way interactions that are formed with components of the three-way interaction⁷.

V. CONCLUSIONS AND LIMITATIONS

This study tests and finds that U.S. subjects, who are higher in individualism than Taiwanese subjects, initially prefer to award relatively less merit than the Taiwanese to poor

⁷ Davison and Sharma (1990) and Dalal (2001) caution against interpreting main effects or lower level interactions when a higher one exists. The only significant main effect without a significant higher level interaction is the gender variable which indicates that across all samples and conditions women are less generous in their merit awards.

performers. The communitarian Taiwanese prefer to ‘spread the wealth around’ in the interest of harmony. What is interesting is that unlike previous studies which have been based on preference surveys or secondary data, this study places the Taiwanese subjects in a situation where they have the opportunity to award merit to individuals and they in fact use it as an opportunity to spread reward across all groups of performers. This is concomitant with a very powerful collectivist ethos in play. It also raises questions for Anglo companies in Taiwan as to whether their agency based reward systems will be effective and what other agency based control systems will fail.

Outside these initial parameters, U.S. subjects trying to avoid the appearance of failure are significantly more likely than Taiwanese to escalate their commitment to failing subjects that they have personally selected. They do this by awarding more and larger merit awards. This result parallels existing self-justification explanations for escalation, particularly Harrison et al. (1999), which finds individualistic cultures are more prone to reacting to their own perceived failure by escalating. This does not mean the U.S. subjects are alone as Taiwanese do escalate their commitment somewhat, possibly driven by face effects, but the escalation is at a significantly lower rate than U.S. subjects.

In considering these results, however, some limitations should be noted. First, this study uses a pencil and paper instrument administered in a classroom environment. To the extent that this atmosphere is artificial it may affect results. Second, the cases were comprised of relatively brief scenarios and did not contain all of the information that might normally be available. However, the information provided was realistic, consistent with prior research, based on actual scenarios and was deemed by industry professionals to be sufficient for our intended purpose. Finally, participating students were not randomly selected but instead were attending accounting

classes at their respective universities. Thus, generalizations should be made cautiously. While the results of this study may not generalize to other students or to the professionals it should be noted that due to the nature of the task (which is not complex), student subjects are expected to be adequate surrogates. As noted by Walters-York and Curatola (1996, 124), "Examination of past research results and existing theoretical arguments on the subject does not allow us to unequivocally conclude that the use of students as surrogate subjects is necessarily invalid." Given the significant experience of the students in our experiment, we believe this group can be more appropriately described as managers in a student environment. In addition, Walters-York and Curatola (1996, 125) state: "If conclusions about the effects of treatments are the same for student and non-student groups, the experimenter may then tentatively conclude that the student subjects were reasonable surrogates within the particulars of the experimental setting." The instrument in this study was used previously with accounting professionals (Brody et. al 2001) with similar results to our student subjects.

These results have consequences for U.S. firms investing in Taiwan or other parts of Greater China such as the PRC. The unwillingness of our Taiwanese subjects to award large differentials in merit pay removes one of the key motivation tools used in the U.S. control arsenal. This may well require a rethinking of incentives, possibly reorienting the control system to focus on group rewards or to make awardable items outside of the traditional pay structure such as non-monetary prizes (e.g. travel, appliances, and club memberships). It perhaps behooves researchers to examine the type of items that are valued and model a reward mechanism that has a stronger mapping of cultural norms to the control system.

On the other hand, U.S. firms with employees in Greater China may wish to alter their control system to one that requires less control for perceptual bias than might be the case in the

U.S. This might well offer a chance to build longer term and more open relationships between a firm and its Taiwanese employees or possibly allow managers in these subsidiaries to focus on issues other than the annual reward cycle. Finally, it also shows that U.S. managers are a source of strategic weakness in that they have greater risk of perceptual failure than managers from other cultures. This may require training and other mediating activity.

