Research Paper

The relationship between financial managers compensation and earnings manipulation: The mediating role of organizational identity

Ahmad Abdollahi [a*], Fatemeh Riahi [b]

[a]Faculty of Economics, University of Algarve, Faro, Portugal
[b]Department of Accounting, Golestan Institute of Higher Education, Gorgan, Iran

Abstract
The adoption of compensation contracts to motivate executives to exert effective and conducive efforts has raised worries about the likelihood of earnings manipulation by management. Organizational identity plays a pivotal role in motivating managers to exhibit their optimal performance as managers' performance towards the benefits of their firms could enhance their desirability. The present study aims at investigating the association between compensation and earnings manipulation with focus on the moderating effect of organizational identity on this relationship. In pursuit of this goal, three questionnaires used by Abernethy et al (2017) are employed and then distributed among 68 managers of five industries including automobile and automobile parts manufacturing, machinery, electrical machinery and equipment, basic metals and metal products manufacturing listed on the Tehran Stock Exchange in 2018. The research hypotheses are tested using structural equation method and PLS software. The results reveal that compensation and organizational identity significantly affect earnings manipulation. Furthermore, organizational identity influences the correlation between compensation and earnings manipulation.

Keywords: Compensation; Earning Manipulation; Organizational Identity; Structural Equations Modelling Approach

1. Introduction

Business environment has undergone fundamental changes worldwide, which has in turn exerted profound and diverse effects on corporate practice and operations. A major example of these alterations includes extensive and unprecedented separation of management from ownership. As such, a potential conflict exists between shareholders' interests and those of managers as the latter seeks to pursue their goals at the expense of the former [39, 5,12, 22]. Since the early 1950s accounting researchers have documented the agency costs that emerge with the use of incentives-based contracts [29, 25, 27]. Where incentive contracts are implemented to motivate productive effort, concerns have been raised about the potential for managers to engage in earnings manipulation [18, 32]. While economics-based principal-agent models assume that managers strictly act out of self-interest and their welfare solely relies on income and effort, management scholars have for some time recognized the importance of prosaically preferences as a motivation for behavior. Researchers have more recently begun to use Akerlof and Kranton's [7, 8, 9, 10], notion of organization identity (OI) to empirically assess its effect on agency costs [16]. Organization identity is powerful in encouraging

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[*]Corresponding Author Email: ahmabdollahi@gmail.com

managers to do the right thing by the firm as their utility increases (decreases) when they act (do not act) in the best interest of the firm. The theoretical underpinnings of OI are useful for understanding how OI works [9, 30] and perhaps even for understanding why some managers behave with integrity and some don't [22].

This paper examines whether a manager's OI provides a means of mitigating some of the agency costs associated with the provision of financial incentives. The intent of incentive contracts is to direct managers' attention to actions that will add value to the firm. Managers are incentivized to do so as their compensation depends on some measure of value creation. However, firms are not always successful in designing such contracts. The problem, of course, is that contributions of managers to firm value are imperfectly measured. Incentive contracts can prompt opportunistic behavior designed to improve those measures but which do not improve firm value, what we call earnings manipulation. There is a long history of research documenting how managers make accounting choices to increase the proceeds of their bonus plan [29, 28]. Roychowdhury [41, 26], for example, reports managers offering price discounts to boost revenues and reducing discretionary expenditures to improve reported performance. We draw on the intuition provided by Akerlof and Kranton [7, 8, 9, 10] to empirically examine the role of OI in mitigating opportunistic reporting choices.

In our study, earnings manipulation (EM) includes choices that result in changes in reported income, which encompasses accounting manipulation (e.g., shifting between accounts) and real earnings management (e.g., postponing necessary investments). Consistent with prior research, we expect a positive relationship between incentives and earnings manipulation [29]. In addition, we examine whether managers who are rewarded by means of incentive contracts and who identify with the firm will engage in less EM than those agents who do not identify with the firm. Managers with higher OI will experience disutility with actions that increase their own wealth but which could potentially be harmful to the firm [9, 21, 11].

