

A New Way of Making Ethical Decisions in Business Using Integrative Ethical Decision Making Model

Kyung Hoon Lee *

Corporate scandals have brought attention to organizations' ethical behavior. However, few theoretical or empirical developments have been made with respect to practically aiding organizations improve their ethical decision making. The purpose of this study was to develop a new model that can lead the decision makers to make more ethical decisions in business. The basis of this research was to explore a new way that can be readily and easily adopted by people in business. To be understandable and usable, the new model had to simplify theoretical complexity of "ethic" by categorizing and evaluating the ethicality in economic terms. The proposed model called Integrated Ethical Decision Making (IEDM) Model integrated a concept from decision analysis into a moral assessment system that evaluates the degree of ethicality of a decision. With the use of the IEDM Model, users are able to approach an ethically dilemmatic situation, identify ethical issues, analyze the ethical implications of each issue, and evaluate the ethicality of possible alternatives. The IEDM Model practically assists decision makers to acknowledge the ethical impacts pertain to the alternatives and ultimately select the most ethical alternative. To test the logical validity and applicability of the IEDM Model, an organizational case was examined. Future research on technological development and organizational implementation was recommended.

Keywords: Business, Integrated Ethical Decision Making (IEDM) Model, Decision Analysis

1. Introduction

While there has been a steady production of business ethics related research over the past decade, there is a noticeable gap in business ethics literature relating to ethical decision making within an organization. In recent years, numerous ethical decision making models have been developed and certain models have dominated the literature (e.g. Bartels, 1967; Chase et al., 1997; Engel et al., 2002; Laczniack, 1983; Schumann, 2001; Spurgin, 2004). However, most of the models focus on explaining the behavioral aspects of decision makers (Chau & Siu, 2000; Ferrell & Gresham, 1985; Hunt & Vitell, 1986; Jones, 1991; Robertson, 1993; Trevino, 1986), rather than focusing on the practical use of the model or helping decision makers improve their ethical decision making performances.

While ethical decision making related research is growing, little research has been aimed toward practical usage in managerial decision making in organizations.

*Dr. Kyung Hoon Lee, Assistant Professor of Management, Department of Business, Union College, KY, USA. E-mail: klee@unionky.edu

Lee

Consequently, the gap between theory and practice continues to expand. In an effort to bridge this gap, this study takes an exploratory approach toward developing a new model – that is, an Integrated Ethical Decision Making (IEDM) Model that encompasses the theoretical aspects of the existing ethical decision making models and at the same time be more practical. To enhance the practicability, decision tree analysis technique is adopted.

2. Integrated Ethical Decision Making (IEDM) Model

2.1 Theoretical Basis of the IEDM Model – Moral Assessment Matrix

In order to ensure that the IEDM Model is theoretically sound, it is important to establish a complete set of evaluation criteria to assess the ethicality of decision alternatives. In this research, an evaluation system that assesses the ethicality of decision alternatives is called the moral assessment matrix. The IEDM Model incorporates two ethical theories to provide a comprehensive conceptual base for advanced ethical analysis. The two classical ethical theories – deontology (Barry 1979; Pratt, 1994; Ross, 1930; Vitell et al., 1993; Wong & Beckman 1992) and teleology (Beauchamp & Bowie, 1983; Boyce & Jensen, 1978; Gandz & Hayes, 1988; Garvin, 1953; Reidenbach & Robin, 1988; Tsalikis & Fritzsche, 1989; Wong & Beckman, 19992) – form the basic criteria for the moral assessment matrix that evaluates the ethicality of decision alternatives. Deontological criteria are represented by the seven *prima facie* duties identified by Ross (1930) that have been claimed as the most significant obligatory duties within the literature. The deontological aspect of the decision alternatives is determined to be either “good” or “evil” under the proportionality theory, and then carefully examined according to each *prima facie* duty. For the purpose of this study, Ross’s *prima facie* duties are ranked from highest to lowest: justice, non-maleficence, reparation, fidelity, self-improvement, gratitude, and beneficence. More weight is accorded to the higher ranked moral duties, and less weight is accorded to the lower ranked moral duties. Whether all consequences of actions taken in business settings can be encompassed by these seven *prima facie* duties can be questioned. However, considering the generalized nature of the *prima facie* duties in a social context, this research assumes that all positive and negative consequences are within the boundaries of seven *prima facie* duties.

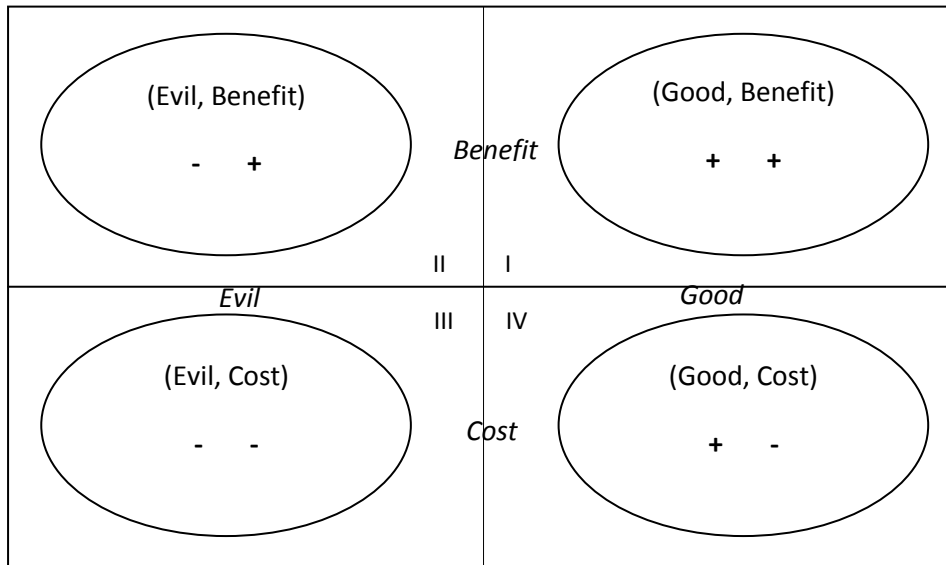
On the other hand, the teleological – namely utilitarianism – aspect of the decision alternatives is evaluated in terms of economic loss or gain. The cost-benefit analysis is used to assess the amount of good involved. Cost-benefit analysis takes into account only the economic losses and gains of the consequences of an action. If the consequence is beneficial to the groups of people affected, then positive points are assigned. Conversely, if the consequence is expected to cause harmful effects on the group of people affected, then negative points are assigned.

The good-evil assessment of social consensus and the cost-benefit analysis forms the basic dimension of the moral assessment matrix. The good-evil criterion forms the horizontal axis (positive for good and negative for evil), while the cost-benefit criterion forms the vertical axis (positive for benefit and negative for cost). With the two axes,

Lee

four dimensions are determined to differentiate consequential effects: 1) good-benefit dimension applies to the consequence that is socially accepted as good and benefits the parties involved; 2) evil-benefit dimension applies to a consequence that is socially accepted as evil but benefits the parties involved; 3) evil-cost dimension applies to a consequence that is socially accepted as evil and harmful to the parties involved; and 4) good-cost dimension applies to the consequence that is socially accepted as good, but has harmful effects on the parties involved. The four dimensions of the moral assessment matrix are illustrated in Figure 1.

