



Conflicts of Interest in Decision-making for the Transportation of Dangerous Goods by Sea: Perspectives of Freight-forwarding Sales People

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RESEARCH ARTICLE

Conflicts of Interest in Decision-making for the Transportation of Dangerous Goods by Sea: Perspectives of Freight-forwarding Sales People

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Abstract

This study develops and investigates an ethical decision-making model to evaluate the major factors—moral sensitivity, moral consensus, desire for power, and desire for money—that influence conflicts of interest in decision-making among ocean-freight-forwarding salespeople. To empirically test this conceptual model, we used a scenario-based questionnaire to collect 139 valid samples and then conducted further analyses using Pearson product-moment correlation coefficients and hierarchical regressions. The results of the preliminary analysis revealed two types of conflicts of interest in decision-making, namely avoidance of negative effects and positive promotion, which were significantly related to moral sensitivity and moral consensus. Advanced regressions partially supported the six hypotheses proposed herein; thus, salespeople's ethical decision-making was influenced by their moral sensitivities, moral consensus, and desire for power. These findings provide new insight into the relevant factors that influence freight-forwarding salespeople's ethical judgments when making decisions concerning the transportation of dangerous goods. We also discuss the implications for daily operations of conflicts of interest in decision-making and provide managerial insights for freight-forwarding companies.

Keywords: Moral sensitivity, Moral consensus, Desire for power, Desire for money

1. Introduction

The devastating explosion in Beirut in the summer of 2020 and several serious incidents and fires aboard container ships that were caused by improperly declared dangerous cargo have led to a reconsideration of the factors relating to the storage and transportation of dangerous goods (DGs). According to information submitted by the International Cargo Handling Coordination Association to the International Maritime Organization (IMO) in July 2017, approximately 5.4 million containers carry DGs each year. This number is highly underestimated because a large amount of improperly packed or incorrectly declared DGs is difficult to estimate or even track [1,2]. The carriage of DGs by sea is regulated by the International Maritime DG Code (IMDG Code, IMO) to

prevent injury to persons, property, and the environment. According to the IMDG Code, DGs can be solid, liquid, or gaseous substances. The IMO also regulates explosive, flammable, oxidizing, and radioactive substances, mandating their proper stowage, containment, or packing and providing other essential information relating to these cargos.

According to the TT Club (the leading provider of insurance and related risk management services), between 1998 and 2006, 16 container ship accidents occurred as a result of misdeclared DGs [3]. In addition, based on data from Gard Insurance, 27 large container ships experienced fire incidents between 2007 and 2017 because of incorrectly declared DGs [2]. These statistics reveal that the dishonest or incorrect declaration of DGs by freight-forwarding salespeople (FFS) can have severe consequences,

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especially when considering the trend for larger vessel sizes.

The carriage of DGs by sea involves more costs in terms of packing and labeling a shipment, increased scrutiny, and the additional equipment required for loading and stowage on vessels. Therefore, shippers who are either unscrupulous or lack the required knowledge avoid these additional costs by not properly preparing and declaring shipments of DGs. If FFS neglect their duties, solicit bribes from shippers, or choose to act unethically by misdeclaring DGs, which can be considered a conflict of interest during the ethical decision-making process, the company's interests and image may be damaged and a catastrophic accident may occur.

Most research on DGs has focused on safety management, risk assessment, legal regulations, emergency procedures, and cargo packaging, with little exploration of the decision-making process of FFS with regard to transporting DGs by sea. In terms of salespeople's ethical decision-making, numerous studies have focused on the information technology, banking, and medical industries. Thus, a gap in the literature exists, both conceptually and empirically, with respect to conflicts of interest in the shipping industry.

This study applied an ethical decision-making model to the context of ocean freight-forwarding businesses that contract to ship DGs. Accordingly, the main determinants of ethical decision-making were derived from individual moral traits and contextual situational factors. Therefore, this study adopted an individual level (moral sensitivity) and situational factor (moral consensus) to construct the causal relationship between the ethical decision model and freight-forwarding industry. In addition, this study added two antecedents of moral sensitivity, namely desire for power and desire for money, to make the ethical decision-making model more comprehensive. This study developed a specific scenario statement that highlighted the business characteristics of ocean freight forwarding and conducted data collection through a quasi-experimental design to truly reflect ethical conflicts in the freight-forwarding industry.