Table I
Standardized Culture Scores of Countries Discussed in this study

Country	Individualism	Uncertainty Avoidance	Power Distance	Masculinity	Confucianism/LTO
USA	1.92	-0.86	-0.83	1.28	-0.77
Australia	1.88	-0.64	-1.00	1.22	-0.69
Finland	0.80	-0.27	-1.13	-0.72	N/A
Japan	0.12	1.23	-0.25	3.11	1.30
Hong Kong	-0.72	-1.64	0.33	1.00	1.95
Singapore	-0.92	-2.59	0.58	0.50	0.00
Korea	-1.00	0.91	0.00	0.00	1.10
Taiwan	-1.04	0.18	-0.13	0.56	1.59
Hofstede (2000) Mean	43	65	60	39	48
Hofstede (2000) Standard Deviation	25	22	24	18	25

Note:

1. Standardized scores for Individualism, Uncertainty Avoidance, Power Distance and Masculinity are computed by subtracting the mean for 53 countries provided in Hofstede (2000) and dividing by the 53 country standard deviation for the same sample.
2. Standardized scores for Confucianism/LTO are computed by subtracting the mean for 23 countries provided in Hofstede (2000) and dividing by the 23 country standard deviation for the same sample.

Table II
Demographic Information on Participants

	COUNTRY	N	Mean	Std. Deviation	Std. Error	t-test for Equality of Means			
						Mean Difference	df	t	Sig. 2-tailed
AGE	USA	178	26.77	7.395	.554	.256	390	.307	.759
	TAIWAN	214	26.51	8.842	.604				
WORK EXPREIENCE	USA	178	6.80	7.271	.545	2.752	383	3.642	.000
	TAIWAN	214	4.05	7.656	.523				
REALISM	USA	178	5.58	1.201	.090	.743	389	5.617	.000
	TAIWAN	214	4.84	1.419	.097				
DIFFICULTY	USA	178	2.89	1.576	.118	-.463	390	-2.941	.003
	TAIWAN	214	3.35	1.530	.105				
GENDER	USA	178	.53	.501	.038	.009	377	.185	.853
	TAIWAN	214	.52	.501	.034				
GRADUATE	USA	178	.44	.498	.037	-.215	370	-4.345	.000
	TAIWAN	214	.66	.475	.032				

Notes:

1. Realism: 1=not very realistic, 4=somewhat realistic, 7=very realistic
2. Difficulty: 1=not very difficult, 4=somewhat difficult, 7=very difficult
3. Gender: =1 if female, =0 if male
4. Graduate: =1 if graduate, =0 if undergraduate

Table III
Number and Proportion of **Subjects Receiving** Merit by Group

Panel A: Poor Performers

	US CONTROL GROUP	US TREATMENT GROUP	TAIWAN CONTROL GROUP	TAIWAN TREATMENT GROUP	TOTAL
Number of Individuals					
No Merit	63	40	39	23	165
Merit	17	58	68	84	227
Total	80	98	107	107	392
Percentage of Individuals					
No Merit	78.75%	40.82%	36.45%	21.50%	42.09%
Merit	21.25%	59.18%	63.55%	78.50%	57.91%

Chi-Square Test: Poor Performers

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	64.191	3	0.000

Panel B: Good Performers

	US CONTROL GROUP	US TREATMENT GROUP	TAIWAN CONTROL GROUP	TAIWAN TREATMENT GROUP	TOTAL
Number of Individuals					
No Merit	0	0	0	1	1
Merit	80	98	107	106	391
Total	80	98	107	107	392
Percentage of Individuals					
No Merit	0.00%	0.00%	0.00%	0.93%	0.26%
Merit	100.00%	100.00%	100.00%	99.07%	99.74%

Chi-Square Test: Good Performers

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.670	3	0.445

Table IV
Descriptive Statistics of Dollar Merit Awards by Sub Groups

Group	Mean		Min		Max		Std. Deviation	
	U.S.	Taiwan	U.S.	Taiwan	U.S.	Taiwan	U.S.	Taiwan
Poor performer/ control group	140.00	563.35	0	0	1500	2167	332.68	606.04
Poor performer/ Treatment	428.06	705.56	0	0	2000	2667	522.19	638.14
Good performer/ control group	2862.5	2419.38	1000	333	3000	3000	346.55	626.73
Good performer/ Treatment	2593.37	2464.81	800	0	3000	3000	518.05	733.84