Figure 1: Dimensions of the Moral Assessment Matrix

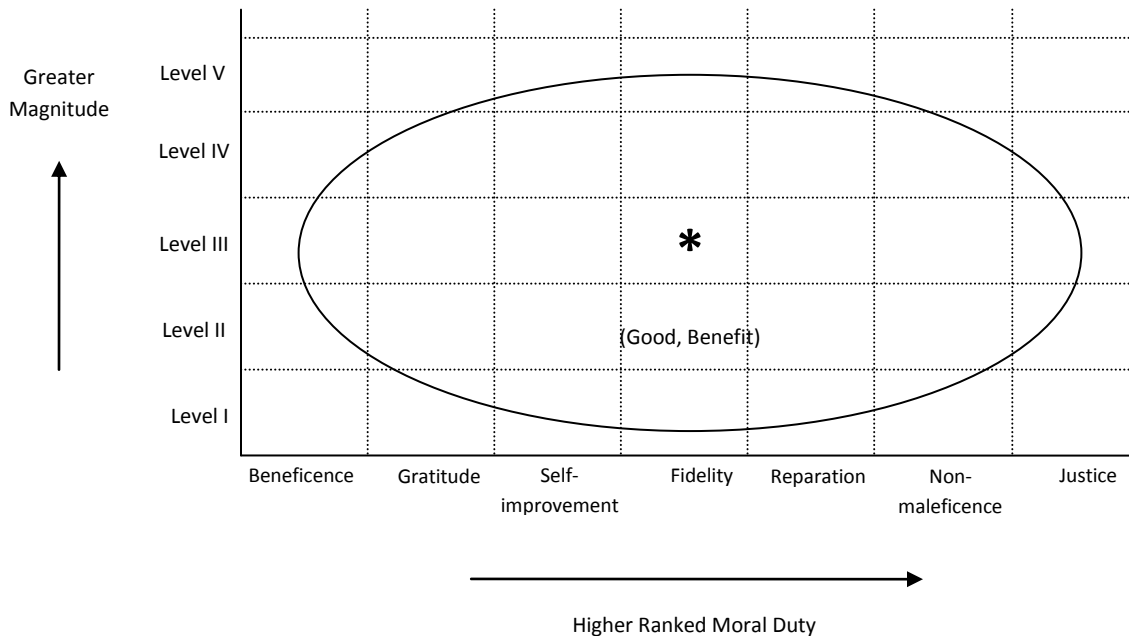


Magnitude of Consequences

In addition to identifying the good-evil and cost-benefit aspects, each consequence of an action should be evaluated in terms of its magnitude. According to Jones (1991), an act that harms 1000 people has greater magnitude than an act that harms 10 people. The amount of benefits and costs are not quantified nor monetarily identified. Instead, the amount of benefits and costs are reduced to commensurable levels that reflect their relative quantity. For example, level 1 represents the lowest magnitude of consequence and the smallest number of people affected. Meanwhile, level 5 represents the highest magnitude of consequence and the largest number of people affected. Among the four dimensions indicated in Figure 1, the good-benefit dimension is enlarged in Figure 2, presenting a detailed view of the dimension including seven moral duties and magnitude levels.

Lee

Figure 2: Detailed View of Good-Benefit Dimension

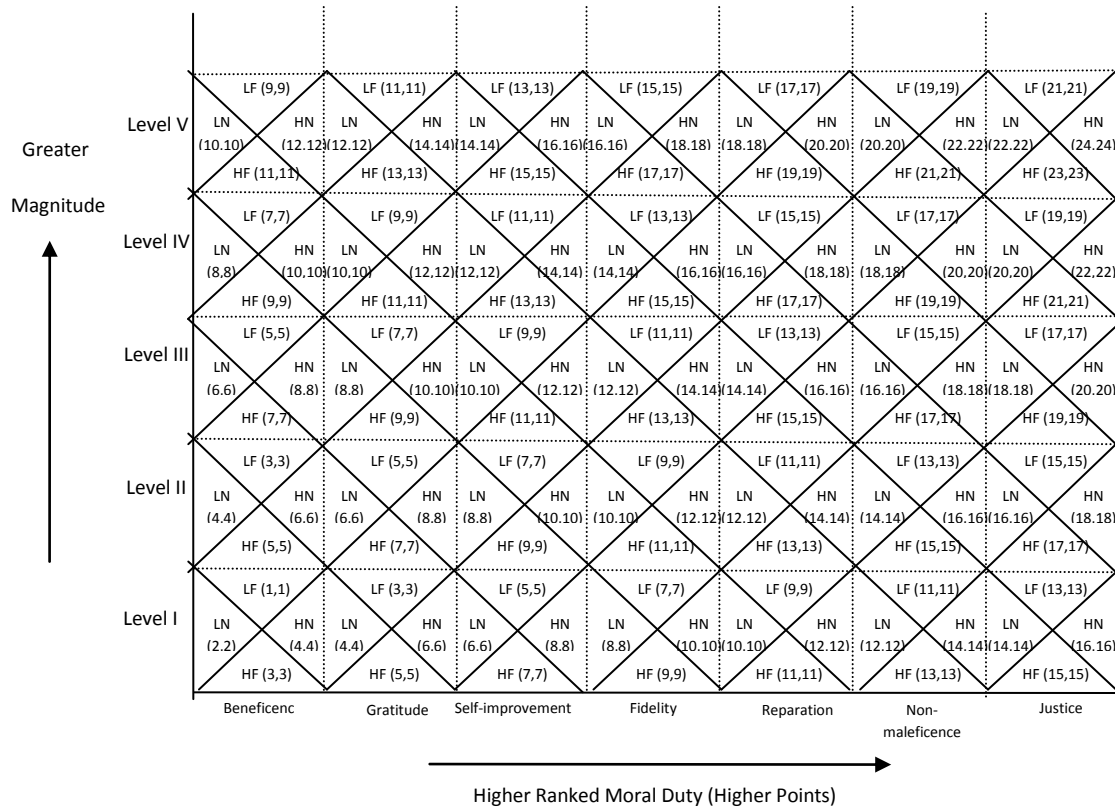


Once the consequence has been identified as good-evil, cost-benefit, and magnitude of high-low, the next step is to estimate the probability, immediacy, proximity, and concentration effect of such a consequence. According to Jones (1991), each of the four factors has the following characteristics:

- (1) Probability of effect – producing a vehicle that has potential dangers to drivers routinely has greater probability of harm than producing a vehicle that endangers drivers only in certain conditions.
- (2) Temporal immediacy – releasing a drug that has acute nervous reactions immediately has greater temporal immediacy than releasing a drug that takes 20 years to develop into nervous disorders.
- (3) Proximity – layoffs in a person's work unit have greater proximity than layoffs in a remote location.
- (4) Concentration effect – a change in a warranty policy denying coverage to 10 people with claims of \$10,000 has more concentrated effect than a change in a warranty policy denying coverage to 10,000 people with claims of \$10.

The probability of the consequence refers to the degree of certainty pertaining to the occurrence. The IEDM Model takes into account only two levels of probability: high and low. For the sake of simplicity, the remaining three factors – immediacy, proximity and concentration – are combined to one representative criterion, nearness. The model assumes only two levels of nearness exist – near and far. For example, if automation of a plant leads to laying off some employees, the probability of the action is high and the feeling of nearness is near. The final view of the good-benefit dimension including point allocation is indicated in Figure 3.