The objective of this research was therefore to propose an ethical decision-making model for investigating and predicting the decision-making behavior of FFS in relation to conflicts of interest. To achieve this, we developed and verified the relationships between “moral sensitivity,” “moral consensus,” “desire for power,” “desire for money,” and “conflicts of interest in decision-making.” In this study, we suggest an ideal empirical context for developing and testing a conceptual model for decision-making and its determinants to effectively

develop guidelines for strengthening ethical decision-making in the shipping industry to ensure a safer ocean transportation environment.

2. Literature review

A conflict of interest covers a set of certain circumstances in which the professional judgment concerning primary interests is often improperly influenced by secondary interests (such as financial concerns). The primary interest should be the priority consideration in any professional decision, but secondary interests (including financial and nonfinancial gains) often benefit the decision maker. Secondary interests are not illegal; in fact, they may be a necessary and useful component of professional practice. However, the problem arises from improper prioritization of interests because the purpose of prioritizing primary interests is to prevent private secondary factors from dominating primary interests in professional decision-making [4].

Sauser [5] noted that when individuals or businesses are faced with a decision that involves a conflict of interest, the conflict of interest may not necessarily violate the law but can be a matter of morals. Thus, the nature of ethical decision-making is similar to that of conflicts of interest in decision-making, and the determinants of ethical decision-making are the same as those of conflicts of interest in decision-making. However, few studies have addressed how motivational forces affect conflicts of interest in decision-making, and this study therefore adopted the structured model proposed by Vörösmarty and Dobos [6] and Vörösmarty et al. [7]. Their model comprises three motivating forces—the avoidance of negative effects, compliance with expectations, and achievement of positive goals—that are used as a guide to help FFS make the right decision when facing conflicts of interest in relation to DGs.

2.1. Moral sensitivity and conflicts of interest in decision-making

Ethical decision-making is a set of complex procedures that include perceiving, analyzing, evaluating, and eliminating unethical alternatives and then choosing the option that is the most consistent with ethical principles. Generally, ethical decision-making can be categorized into two levels of analysis: (1) the corporate level, which involves the different positions of interest groups and the judgment of right or wrong and is mostly resolved through corporate policy, and (2) the individual level, which refers to trade-offs between the different conflicts of interest that arise in the

decision-making process of employees and involves the judgment of right or wrong and what should or should not be done.

A large body of theoretical and empirical research has focused on ethical decision-making models. Rest [8], a cognitive-development researcher, proposed a four-component model to explain the process of ethical decision-making. The four steps are “recognize the moral issue,” “make a moral judgment,” “establish moral intent,” and “engage in moral behavior.” In the “recognize the moral issue” step, individuals with varying moral sensitivities perceive different levels of moral dilemma and then make different decisions. Thus, a person with higher moral sensitivity recognizes the existence of moral controversies more acutely than those with low moral sensitivity. Moral sensitivity refers to an individual's ability to recognize and judge ethical dilemmas in a specific situation and to be sensitive to the moral implications of a particular situation before making ethical decisions [9,10].

Kouchaki and Smit [11] argued that people with moral humility were more defensive of unethical decision-making and made efforts to avoid rationalizing those unethical factors. The connotation of moral sensitivity is similar to that of moral humility. Thus, moral sensitivity drives people to be highly alert to unethical influences and consequences and to take positive actions to avoid unethical decisions.

Schmocker et al. [12] stated that moral sensitivity is the ability to identify and ascribe value to moral dilemmas when they arise in the workplace. People with moral sensitivity tend to consider the moral consequences when making decisions because they are aware of the potential negative impacts their behaviors may have on others [13]. Craft [14] reviewed 84 ethical decision-related papers published between 2004 and 2011 and determined that moral sensitivity plays a crucial role in various models of ethical decision-making.

In this study, we therefore infer that FFS with higher moral sensitivity place greater priority on the moral consequences of decisions when faced with conflicts of interest in decision-making; they then make an avoidance decision. By contrast, FFS with lower moral sensitivity are more likely to engage in self-deception, which means they are more easily blinded by cognitive biases or deceived by organizational systems that prevent them from identifying the moral dilemmas in decision-making [15]; they then make decisions to maximize their own interests. In addition, some FFS with lower moral sensitivity may experience “ethical mirage”—they

know what they “should” do but tend to focus on what they “want” to do. Under these circumstances, some FFS identify a compromise between “should” and “want” and then take a positive promotion decision. Therefore, this study proposed the following hypotheses regarding the relationships between moral sensitivity and conflicts of interest in decision-making.