2. Theoretical foundations and Research background

2.1. Incentives and earnings manipulation

A major stream of the accounting literature documents opportunistic reporting choices of managers, consistent with the notion that managers use their reporting discretion to increase their own wealth and this comes at the expense of the firm. Healy [29] was one of the first to document that managers use income-decreasing accruals when they are below the threshold or above the cap of the bonus plan, while managers select income-increasing accruals when they are within the incentive zone. Guidry et al [28]. show that business-unit managers choose income-increasing accrual policies when they are in the bonus range. The more recent evidence suggests that managers not only make opportunistic reporting choices to maximize the proceeds from their annual bonus plans, but also do so in response to equity-based incentives. There are numerous examples of how such behavior has adverse consequences for the firm. For example, Bhojraj, Hribar, Picconi, and McInnis [15] find that managers with strong equity-based incentives will cut discretionary expenses and manage accruals to meet and beat the analysts' forecasts. While such actions result in higher stock market returns in the short term (i.e., in the subsequent year) these actions result in lower longer-term returns (i.e., returns over the next three years). Bhojraj et al [15], also document that for firms managing their reported earnings numbers to marginally beat their forecasts, there is greater insider selling in the subsequent year.

Aboody and Kasznik's [4] findings indicate that executives delay good news and bring forward bad news to manage investors' expectations downwards surrounding the dates when options are granted (to lower the exercise price of those options). Bergstresser and Philippon [13] find that executives who are strongly incentivized exhibit higher levels of earnings manipulation. These authors show how executives exercise and sell unusually large amounts of options and shares in those years in which accruals make up a large part of their firms' reported earnings [21, 33]. There is thus a significant body of literature linking incentives to earnings manipulation.

2.2. Organization identity, incentives and earnings manipulation

The topic of identity is a vital, subjective and objective concern which has evolved since human genesis so that human beings have always sought to know who and what he is [43, 44]. Identity is defined as particular characteristics of a person or group which makes him or them distinct from others [1]. Organization identity (OI) stems from social identity theory and is defined as the extent to which an individual's self-identity is "intertwined with the identity of her organization, or the degree to which the individual defines herself in terms of the attributes of the organization" [16- 36]. Social identity theory was developed by Tajfel & Turner [45] to understand the psychological basis for intergroup discrimination (e.g. racial discrimination). Traditional agency models, on the other hand, assume that individual preferences are independent of social context. Akerlof and Kranton [7] bring this literature together and demonstrate

how the OI of employees influences their utility and in turn their behavior. Once an individual sees herself as a part of the organization, she derives utility by doing 'right' by the organization. Deviation from what is in the firm's best interests causes disutility. Organizational identity is amongst the variables which largely contribute to gain confidence in personnel's behavior towards organizational goals. It is thus characterized as a fundamental concept in the realm of organizational behavior and has drawn increasing attention from academicians [35]. Akerlof and Kranton [9] consider OI to be an important supplement to incentive contracts, particularly when such contracts are costly. They argue that a firm will find it beneficial to rely on OI in settings where inculcating identity comes at low cost; when there is uncertainty; and when employee efforts are hard to observe [8]. Others provide similar arguments [14- 32].

Empirical research demonstrates the value of OI in reducing agency losses. For example, Boivie et al [16] show that CEOs with higher levels of OI are less likely to exert their influence on the Board of Directors to secure higher levels of cash compensation when the firm's performance is low. This suggests that a 'greater connection between a CEO's identity and her firm's identity leads the CEO to do what is right for the firm, because helping the firm is tantamount to helping herself' [16].

Where higher levels of OI may result in managers being motivated to work towards organizational objectives, incentive contracts tied to specific performance measures can complement OI as the incentive contracts may be helpful in directing managerial attention in a multitask framework [40].

We focus on the role of OI in mitigating the potential for earnings manipulation, induced by incentives, to emerge. We expect that the relation between incentive-based pay and earnings manipulation will be less positive when individuals identify with the firm. Our intuition for this expectation is based on organization identity theorists who argue that when an individual strongly identifies with the firm they will behave in ways that benefits the firm because doing so enhances their own concept of self [23- 24]. When there is potential for agency costs to emerge, namely where agents are compensated with incentive contracts, we expect that agents with a strong OI will experience disutility when making reporting choices that may increase their own welfare, but may come at the expense of the firm [7]. It is the interaction between OI and incentives that can result in "strong negative emotions such as guilt and loss of self-esteem" and thus influence those choices that increase reported earnings [30, 31]. Akerlof and Kranton [10, 38] argue that

incentives in isolation are unlikely to create conditions for agents to select actions valuable to the firm.