Figure 3: Point Allocation of Good-Benefit Dimension



L = Low probability of occurrence

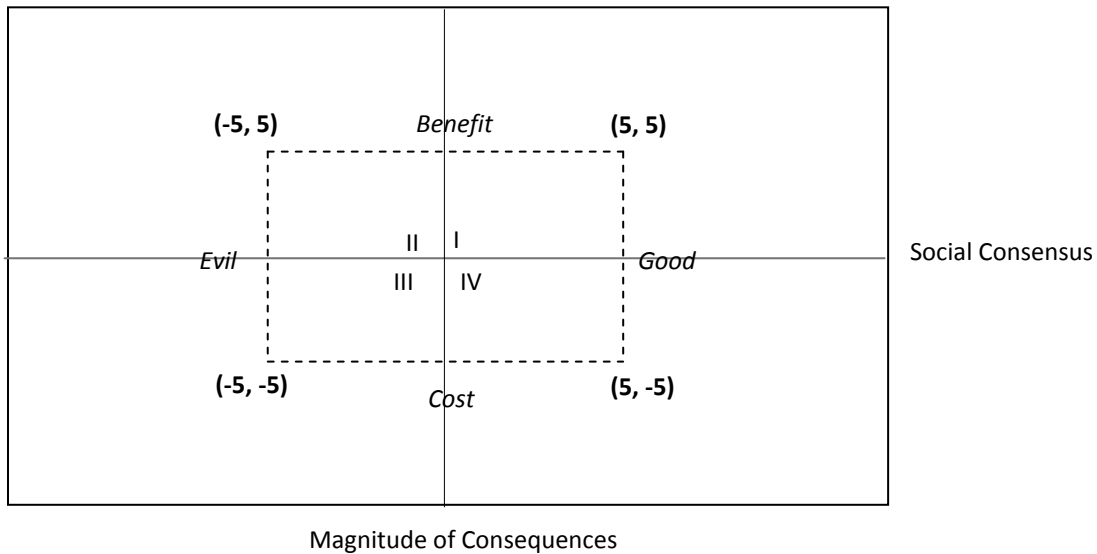
H = High probability of occurrence

N = Immediate, close, concentrated

F = Future, distance, de-concentrated

Each box is composed of one level of magnitude and one moral duty and is divided into four dimensions labeled as LF (low probability and farness), LN (low probability and nearness), HF (high probability and farness), and HN (high probability and nearness). Each dimension is allocated different points that are weighted according to the significance of the moral duty, number of people affected, probability, and sense of nearness. Same numbers are duplicated in a parenthesis; the first number refers to the point of either good or evil and the second number refers to the point of either benefit or cost. In Figure 1, the signs of the four dimensions differ in terms of good-evil and benefit-cost effects of the consequence. Because Figure 3 displays the point system of good-benefit dimension, all the points are in positive sign. The point system of each dimension is symmetrical in nature, meaning it maintains the same absolute value of the points in all four dimensions. For example, (5, 5) in good-benefit dimension will change to (-5, 5) in evil-benefit dimension, (-5, -5) in evil-cost dimension, and (5, -5) in good-cost dimension. The symmetrical nature of the four dimensions is illustrated in Figure 4.

Figure 4: Symmetrical Point System



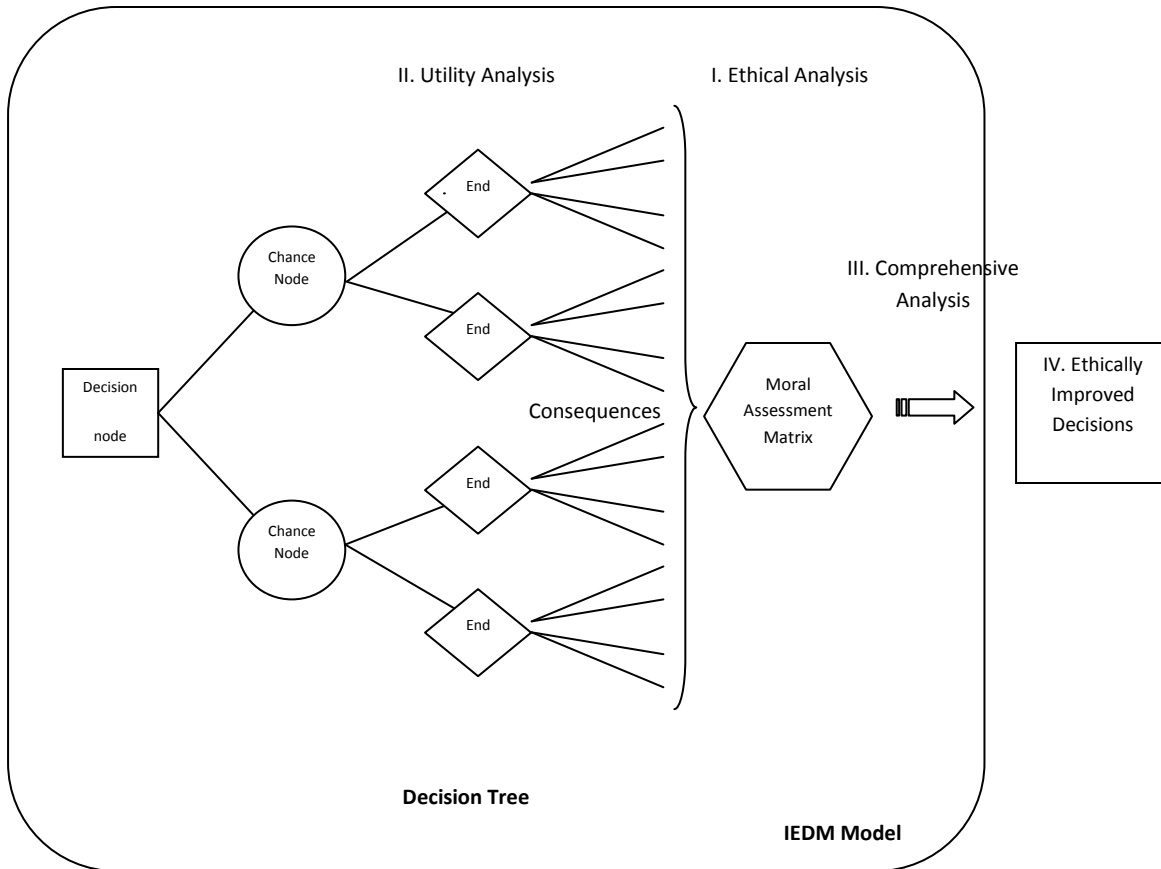
The consequences of an action are assigned to proper dimensions and points according to the score representing ethicality. Once the ethical points are allocated accordingly, the two kinds of points that are in parenthesis – good-evil and benefit-cost – should be added to determine overall ethicality of an action. The sum of scores determines the quantified ethical worth of an action – that is, the total ethical rightness or wrongness of an action. As good-beneficial consequences are assigned (+) signs and evil-harmful consequences are assigned (-) signs, the sign of the sum indicates whether an action is ethical (+) or unethical (-).

In addition, the absolute value of the score signifies the degree of ethicality associated with an action. Therefore, the larger the absolute value of the scores, the more ethical or unethical is the result of an action. For example, if the total score is (+21, +21), the ethical score indicates that taking the action is ethically sound. If the total score is (-21, -21), it means that taking the action is undesirable from an ethical standpoint. Lower scores with absolute values approaching zero imply a higher degree of uncertainty in determining whether an action is ethical or unethical. Allowing for a certain degree of subjectivity in using this moral assessment matrix, this research follows Wong & Beckman (1992) in determining +5 to -5 as an uncertain range. If the total score falls between +5 and -5, it implies that the determination is ethically uncertain.

2.2 Structural Basis of the IEDM Model – Decision Tree

The structure of the IEDM Model incorporating the concept of the decision tree is presented in Figure 5.

Figure 5: Structure of the IEDM Model



The first stage of the IEDM Model analyzes the ethical implications of the possible consequences associated with each action. At this stage, a comprehensive ethical analysis takes place by identifying direct and secondary effects on the stakeholders and/or society. The ethicality of the consequences is evaluated by the moral assessment matrix, which is represented by the ethical score in quantified economic values. Once appropriate ethical scores are allocated to each consequence, the sum of the ethical scores is calculated in order to determine the total rightness or wrongness of the action.