H1. FFS with higher moral sensitivity tend to make avoidance decisions in relation to conflicts of interest in decision-making.

H2. FFS with higher moral sensitivity tend to reduce the negative impacts of positive promotion in conflicts of interest in decision-making.

2.2. Social contextual factors and conflicts of interest in decision-making

Huckfeldt and Sprague [16] asserted that social context refers to an individual's living space imposed by the external structure, and Trevino [17] contended that individual and organizational variables interact with each other; the situation and personal idiosyncrasies drive people to make ethical or unethical decisions. Moral consensus is a key social contextual factor and refers to all members in an ethical decision-making situation in which consensus has been achieved (here, meaning that the majority shares the same ideas, views, and values within a particular organization).

From a broader perspective, moral consensus helps not only to establish norms but also to give commonly acceptable meaning to ethical decision-making [18]. Jones and Jones [19] noted that in certain multinational corporations, many unethical decisions are made primarily because moral consensus is lacking among senior managers. Kaptein [20] indicated that in addition to ethical leadership, using a range of management tools to establish a clear moral consensus is necessary to elevate the company to the level of moral entrepreneurship.

In a social context with a higher moral consensus, such as a corporate ethical climate, this moral consensus exerts a substantial impact on employees' ethical behavior, organizational citizenship behavior, and attitudes [21,22]. Therefore, we proposed that when faced with conflicts of interest in decision-making, the behaviors of FFS working in an organizational context with a higher moral consensus are more likely to be bound by the

organizational ethical climate or legislation or the FFS must comply with company regulations to make an avoidance decision. Conversely, when working in an organization with lower moral consensus, because of the absence of shared values and codes of conduct that govern employee behavior, FFS are prone to be self-interested and make a positive promotion decision. Hence, the following hypotheses were proposed.

H3. Under a higher moral consensus, FFS tend to make avoidance decisions in relation to conflicts of interest in decision-making.

H4. Under a higher moral consensus, FFS tend to reduce the negative impacts of positive promotion in conflicts of interest in decision-making.

2.3. *Desire for power and moral sensitivity*

The desire for power is a person's perception that they have a vital controlling force to influence another person to accept and implement their views and ideas. Yan and Chen [1] noted that formal power in an organization is limited to satisfying the desire of all members for power, and thus, members engage in competition to fight for the limited power, which in turn leads to potential moral conflicts. People with a strong desire for power act unethically for their own interests and may then make decisions that are not in line with social expectations [23]. Vriend et al. [24] suggested that people with an elevated desire for power are more likely to prioritize their own interests and to be less concerned with others' needs and interests. Therefore, a stronger desire for power makes FFS less inhibited by the dilemmas or moral problems of a situation, and thus, they are more prone to unethical conduct. Consequently, in this study, we proposed the following hypothesis regarding the desire for power and moral sensitivity.

H5. The trait of desire for power negatively influences moral sensitivity.

2.4. *Desire for money and moral sensitivity*

The desire for money is an individual's perception of the value of money, which reflects the individual's attitude toward money. Money plays a key role as

an instrument of commerce in people's daily lives; however, it represents much more than that. Money stands for power in a materialistic world [25], and people with money signal their success and win respect from others [26,27]. Money is used as an essential motivator to attract and retain employees in organizations [28]. The desire for money also affects employees' perception of organizational reward and punishment systems, which in turn influences their behavior in the organization [29].

FFS who are more avaricious may experience this attitude undermining their moral sensitivity and increasing their intention to act dishonestly and unethically [30,31]. Thus, the following hypothesis was proposed.

H6. The trait of desire for money negatively influences moral sensitivity.

3. Research methods

This study developed a conceptual framework to examine the linkages between moral sensitivity, social contextual factors, and conflicts of interest in decision-making, the relationships between desire for power and desire for money, and moral sensitivity among FFS. We adopted a scenario-based questionnaire to collect data and then used statistical software to analyze the collected data.

3.1. *Research design*

We designed an appropriate scenario for the hypotheses and used variable measurements and questionnaires.