Table V
Mean Range of Awards by Country -- Good Minus Bad Performers:
A Test of Hypothesis 2 for the Control Group with No Prior Commitment

Variable: Difference in Merit Pay—Good minus Bad Performers (Same Evaluator)

Country	N	Mean	Std. Deviation	Std. Error	Mean Difference	df	t	Sig. 2-tailed
TAIWAN	107	1855.45	840.93	81.30	-867.05	168	-9.121	.000
USA	80	2722.50	440.65	49.27				

Table VI
Mean Range Of Awards by Country -- Good Minus Bad Performers:
A Test of Hypothesis 2 for the Treatment Group with Prior Commitment

Variable: Difference in Merit Pay—Good minus Bad Performers (Same Evaluator)

Country	N	Mean	Std. Deviation	Std. Error	Mean Difference	df	t	Sig. 2-tailed
TAIWAN	107	1750.78	894.58	86.48	-414.5	203	-3.517	.001
USA	98	2165.31	782.49	79.04				

Table VII
Logistic Regression

	Coefficient	Std. Error	Wald Statistic	df	Sig.
Constant	.556	.201	7.660	1	.006
TREAT	.739	.309	5.711	1	.017
USA	-1.866	.339	30.262	1	.000
USA*TREAT	.942	.461	4.173	1	.041

Definitions:

Dependent Variable: POORMAN=1 if \$ Merit given to a poor performer is greater than 0, else=0

Independent Variables:

TREAT 0=Control Group, 1=Treatment Group

USA 1=U.S., 0=Taiwan

Table VIII
ANOVA Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.879	0.773	0.770	577.848	2.114

Dependent Variable: MERIT

ANOVA Table

	Sum of Squares	df	Mean Square	F	Sig.
Regression	882,408,004	11	80,218,909	240.24	0.000
Residual	258,445,175	774	333,908		
Total	1,140,853,179	785			

Coefficients

Dependent Variable: MERIT=the amount of merit dollars

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics
	B	Std. Error	Beta			VIF
(Constant)	2,542.788	105.895		24.012	0.000	
TREAT	46.041	79.632	0.019	0.578	0.563	3.723
PERFORM	-1,855.452	79.002	-0.770	-23.486	0.000	3.673
USA	421.479	86.902	0.174	4.850	0.000	4.405
GENDER	-107.920	42.183	-0.045	-2.558	0.011	1.045
WORKEXP	1.525	2.824	0.010	0.540	0.589	1.094
REALISM	-0.509	15.814	-0.001	-0.032	0.974	1.106
DIFFICUL	-21.569	14.221	-0.028	-1.517	0.130	1.168
TREATPFM	96.192	111.466	0.035	0.863	0.388	5.656
USAPFM	-867.048	120.785	-0.301	-7.178	0.000	6.016
USATREAT	-297.058	117.671	-0.107	-2.524	0.012	6.101
USATRTPFM	461.001	166.093	0.126	2.776	0.006	7.087

Notes:

1. TREAT =1 if high responsibility, =0 if from control group
2. PERFORM =1 if the accountant is a poor performer, =0 otherwise
3. USA =1 if from U.S., =0 if Taiwan
4. GENDER =1 if female, =0 if male
5. WORKEXP = number of years of work experience
6. Realism measures the degree to which subjects regarded instrument and task as realistic on a 7 point scale with 7 being the most realistic.
7. Difficulty measures the degree to which subjects regarded instrument and task as difficult on a 7 point scale with 7 being the most difficult.

Interactions:

8. TRTPFM = Treat*Perform; 1 if the evaluator a poor performer they hired (treatment group), else 0.
9. USAPFM = USA*Perform; 1 if both a U.S evaluator is rating a poor performer, else 0.
10. USATRT = USA*Treat; 1 if a U.S. evaluator is rating a person they hired (treatment group), else 0.
11. USTRTPFM = U.S.*Treat*Perform; 1 if a U.S. evaluator is rating a person they hired (treatment group) who is a poor performer, else 0.

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