The second step of the model displays the decision problem in a decision tree including costs, expected profit, and probability. These factors constitute the decision criteria used to evaluate the decision alternatives in a strictly utilitarian manner. A decision tree starts with the decision node (root node) and the branches lead to the chance nodes, which lead to the endpoints where the net profit of the root node is calculated. The net profit is called the expected utility of the outcome representing the final value of each endpoint (alternative). The alternatives are ranked based on their expected utility. Therefore, the alternative with the highest expected utility is selected as the optimal solution to the problem.

Lee

The ethicality calculated by the moral assessment matrix (step 1) and the expected utility from the decision tree (step 2) will then be combined and integrated to evaluate the decision alternatives morally and economically. This is when two-dimensional analysis takes place. Based upon the results obtained from the comprehensive analysis procedure, an ethically justifiable alternative is selected or created. Finally, an ethical decision is made and the decision maker takes action.

In practice, the expected utility and expected ethicality of outcomes derived from the IEDM Model should be interpreted as a comprehensive analysis of the various parties either directly or indirectly involved in the decision making process. All conflicts need to be addressed, considered, and managed in order to make ethically sound decisions in business.

3. Methodology

To test the logical validity and practical usability of the IEDM Model, an organizational case was examined. The ethical implications of the organization's decision alternatives were analyzed and evaluated using the IEDM Model to demonstrate how the model could assist decision makers make more ethical decisions.

3.1 Setting

The organization selected was C&M Inc., a small interior design company that specializes in upholstery. A brief presentation summarizing the research project was made to the owner of the company. The owner of the company gave positive response to cooperate in providing data requested. C&M Inc. located in Fairfax, Virginia became the research site for this study. In 2007, C&M employed 25 employees (1 owner, 3 managers, and 19 sewers) and their annual income for 2006 was approximately \$1.38 million.

3.2 Participants

Among C&M's 25 employees, 4 (1 owner, 1 material manager, 1 mechanical manager, and 1 marketing manager) were directly involved with the decision making processes. The identified 4 employees agreed to be interviewed. They were contacted during site visits and an interview was arranged based on the availability.

3.3 Data Collection and Analysis

The participants were interviewed twice. The first interview was an in-depth open-ended interview that gathered background information and ethical perspectives of the participants. This interview also collected information about ethical concerns on possible decision alternatives. The second interview was a group interview that clarified the research purpose and delivered results.

For the initial in-depth open-ended interview, a three-part semi-structured interview guide was developed to investigate the ethical issues in current decision making. The

Lee

guide was used to ensure key questions were covered during each interview. The guide allowed other topics to emerge in the course of the interview. The interviewees signed a consent form before the interview. Interviews lasted up to an hour. Interviews were audio-recorded with permission from the participants and were later transcribed.

After the initial interview, data were examined and analyzed using the IEDM Model. Once the analysis results had been organized, a group interview was arranged with all participants. During the follow-up interview, the concept, purpose, and method of the IEDM Model were explained, along with the results obtained by applying the model. Understanding the purpose and structure of the IEDM Model, the respondents actively participated in the creation of alternatives that accommodated the analysis results. Through this interactive process, the model influenced the individuals' moral development and led them to make more ethical decisions.

4. Findings

Findings from the initial in-depth open-ended interview are categorized as the company's ethical culture, decision making context, organizational choices, and decision impacts.

Ethical culture: The company's ethical culture is well described in the owner's unique employee policy: *"treat the employees as valued partners, because employees' trust in the company is a fundamental element of business ethics and realization of corporate social responsibility."* Poor working conditions are common in the upholstery industry; however, C&M's management team try to treat workers (mostly minorities) as fairly as possible.

Decision making context: Since the late '90s, competition has increased among upholstery subcontractors, lowering the supply price (below the tacitly agreed industry price). The use of the US-made fabrics made C&M disadvantageous in price competition. Heightened competition and slowing sales (especially in winter), may lead to a huge net loss. Continued slow sales could result in serious financial crisis. C&M was in desperate need of reducing the operating expenses.

Organizational choices: Two possible decision alternatives were identified. 1) Reduce the supply price (note: immediate cost saving is realizable through the dismissal of at least four sewers is inevitable). 2) Import inexpensive fabrics from China (note: can realize cost savings when fabrics are sold, but bulk orders may increase inventory).

Decision impacts: 1) Reducing the supply price – The upside of this alternative are immediate cost savings and prevention of net loss and/or serious financial crisis. The downside of this alternative are that it undermines the spirit of fair play, contradicts to the company's ethical philosophy of employee treatment, financially hurts laid off employees and their families, poses possibility of unethical organizational conduct and misuse of foreigners' visa status, and may adversely affect employee motivation that can lead to decreased productivity. 2) Importing materials from China – The upside of this alternative is long term cost savings from buying cheap materials and placing bulk

Lee

orders. The downside of this alternative are the difficulty of immediate cost savings, high inventory risk from placing bulk orders, and lower level of quality and service provided to partners and customers.

5. The IEDM Model Application

5.1 Step One – Moral Assessment Matrix

The moral assessment matrix is applied to the findings from the initial interview. Two set of moral assessment matrix are developed for each decision alternative. The result of first decision alternative “supply price reduction” is given below in Table 1.

Table 1: Application of Moral Assessment Matrix to Supply Price Reduction

Group	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Ethical
Affected	Good - Evil	Benefit - Cost	Magnitude	Moral Duty	Probability	Nearness	Score
C&M	Good (+)	Benefit (+)	Level III	Non-maleficence	High	Near	(+18, +18)
CEO	Good (+)	Benefit (+)	Level I	Fidelity	High	Far	(+9, +9)
Subcontracting companies	Good (+)	Benefit (+)	Level IV	Beneficence	High	Near	(+10, +10)
Competitors	Evil (-)	Cost (-)	Level IV	Justice	High	Near	(-22, -22)
Competitors	Evil (-)	Cost (-)	Level IV	Non-maleficence	¹ Low	Far	(-17, -17)
Employees	Evil (-)	Cost (-)	Level II	Reparation	High	Near	(-14, -14)
Employees	Evil (-)	Cost (-)	Level II	Non-maleficence	High	Near	(-16, -16)
Employees	Evil (-)	Cost (-)	Level II	Fidelity	² Low	Far	(-9, -9)
C&M	Evil (-)	Cost (-)	Level III	Beneficence	³ Low	Far	(-5, -5)
Sum							(-46, -46)

¹ The probability of C&M’s price reduction causing “vicious circle of price reductions” across the industry is low, since the competitors might still keep the tacitly agreed price.

² Although the unethical organizational conduct misusing the foreign sewers’ unfavorable visa status has been secretly practiced across the industry, C&M might not necessarily discriminate or exploit their sewers.

³ Negative effects on employee motivation and public relation might not directly affect front-line sales.

According to calculations from the matrix, the reduction of supply price has an ethical score of (-46, -46), implying the act is more evil than good, and has a greater cost than

Lee

benefit. Furthermore, the reduction of supply price and is explicitly “unethical” as the value falls far outside the uncertain range of +5 and -5.

The result of the second decision alternative “importation from China” is presented below in Table 2.

Table 2: Application of Moral Assessment Matrix to Importation from China

Group	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Ethical
	Good - Evil	Benefit - Cost	Magnitude	Moral Duty	Probability	Nearness	Score
C&M	Good (+)	Benefit (+)	Level III	Benevolence	¹ Low	² Far	(+5, +5)
Employees	Good (+)	Benefit (+)	Level II	Non-maleficence	High	Near	(+16, +16)
Subcontracting companies	Evil (-)	Cost (-)	Level IV	Benevolence	High	Near	(-10, -10)
Consumers	Evil (-)	Cost (-)	Level V	Benevolence	High	Near	(-12, -12)
Sum							³ (-1, -1)

¹ The probability of C&M realizing substantial cost savings from importing cheap materials from China is low because material liquidation is less likely to occur with the current sales trend.