3.1.1. *Scenario design*

This study defined ethical decision-making as a decision-making situation for FFS involving different stakeholders that causes their interests to come into conflict. Regarding measurements, this research used a narrative approach to develop scenarios about ethical decision-making with conflicts of interest. Most research on ethical decisions has employed scenario questionnaires [32–35] in which a decision-related situation is illustrated in the form of a narrative; then, respondents are asked to analyze that situation.

In this study, FFS were the participants. We developed a scenario illustrating a conflict of interest in ethical decision-making in which a consignor

entrusts the transportation of DGs but tries to conceal information about the DGs from the FFS:

OO exporter wants to export a consignment of dangerous goods overseas using container shipping and requests a quotation from domestic and foreign freight forwarders. XX freight forwarder has been chosen to carry this consignment. Assume you are a salesperson working for XX freight forwarder. Based on your professional knowledge and experience in dealing with this exporter, you believe that this consignment contains high-risk dangerous goods. Assess the likelihood that you would make the following choices.

3.1.2. Measurements. This study included five main constructs: conflicts of interest in decision-making, moral sensitivity, moral consensus, desire for power, and desire for money. One unique feature of this model was that it included two antecedent variables of moral sensitivity, namely trait of desire for power and desire for money, thus establishing a more complete cause–effect relationship for ethical decision-making. This definition of conflicts of interest in decision-making refers to decisions involving the interests of different stakeholders whose interests are in conflict with each other. This study defined moral sensitivity as the degree of moral apperception and moral interpretation of a situation. Moral consensus in this study refers to the consistency of peers' views on ethical issues in the workplace. The desire for power is a person's perception that they have a vital controlling force to influence another person to

accept and implement views and ideas. The desire for money is an individual's perception of the value of money, which reflects the individual's attitude toward money. The measurements and literature sources of each construct are summarized in [Table 1](#). We adopted a questionnaire survey to collect data and used a 5-point Likert scale, with 1 corresponding to “strongly disagree” and 5 to “strongly agree.”

3.2. Data collection

We tested our conceptual model on ethical decision-making in relation to the conflicts of interest experienced by FFS. The FFS sample was selected from the membership list of the International Ocean Freight Forwarders & Logistics Association, Taiwan (IOFFLAT), which has approximately 1000 members. After an initial screening, members who had not participated in activities within the previous 2 years were excluded, and the remaining 500 members were included in the study. We mailed a questionnaire and included a self-addressed stamped envelope to elicit a higher return rate. In addition, a researcher visited the companies in person to distribute and collect the questionnaires simultaneously.

We identified three types of conflict-of-interest situations faced by salespeople when dealing with shippers: personal performance pressure, customer interests, and company interests. After reading the scenario, FFS were asked to consider the three sources of interest pressure and then complete the questionnaire. In total, 139 useable questionnaires were collected, with an effective response rate of 27.8%. This study examined the representativeness of the collected samples in two ways. First, we

Table 1. Research variables and measurements.

Constructs	Variables	Item	Sources
Conflicts of interest in decision-making	Avoidance of negative effects	● To ensure the fleet safety and reputation of the company and individual; after informing the vendor, the FFS refuse to carry the DGs.	[6,7]
	Positive promotion	● To enhance personal performance and company profits, FFS actively facilitate the cargo contract.	[6,7]
Moral sensitivity		● In the study scenario, is it unethical to transfer the contract to another carrier or freight forwarder? ● In the study scenario, is it ethically inappropriate to accept this shipment of DGs?	[36]
Moral consensus		● Would your colleague consider it unethical to accept the shipment of DGs in the study scenario? ● Would your colleague refuse to accept the shipment of DGs in the study scenario even at the expense of the opportunity to improve their own performance?	[36]
Trait of desire for power		● Power is an indispensable part of life. ● With power, life is easier. ● Without power, life becomes more challenging.	[1]
Trait of desire for money		● Money is an indispensable part of life. ● With money, life is easier. ● Without money, life is more challenging.	[1]

Table 2. Respondents' profiles.

Demographics	Characteristics	Number (%)	Demographics	Characteristics	Number (%)
Gender	Male	80 (57.6)	Education	Bachelor's	93 (66.9)
	Female	59 (42.4)		Graduate	46 (33.1)
Age	~30 y	80 (57.6)	Performance (previous 3 months)	~60%	18 (12.9)
	31–40	46 (33.1)		61%–80%	29 (20.9)
	41–50	12 (8.6)		81%–100%	74 (53.2)
	50~	1 (0.7)		101%–120%	18 (12.9)
Income ^a /y	13,300–26,600	113 (81.3)	# of years handling DGs	~1 y	52 (37.4)
	27,000–40,000	18 (12.9)		1–5 y	68 (48.9)
	40,000~	8 (5.8)		6+ y	19 (13.7)
Seniority/y	1–5 y	102 (73.4)	Certification for handling DGs	Yes	11 (7.9)
	6–10 y	18 (12.9)		No	128 (92.1)
	11–15 y	9 (6.5)			
	16–20 y	6 (4.3)			
	20+ y	4 (2.9)			

^a US\$1 = ~NT\$28 (as of Q1 2022).

conducted *t* tests to examine the nonresponse bias. We collected 92 effective questionnaires from the first wave, and 3 weeks later, to increase the sample size, we mailed a second questionnaire to non-respondents, after which we received an additional 47 questionnaires. By comparing the means of the earlier and later groups, we detected no significant differences between these two groups at a 5% significance level. The reliability of the sample was therefore verified.

Second, we compared the demographic distribution structure of the sample with that of the population. Table 2 presents the demographic profile of the 139 participants. More than half the participants were male and well-educated (66.9% had a bachelor's degree), and the majority were aged below 30 years (57.6%). In terms of yearly income, most participants earned US\$13,300–26,600 (81.3%), with 73.4% of participants having work experience of less than 5 years. More than half the participants (92.1%) indicated that they have not been certified to handle dangerous cargos but had extensive experience handling DG. In the previous 3 months, 53.2% of respondents had achieved an average of 81%–100% in terms of key performance. This distribution

almost fully represents the unique characteristics of FFS in Taiwan.

3.2.1. Reliabilities and correlations. To ensure the consistency and stability of this questionnaire, we conduct a reliability analysis of the 139 valid samples (Cronbach's α in Table 3). All values exceeded the acceptable threshold value of 0.7, as suggested by Nunnally and Bernstein [37]. Table 3 also presents the means, standard deviation, and bivariate correlations of the independent and dependent variables. Two types of conflicts of interest in decision-making were significantly related to moral sensitivity and moral consensus. Moral sensitivity relates to desire for power to some extent.

4. Results

In this study, we employed hierarchical regressions to test the hypotheses. The analyses also controlled for eight variables (Gender, age, education, seniority, yearly income, performance accomplishment, number of years handling DGs, and certification for handling DGs) that are believed to influence the relationships between conflicts of

Table 3. Means, standard deviations (SD), and correlations.

Variable	Mean	SD	1	2	3	4	5	6
1. ANE	4.56	0.82	NA					
2. PP	1.43	0.86	-.367	NA				
3. MS	4.04	0.99	.403*	-.2	.745			
4. MC	3.95	0.99	.351*	-.16	.555*	.76		
5. DFP	3.69	0.84	-.198*	-.02	-.199*	-.13	.73	
6. DFM	4.30	0.75	.087	-.08	.015	.02	.48	.71

Notes: Diagonals represent Cronbach's α ; ANE: Avoidance of negative effects; PP: Positive promotion; MS: Moral sensitivity; MC: Moral consensus; DFP: Desire for power; DFM: Desire for money; N = 139. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4. Results of hierarchical regressions.

Dep. V(Y)	ANE	ANE	PP	PP	MS	MS
Ind. V(X)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender	−1.30 (.123)	−0.101 (.196)	.040 (.657)	.030 (.736)	−.040 (.648)	−.023 (.795)
Age	.218 (.193)	.171 (.267)	−.249 (.160)	−.218 (.207)	.120 (.489)	.066 (.701)
Edu	−.036 (.670)	−.036 (.644)	−.041 (.653)	−.050 (.571)	−.036 (.683)	−.044 (.620)
Seniority	.091 (.619)	.060 (.721)	−.004 (.985)	.025 (.893)	.112 (.555)	.154 (.420)
Income	−.140 (.173)	−.165 (.088)	.132 (.227)	.125 (.245)	−.024 (.822)	−.041 (.698)
Past performance	.247** (.005)	.188* (.021)	−.082 (.371)	−.038 (.671)	.168 (.062)	.166 (.061)
Experience with DGs	−.006 (.945)	.013 (.883)	−.029 (.773)	−.042 (.661)	−.054 (.580)	−.074 (.444)
Certification for DGs	−.084 (.308)	−.166* (.034)	−.050 (.563)	−.005 (.953)	.176* (.040)	.173* (.041)
MS		.250** (.007)		−.259* (.012)		
MC		.192* (.037)		.002 (.981)		
DFP						−.214* (.030)
DFM						.174 (.074)
R ²	.175	.308	.072	.132	.109	.146
Δ R ²	.175	.133	.072	.059	.109	.037
Δ F	3.445**	12.319***	1.265	4.379*	1.981	2.825*