² Considering the ongoing slow-down sales trend, C&M projects the sales will not likely to recover in near future.

³ The sum is between the uncertain range of +5 and -5. that is. it is uncertain to determine whether an action is ethical or

According to calculations from the matrix, the ethical scores for importing fabrics from China are (-1, -1). Considering the signs are both negative, the tendency of the act is more toward evil than good and presents more cost than benefit; however, the values fall inside the uncertain range of + 5 and -5, implying that the determination of ethicality of this act is “uncertain” in nature. The point allocation of both decision alternatives is included in Appendix.

5.2 Step Two: Decision Tree

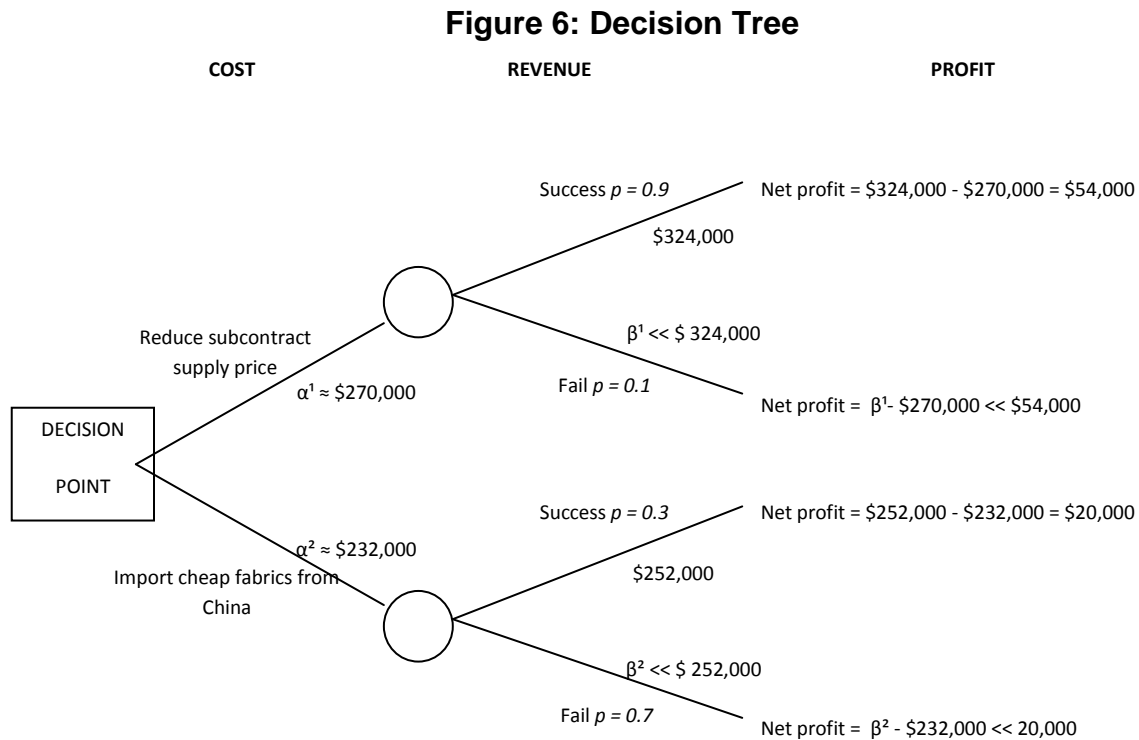
The information on the company’s financial data obtained from the initial interview is summarized as follows:

- Sales in 2006 totaled approximately \$1.38 million, a 7% drop from 2005.
- Projected revenue for 2007 is approximately \$1.08 million, a 22% drop from 2006.
- If the company reduces subcontract supply price by 10%, upholstery orders for December through March are projected to reach \$324,000.
- To make up the loss of \$36,000 from the 10% price reduction, labor costs need to be reduced from \$180,000 (19 sewers) to \$144,000 (15 sewers).

Lee

- With labor cost saving, operating cost is projected to be \$270,000.
- If the company dismisses more than four sewers, the company may save over \$108,000 annually.
- Without supply price reduction, upholstery orders for December through March are projected to be \$252,000 (22% less than the projected sales considering supply price reduction).
- If the company imports inexpensive fabrics and materials from China, the cost of materials can be reduced 40% from \$68,000 to \$41,000.
- With material cost saving, operating costs are projected to be \$232,000.
- If sales can be generated to liquidate the materials imported from China, the company may save up to \$81,000 annually.

A decision tree is developed based on the facts above. The decision tree is shown in Figure 6.



$\alpha^1 = \$270,000 = \$144,000$ (labor cost for 15 sewers) + $\$97,200$ (material cost) + $\$28,800$ (miscellaneous)

β^1 = revenue less than \$324,000, due to upholstery subcontract order less than expected

$\alpha^2 = \$232,000 = \$171,000$ (labor cost for 19 sewers) + $\$41,000$ (material cost reduced by 40%) + $\$20,000$ (miscellaneous)

β^2 = revenue less than \$252,000, due to continuing sales decrease

For the sake of this study, the probability of successful achievement of the first decision alternative “supply price reduction” is assumed 90%, while the probability of unsuccessful attainment is assumed 10%¹. Considering higher risk factors pertaining to the second decision alternative, the probability successful achievement is determined to

Lee

be 30%, while the probability of unsuccessful attainment is determined 70%ⁱⁱ. This decision tree can be formulated as shown in Table 3.

Table 3: Formulation of the Decision Tree

Node	Node Type <i>tiv</i>	Number of Branches <i>bi</i>	Branch Index <i>j</i>	Branch Probability <i>pi</i>	Next Node <i>nij</i>	Utility <i>ui</i>
1	decision	2	1 2		21 22	
21	chance	2	1 2	0.9 0.1 0.3 0.7	31 32	
22	chance	2			33 34	
31	endpoint					\$54,000
32	endpoint					$\beta^1 - \$270,000$
33	endpoint					\$20,000
34	endpoint					$\beta^2 - \$232,000$

The decision node is assigned a node index of 1, followed by the two chance nodes which are assigned 21 and 22. Accordingly, four endpoints are assigned in the order of 31, 32, 33, and 34. Applying the definition of expected utility by Kirkwood (1993), the expected utility EU [*i*] for node *i* can be calculated as follows:

$$\begin{aligned}
 EU [1] &= \max \{EU[21], EU[22]\} \\
 &= \max \{p_{21,1} \times EU [31] + p_{21,2} \times EU [32], p_{22,1} \times EU [33] + p_{22,2} \times EU [34]\} \\
 &= \max \{0.9 \times 54,000 + 0.1 \times (\beta^1 - 270,000), 0.3 \times 20,000 + 0.7 \times (\beta^2 - 232,000)\}
 \end{aligned}$$

In this case, the expected utility of the supply price reduction is the net profit of \$54,000 with 90% probability, plus the net profit of less than \$54,000 with 10% probability (A), while the expected utility of the importation is the net profit of \$20,000 with 30% probability, plus the net profit of less than \$20,000 with 70% probability (B). Among these two values (A) and (B), the decision tree selects the one with the higher value of expected utility.

The value of β^1 represents the total sales for four months which is less than the projected value of \$324,000. In the sense that β^1 cannot exceed \$324,000, (A) cannot exceed the value of \$54,000. Additionally, β^1 should have a value over \$270,000 in order for the profit ($\beta^1 - 270,000$) to have positive value. When β^1 is \$270,000, (A) is minimized to \$48,600ⁱⁱⁱ. Meanwhile, the value of β^2 represents the total sales for four months which is less than the projected value of \$252,000. Considering that β^2 cannot exceed \$252,000, (B) cannot go beyond the value of \$20,000. Similarly, β^2 should be at least \$232,000 to avoid net loss. In this sense, the minimum value of (B) is \$6,000 based on net profit assumption. Calculations for the process of expected utility showing the minimum value of (A) and (B) can be found in Table 4.