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$. Standardized coefficients are reported. Significance is between parentheses. ANE: Avoidance of negative effects; PP: Positive promotion; MS: Moral sensitivity; MC: Moral consensus; DFP: Desire for power; DFM: Desire for money.

interest in decision-making, moral sensitivity, moral consensus, desire for power, and desire for money.

Table 4 presents the results of the regression models. In model 1, the avoidance of negative effects was regressed against the aforementioned control variables, and model 2 also included the predictors (moral sensitivity and moral consensus). Comparing the results of models 1 and 2, we revealed that extra moral sensitivity and moral consensus contributed significantly to the variance in the avoidance of negative effects, with an increase of 13.3% in the value of R^2 ($\Delta F = 12.319$, $p < .001$). The regression results pertaining to H1 (H1: FFS with higher moral sensitivity tend to make avoidance decisions in relation to conflicts of interest in decision-making) and H3 (H3: Under a higher moral consensus, FFS tend to make avoidance decisions in relation to conflicts of interest in decision-making) helped us determine the standardized coefficients in model 2. Consistent with our predictions, FFS with higher moral sensitivity are more sensitive to ethical implications and more likely to avoid any negative consequences; thus, moral sensitivity was positively related to the avoidance of negative effects ($\beta = 0.250^{**}$, $p < .01$), and H1 was supported. Similarly, FFS working in an organizational context with higher moral consensus are more likely to avoid negative effects; thus, moral consensus was positively associated with the avoidance of negative effects ($\beta = 0.192^*$, $p < .05$), and H3 was validated.

Models 3 and 4 tested for moral sensitivity and moral consensus in relation to positive promotion to examine H2 (H2: FFS with higher moral sensitivity tend to reduce the negative impacts of positive promotion in conflicts of interest in decision-making) and H4 (H4: Under a higher moral consensus,

FFS tend to reduce the negative impacts of positive promotion in conflicts of interest in decision-making). We detected only marginal significance in the relationship between these two independent variables and positive promotion, with an increase of 5.9% in the value of R^2 ($\Delta F = 4.379$, $p < .05$), indicating that the regression model lacked sufficient explanatory power. The standardized regression coefficients of moral sensitivity and positive promotion supported H2 in model 4 to some extent ($\beta = -0.259^*$, $p < .05$). However, the impact of moral consensus on positive promotion did not validate H4 ($\beta = 0.002$, $p > .05$).

Finally, the results of models 5 and 6 tested H5 (H5: The trait of desire for power negatively influences moral sensitivity) and H6 (H6: The trait of desire for money negatively influences moral sensitivity), revealing limited explanatory power, with a small increase of 3.7% in the value of R^2 ($\Delta F = 2.825$, $p < .05$). The standardized coefficients of desire for power and moral sensitivity revealed a significantly negative association ($\beta = -0.214^*$, $p < .05$), thus verifying H5. Desire for money was not significantly related to moral sensitivity, and thus, H6 was not validated.

As presented in Fig. 1, the research hypotheses H1–H6 were partially verified by the significant path coefficients linking “moral sensitivity,” “moral consensus,” “conflicts of interest in decision-making,” “desire for power,” and “desire for money.”