Table 4: Expected Utility Calculation

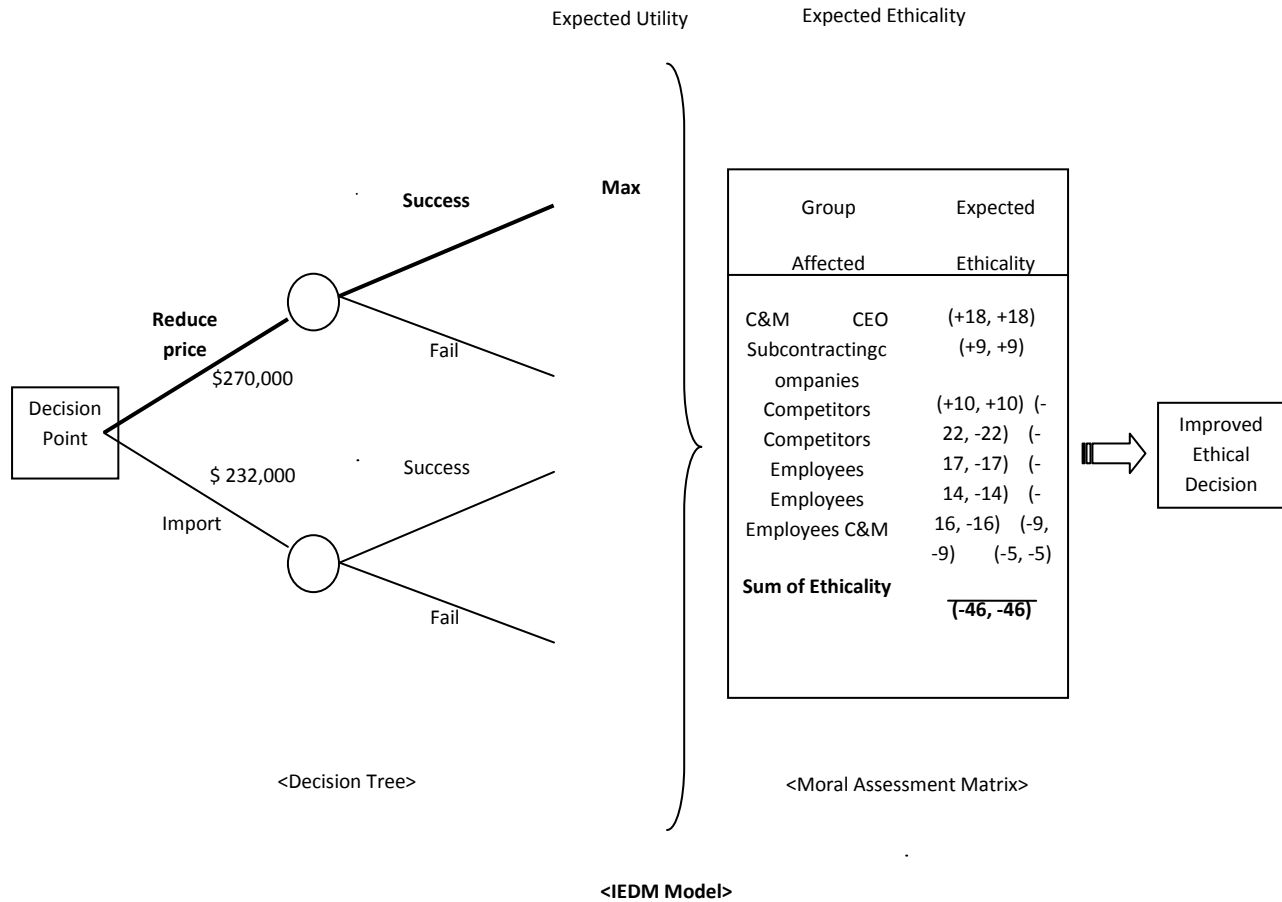
Expected Utility of Supply Price Reduction (A) $270,000 \leq \beta^1 < 324,000$		Expected Utility of Importation from China (B) $232,000 \leq \beta^2 < 252,000$	
$0.9 \times 54,000 + 0.1 \times (\beta^1 - 270,000)$		$0.3 \times 20,000 + 0.7 \times (\beta^2 - 232,000)$	
$\beta^1 < 324,000$	$48,600 + <5,400 = <54,000$	$\beta^2 < 252,000$	$6000 + <14,000 = <20,000$
$(\max)\beta^1 = 323,000$	$48,600 + 5,300 = 53,900$	$(\max)\beta^2 = 251,000$	$6000 + 13,300 = 19,300$
$322,000$	$48,600 + 5,200 = 53,800$	$250,000$	$6000 + 12,600 = 18,600$
$48,600 + 5,100 = 53,700$	$\beta^1 = 321,000$	$\beta^2 = 249,000$	$6000 + 11,900 = 17,900$
$\beta^1 = 320,000$	$48,600 + 5,000 = 53,600$	$\beta^2 = 248,000$	$6000 + 11,200 = 17,200$
...
$\beta^1 = 270,000$	$48,600 + 0 = 48,600$ (min)	$\beta^2 = 232,000$	$6000 + 0 = 6000$ (min)
$\beta^1 = 269,000$	$48,600 - 100 = 48,500$	$\beta^2 = 231,000$	$6000 - 700 = 5,300$
$\beta^1 = 268,000$	$48,600 - 200 = 48,400$	$\beta^2 = 230,000$	$6000 - 1400 = 4,600$
...

According to the expected utility calculation, it is reasonable to conclude that the expected utility of supply price reduction (A) is always larger than the expected utility of importing materials from China (B)^{iv}. Therefore, the decision tree suggests supply price reduction as the preferred solution for C&M.

5.3 Step Three: Comprehensive Analysis

Figure 7 presents the analysis procedure including both moral assessment matrix and decision tree. Figure 7 visualizes the idea of considering of both ethical and economical perspectives that form the basis of the IEDM Model.

Figure 7: The IEDM Model



If the supply price is reduced with maximum expected utility, the parties involved will probably experience negative impacts, rendering the act “unethical.” In particular, the result shows that the impact on competitors and employees are strongly negative. Thus, in order for the management of C&M to reach an improved ethical decision, ethical consideration of both parties appears inevitable.

5.4 Step Four: Decision Making

In this phase, the decision maker is able to make strategic decisions based on the results of the IEDM Model application. The ideal situation is when an alternative possess both maximum utility and a strong ethical score. However, this rarely happens in real business operations. In cases where the alternative with highest expected utility is determined to “unethical,” new alternatives should be created in order to mitigate the evil effects. In this sense, C&M’s case is a typical example that requires creation of new alternatives to improve overall ethicality of the consequences.

In C&M’s case, the alternative with the highest expected utility resulted in a strong inclination toward evil and cost, representing an unethical action. The consequences

Lee

that received strong negative points were related to the impact on competitors and employees. After the second group interview, participants reached the conclusion that the following principles should be included in the new alternatives: 1) the spirit of fair play and the free competition system must be safeguarded through justifiable price adjustments and 2) the employees should be protected through provision of adequate severance pay for dismissals and prohibition of unfair discrimination or exploitation.

The reduction of supply price violated the spirit of fair play by breaching the tacit agreement on the supply price amongst subcontractors which may lead to a vicious circle of price reductions. In other words, the act of reducing supply price for the subcontracting companies is not fair from the industrial perspective, considering the act may result in depriving other companies of market share. To prevent the unethical consequences associated with supply price reduction, C&M needs to find a new market where price competition is justified.

One alternative for safeguarding justifiable price competition is government bids. Government bids foster small and mid-size organizations for include local, state, and federal projects across all industries. For example, various upholstery projects and contract opportunities are officially announced on many websites (e.g. <http://www.bidmain.com/>, www.governmentbids.com/, <http://www.govcb.com/>). Government bids would constitute a new opportunity for C&M that might lead to increased profits, and at the same time justifies competitive pricing.

Another way to safeguard justifiable price competition would be the establishment of an upholstery institute. The upholstery institute could be established based on support from competitors within the industry. The main role of this upholstery institute would be managing and maintaining supply prices across the industry. The upholstery institute could prevent unjustifiable monopolization due to unreasonable price reductions by setting up a range of upholstery subcontract supply prices. The presence of such institute could obviate evils resulting from excessive price competition. The management of C&M agreed that the majority of competitors would probably agree to the establishment of such an institute because it has the potential of increasing long-term benefits for the entire industry.

The potential evils related to the layoff of at least four sewers must also be mitigated. Negative effects experienced by the laid off workers may include financial difficulty throughout the winter season and low probability of rehire. To prevent such negative effects, C&M could provide severance pay or other allowances to help alleviate the suffering of the dismissed workers and their families. Also, the employees should be protected against the potential risk of unethical conduct by the organization or abuse of foreign workers. In order to prevent the organization from engaging in unethical conduct, discrimination, or exploitation, employees should help establish guidelines for ethical treatment. Self-regulatory rules banning unfair treatment of employees should be institutionalized and practiced across the industry. The upholstery institute could oversee the execution of employee ethics, and thereby prevent misconduct.

6. Discussion

Considering and evaluating the ethical characteristics involved in organizational issues was a key factor in the effective application of the IEDM Model. The resulting research effort was based on testing the practical applicability of the IEDM Model. The C&M case highlighted the ethical dilemmas the company faced at the time of data collection and the ethical implications of decisions on the parties involved. The IEDM Model was proven to be capable of assessing the morality of the potential outcomes and influencing the decision maker in ethical point of view. With the use of the IEDM Model, a number of tangible solutions were provided to C&M, as C&M's management was able to search for alternatives that were consistent with the organization's ethical standards and those of the society.

However, this study addresses a limitation of the current research relating to the cultural influences on organizations in which they operate. For those companies operating in different cultures (i.e., Mid-Eastern, Latin America, European (Western, Central and Eastern), and North America), this research suggests considering the possible ethical impacts of cultural dynamics when facilitating a thorough understanding of an ethically dilemmatic situation of the organization, prior to performing the IEDM Model application.

7. Conclusion

Since the Enron crisis, organizations are increasingly attempting to become more ethical in terms of organizational behavior. Businesses are now concerned with interactions not only in the external environment (e.g. consumers, suppliers, stockholders, etc.), but also the internal environment (e.g. colleagues, peers, supervisors, subordinates, etc.). The IEDM Model has the ability to help organizations achieve these goals and make more ethical decisions in all aspects of business and management.

The implementation of the IEDM Model is one way for organizations to ensure the consideration of potential ethical issues in their decision making processes. With the use of the IEDM Model, decision makers will be practically aided in facing ethical issues, which will make them more socially responsible with their decisions. Decision makers will also resolve problems in a more ethical manner. Sufficient consideration of ethical issues might prevent negative impacts through the creation of alternate strategies with enhanced ethicality, thereby decreasing potential liability. This potential for guiding individuals to think and respond with a higher degree of morality, enables them to make improved ethical decisions and offers organizations a tangible reason to apply the IEDM Model in their practice.

To extend this study in the future, a more rigorous mathematical treatment on the IEDM Model could be made. The development of a computer-based system implementing the IEDM Model would also contribute to organizations' application and adoption of the idea of ethical decision making in business operations. Additional case studies could be conducted in various organizations across industries and cultures. Also, empirical

Lee

research on the use of the IEDM model by corporate business leaders could be carried out.

Endnotes

- i. The estimated probability of 90% and 10% was determined by the management of C&M. Considering the direct impact of supply price reduction on sales increase, management expects a \$324,000 sales projection is highly achievable, giving 90% probability to attaining \$324,000.
- ii. The estimated probability of 30% and 70% was determined by the management of C&M. Considering the risk factors and current trend of slowing sales, the management expected \$252,000 sales projection less likely to be achieved, giving 30% probability to attaining \$252,000.
- iii. This minimum value is based on the assumption that the profit ($\beta^1 - 270,000$) is positive. If β^1 is less than \$270,000, net loss will be generated and the expected utility of the supply price reduction (A) will go below \$48,600.
- iv. The worst scenario for (A) is when $\beta^1 = 0$, that is, absolutely no sales occur for four months. Even assuming the worst scenario, the expected utility value of (A) equals \$21,600, which is larger than \$20,000. In any case, (B) cannot exceed \$20,000. Thus, it is reasonable to conclude that (A) is always larger than (B).

References

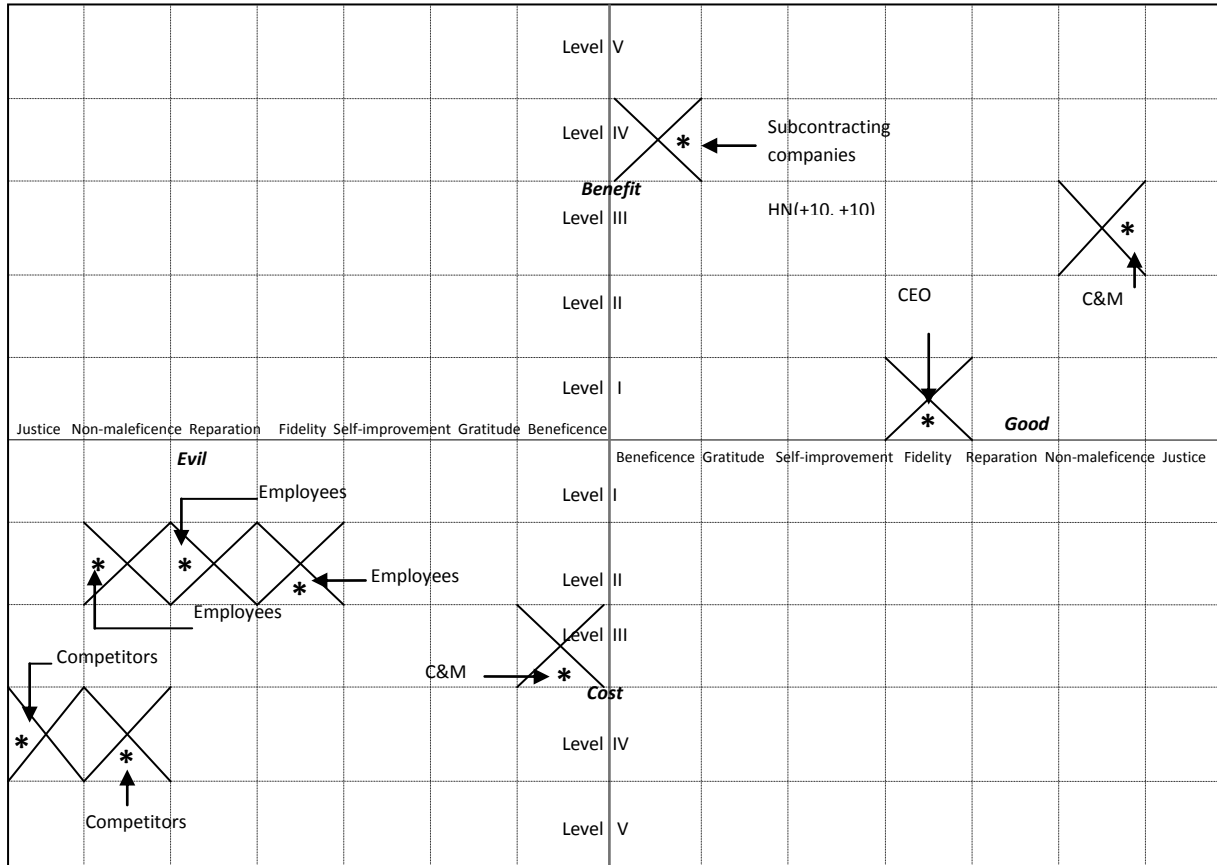
- Barry, V 1979, *Moral issues in business*, Wadsworth Publishing Company, Belmont, CA.
- Bartels, R 1967, 'A model for ethics in marketing', *Journal of Marketing*, vol. 31, no. 1, pp. 20-26.
- Beauchamp, TL & Bowie, NE 1983, *Ethical theory and business*, 2nd edn, Prentice Hall, Englewood Cliffs, NJ.
- Boyce, WD & Jensen, LC 1978, *Moral reasoning: A psychological and philosophical integration*, University of Nebraska Press, Nebraska.
- Chase, DG, Burns, DJ & Claypool, GA 1997, 'A suggested ethical framework for evaluating corporate mergers and acquisitions', *Journal of Business Ethics*, vol. 16, no. 17, pp. 53-63.
- Chau, LL & Siu, W 2000, 'Ethical decision-making in corporate entrepreneurial organizations', *Journal of Business Ethics*, vol. 23, no. 4, pp. 365-375.
- Engle, AD, Spain, JW & Thompson, JC 2002, 'Actors-in-time: A proposed real time, decisional model for evaluating the ethical content of decisions in the financial service industry', *Teaching Business Ethics*, vol. 6, no. 1, pp. 137-150.
- Ferrell, OC & Gresham, LG 1985, 'A contingency framework for understanding ethical decision-making in marketing', *Journal of Marketing*, vol. 49, no. 3, pp. 87-96.
- Gandz, J & Hayes, N 1988, 'Teaching business ethics', *Journal of Business Ethics*, vol. 7, no. 9, pp. 657-669.