5. Discussion and conclusions

This study explored the associations between moral sensitivity, moral consensus, and different conflicts of interest in decision-making options, as

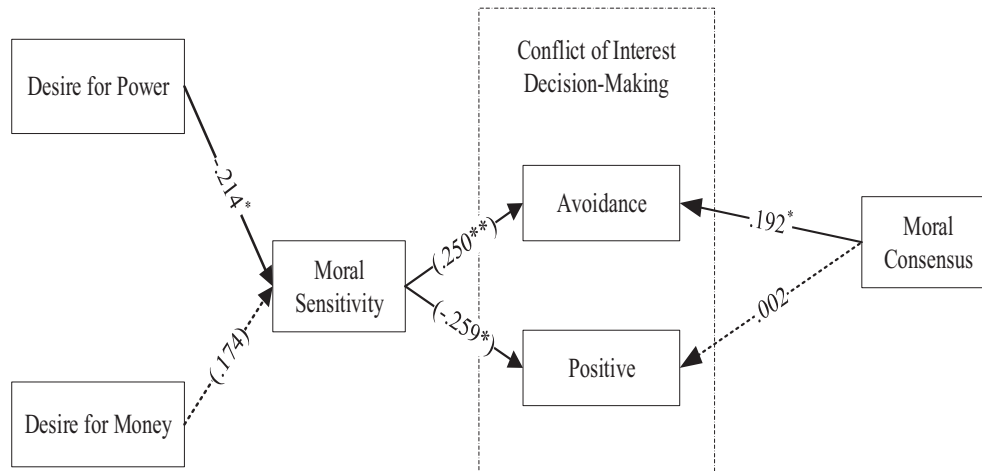


Fig. 1. Results of hierarchical regressions.

well as the association between desire for power, desire for money, and moral sensitivity.

5.1. Moral sensitivity and conflicts of interest in decision-making

Through empirical analysis, we revealed that the moral sensitivity of FFS and two conflicts of interest in decision-making options (ANE and PP) were supported. The research findings are consistent with other studies on ethical decision-making [13,14], demonstrating that personal factors are more powerful than situational factors in the ethical decision-making of contracting for DGs. Many studies on ethical decision-making have contended that the moral sensitivity of employees can be enhanced through educational training and ethics interventions, which is crucial for enterprise ethical management practice.

The concepts of moral humility and moral awareness are highly related to moral sensitivity in ethical decision-making, and by logically integrating these similar concepts, the explanatory power of ethical decision-making models can be effectively improved.

5.2. Moral consensus and conflicts of interest in decision-making

Empirical evidence partially supports the relationships between moral consensus and the two conflicts of interest in decision-making options (ANE or PP). Moral consensus is similar to having an ethical climate, with both exerting normative effects on individual ethical decision-making. This study adopted individual level perceptions to investigate moral consensus rather than the collective cognition of a group. Therefore, determining whether individually perceived moral consensus was an appropriate proxy for ethical climate or group moral consensus was

difficult, which may explain why the results only partially supported ethical decision-making.

Shaping a strong and normative moral consensus is key to ethical management in business. Many antecedents that affect moral consensus, all related to ethical policies and ethical dilemmas in business, remain unexplored. Accordingly, moral consensus can be used as a common goal to reconcile ethics management policies and operational practices in business.

5.3. Trait of desire for power and money and moral sensitivity

Finally, this study tested the relationship between desire for power and money and moral sensitivity, revealing that only desire for power had a significantly negative association with moral sensitivity, thus verifying H3. Many studies exploring the determinants of moral sensitivity have focused on organizational measures, such as organizational management, leadership, and human resource management systems. Little research has been conducted on individual traits. However, in this study, we identified the antecedents of moral sensitivity at an individual level. Although the related research hypotheses were only partially supported, extending this view to other personal factors, such as personality traits, job satisfaction, and organizational commitment, might clarify the causal structure of moral sensitivity.

Overall, the findings of this study not only echo those of existing ethical decision-making models but also expand the scope of ethical decision-making by applying an ethical decision-making model to conflict-of-interest situations and proposing the two traits of desire for power and money as the

antecedents of moral sensitivity. This integrated framework has value as a reference for future research into the transportation of DGs.

6. Suggestions

This empirical study validated and provided evidence for the theoretical framework proposed herein. Although some relationships proposed in this study were statistically non-significant, managerial implications for the freight-forwarding industry must be addressed and discussed. In this section, we provide recommendations for management practice and present the research limitations and future research directions.

6.1. Recommendations for managerial practice

(1) Setting a moral standard for conflicts of interest in decision-making

This study revealed that the more morally sensitive FFS are, the more likely they are to choose to avoid acting immorally, whereas those who are less morally sensitive are more likely to do whatever is necessary to maximize personal interest. This suggests that personal moral sensitivity plays a vital role in the decision-making process of FFS who face conflicts of interest. Therefore, the freight-forwarding industry should strengthen on-the-job education and training, and managers should set a positive example and create standards for employees to follow when making decisions that involve conflicts of interest.