Lee

- Garvin, L 1953, *A modern introduction to ethics*, Houghts Mifflin, Boston, MA.
- Hunt, SD & Vitell, S 1986, 'A general theory of marketing ethics', *Journal of Macromarketing*, vol. 6, no. 1, pp. 5-16.
- Jones, TM1991, 'Ethical decision making by individuals in organizations: An issue-contingent model', *Academy of Management Review*, vol. 16, no. 2, pp. 366-395.
- Kirkwood, CW1993, 'An algebraic approach to formulating and solving large models for sequential decisions under uncertainty', *Management Science*, vol. 39, no. 7, pp. 900-913.
- Laczniak, GR 1983, 'Framework for analyzing marketing ethics'. *Journal of Macromarketing*, vol. 3, no. 1, pp. 7-18.
- Pratt, CB1994, 'Applying classical ethical theories to ethical decision making in public relations: Perrier's product recall', *Management Communication Quarterly*, vol. 8, no. 1, pp. 70-94.
- Reidenbach, EE & Robin, DP1988, 'Some initial steps toward improving the measurement of ethical evaluations of business ethics', *Journal of Business Ethics*, vol. 7, no. 11, pp. 871-880.
- Robertson, DC 1993, 'Empiricism in business ethics: Suggested research directions', *Journal of Business Ethics*, vol. 12, no. 8, pp. 585-599.
- Ross, WD1930, *The right and the good*, Clarendon, Oxford.
- Schumann, PL 2001, 'A moral principles framework for human resource management ethics', *Human Resource Management Review*, vol. 11, no. 1/2, pp. 93-111.
- Trevino, LK1986, 'Ethical decision making in organizations: A person-situation interactionist model', *Academy of Management Review*, vol. 11, no. 3, pp. 601-617.
- Tsalikis, J & Fritzsche, DJ 1989, 'Business ethics: A literature review with a focus on marketing ethics', *Journal of Business Ethics*, vol. 8, no. 9, pp. 695-743.
- Wong, A & Beckman, E1992, 'An applied ethical analysis system in business', *Journal of Business Ethics*, vol. 11, no. 3, pp. 173-178.

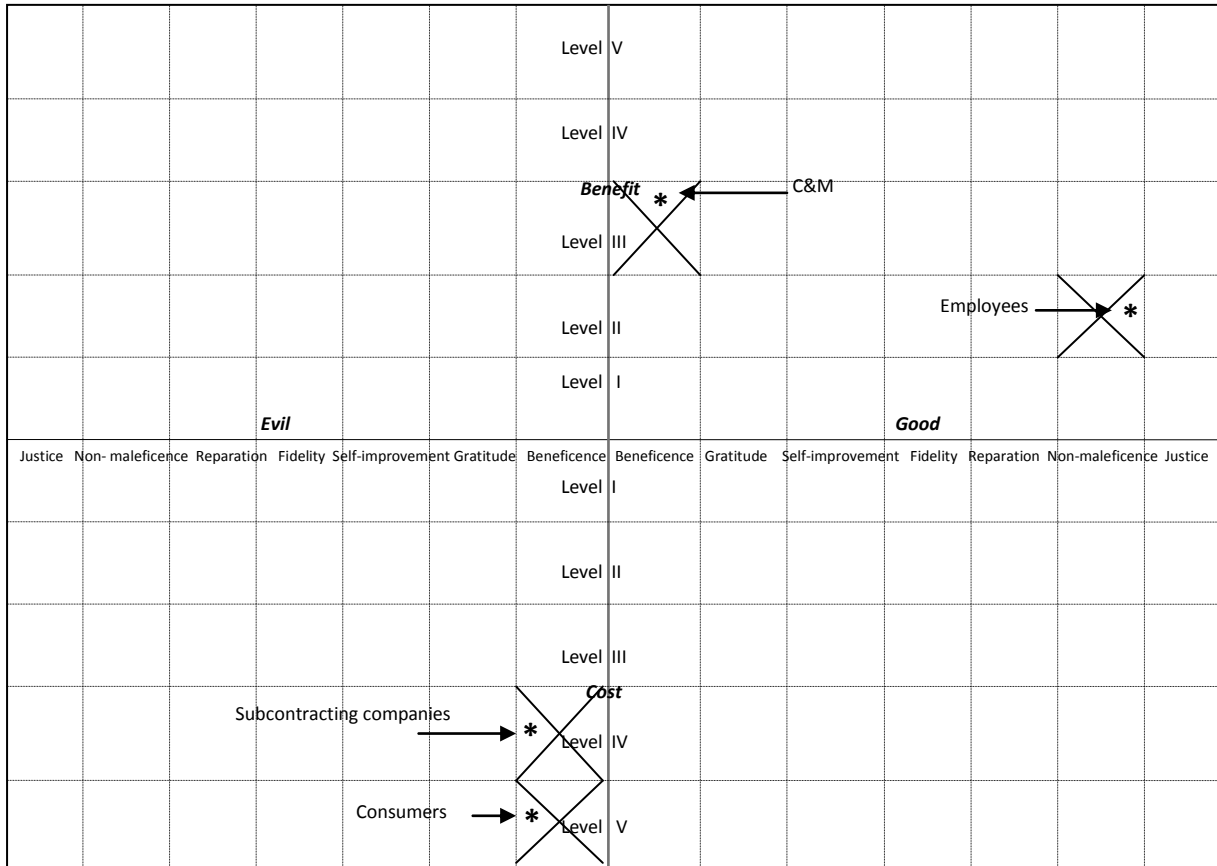
Appendix

Ethical Score Allocation of Decision Alternatives for C&M Case



Ethical Score Allocation of Supply Price Reduction

Lee



Ethical Score Allocation of Importation from China