(2) Developing moral consensus and systematic management

If FFS engage in unethical behavior, their company may experience substantial losses. Our research findings demonstrate that when FFS work in an organizational context that has higher moral consensus, they tend to choose to avoid negative effects. Freight-forwarding companies should therefore develop a stronger moral climate and establish a management system that guides FFS to minimize the risk of losses. The freight-forwarding industry has a long history in the highly competitive field of undifferentiated services, and thus, FFS have become insensitive to external competition. That is why competitive situations have no significant impact on compliance or positive promotion in relation to conflicts of interest in decision-making. However, FFS

may still exhibit unscrupulous behavior by accepting DGs as cargo for both the company's profit and their own interests. Therefore, we propose that freight-forwarding companies establish a systematic management system for their salespeople, document the transaction records of all FFS, and link these records with annual assessments to help FFS select orders carefully. In addition, we recommend that a shipping ethics coding unit be established to regularly advocate shipping ethics and guidelines and appropriately sanction against those who violate the codes of behavior to prevent the recurrence of inappropriate incidents.

(3) Selecting appropriate talent

This study also revealed that FFS with a stronger desire for power are less likely to care about the existence of morally dubious prospects and therefore are more likely to engage in unethical transactions that may jeopardize their company's interests and reputation. Therefore, we suggest that freight-forwarding companies weed out employees who have potentially too much desire for power to maintain a strong reputation and service quality. The insurance industry might collaborate with the shipping industry to implement advanced technology and strategies to increase transparency and identify misdeclared cargo. If a freight forwarder has misdeclared cargo to avoid the additional costs and requirements associated with transporting certain DGs, they should be recorded on a blacklist and lose the trust of customers. This proposal is consistent with other studies, such as that by Subhashini and Preetha [38], which identified that the reliability, responsibility, and trust of FFS influence shippers' satisfaction and loyalty. This study revealed that 92% of employees did not have any certification for handling DGs, which may explain the insufficient awareness of how to handle them. Therefore, in addition to selecting the right people through appropriate selection mechanisms, freight forwarders should strengthen education and training to encourage their employees to acquire relevant certificates.

6.2. Research limitations and suggestions for future research

This study offers a novel theoretical model, which was tested through empirical data. Inevitably, the study has some limitations, which may translate into future research directions.

The FFS sample was selected from the list of 1078 IOFFLAT members, and only a small sample of 139

useable questionnaires was collected. This may account for the lack of statistical significance in some of the tested relationships. By using a larger sample, researchers may be able to examine deeper and more sophisticated components and relationships in moral sensitivity, social context, and conflicts of interest in decision-making.

The actual behaviors of people experiencing moral dilemmas are almost impossible to observe, and thus, employing scenario-based questionnaires to collect individual intentions is the most effective option [39]. Jafarkarimi et al. [40] also highlighted the difficulty of evaluating the ethical decision-making of people in different contexts simply by asking whether or not they would behave ethically. A more effective alternative is to design a scenario and ask respondents to answer a set of questions regarding that particular scenario. However, the weakness of scenario-based questionnaires is that they limit the respondents' answers to several options and ignore other determining factors in the actual decision-making situation. The limited options given to respondents make scenario-based questionnaires less effective at explaining why people think or act as they do. Therefore, this study recommends that face-to-face in-depth interviews be conducted, asking open-ended questions and employing other forms of qualitative research such as focus groups. This is usually a more effective method for clarifying human psychological processing regarding questions on "influential factors."

Ethical decisions may also be influenced by organizational (e.g., organizational norms and organizational systems) or industrial contexts (e.g., positive and negative influences from competitors in the same industry); however, this study did not include industrial factors. Therefore, we suggest that future research could add other industrial and organizational features, such as industrial norms and organizational culture that might influence salespeople's decision-making behavior to increase the explanatory power of the conceptual framework. Alexander and Becker [41] recommended that ethical and moral decision-making research should be conducted through scenarios, whereby different scenarios are used to enable participants to immerse themselves in a more realistic ethical decision-making situation. Therefore, future studies should develop more complex and diverse scenarios for a stronger analysis.

Declaration of competing interest

We have no conflicts of interest to disclose.

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