2.3. Research background

Marwa Tourky et al [34], undertake a project on the effect of organizational identity on corporate social responsibility to gather evidence about the existence of a significant association between organizational identity and corporate social responsibility and describe how the former contributes to the development of the latter. The results of conducting interviews with the executive officers of some English firms highlight the effect of organizational identity on corporate social responsibility, thereby legitimizing such responsibilities and creating a common culture. CI plays a role in implementing CSR via communication and senior management behavior which impact employee identification with organizational values and goals and behavior, which relate to voluntary participation in CSR. Valerie Li, [47], undertake a project on the effect of real earnings management on the persistence and informativeness of earnings, to gather investigates whether real earnings management influences the sustainability and information content of earnings. Examining a large sample over a period of four decades, I find that the extent of real earnings management is negatively related to earnings persistence, and this effect is achieved largely through the negative effect of real earnings management on cash flows rather than on accruals. The less persistent current earnings as a result of real earnings management exhibit a weakened ability to predict future cash flows, suggesting a decreased informativeness of current earnings about future cash flows. Overall, the results suggest that real earnings management through the abnormal reduction in discretionary expenses is associated with deteriorated earnings quality. Aberenthy et al, [2], scrutinize the effect of an individual's identification with his/her company on the agency costs resulting from compensation contracts or the so-called earnings manipulation. Based on OI theory, we expect that managers who identify with the firm gain utility by taking actions that in their view benefits the firm, and experience disutility from taking actions that are harmful to the firm. Drawing on a third-party survey database, we find that performance-based compensation is associated with higher levels of earnings manipulation. Importantly, we also find that managers with incentive-based compensation engage in lower levels of opportunistic earnings manipulation when they identify with the firm.

3. Research hypotheses

According to the paragraph 1-1 of the theoretical concepts of the Iranian accounting standards, financial statements are prepared with the aim of presenting classified information about financial condition, performance and flexibility of economic entities. Earnings figure is one of the major elements of the financial statements which assist outsiders in making informed decisions on the estimation of investment value, evaluation of corporate performance and assessment of the role of managerial accountability. However, the question raised here is whether this information is not properly represented or not. Undoubtedly, given the factors including conflict of interests and information asymmetry between management and shareholders, managers tend to engage to a large extent in information manipulation to follow such particular goals as acquiring higher incentives. The financial misstatement and earnings manipulation, along with their negative consequences like going bankrupt, causing great loss to a society and losing public confidence in the accuracy of accounting practices, zero in on the importance of earnings management. In this respect, organizational identity has attracted a lot of attention. Managers who identify with their organizations have great passion to improve the organization and their colleagues' reputation thanks to their interest to their workplace as they do not considered themselves a separate entity from their organizations:

H1: Incentives are positively associated with earnings manipulation.

H2: The positive relation between incentives and earnings manipulation will be negatively moderated by OI.

H3: OI is negatively associated with earnings manipulation.

4. Research methodology

As an applied, descriptive and cross-sectional survey, the ongoing research aims at investigating the relationship between financial managers' compensation and earnings manipulation with a particular focus on the mediating role of organizational identity in five different listed industries including automobile, machinery, electrical machinery, essential metals and metal products using structural equation modeling method. The statistical population consists of 76 chief financial executive managers, among which, following Morgan table, 64 individuals are selected and 6 more managers are added to avoid reduction of sample. Eventually, 68 questionnaires are answered back. The research variables are as follows:

Dependent variable: earnings manipulation is examined based on the data collected using a questionnaire developed by Merchant [37].

Independent variable: compensation is studied based on the responses elicited from the respondents who are asked to announce the level of their performance-based compensation Abernthy et al [3].

Mediating variable: organizational identity investigated using Mael and Ashforth's [36] questionnaire.

The research questionnaire is delivered among the chief financial officers of the firms of interest. Prior to filling up the questionnaire, they are asked to present their demographic information including gender, age, and their membership in the association of certified public accountants. The compensation questionnaire comprises of only one question concerning the respondent's compensation rate. On the other hand, the earnings manipulation questionnaire includes three items computed on a five-point Likert scale ranging from very low to very high. The organizational identity questionnaire is made up of six items calculated with the same Likert scale as the one used for the computation of the items in the second questionnaire.
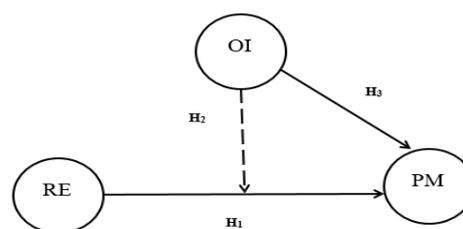

Figure 1. the conceptual framework of the research variables based on Abernthy et al [2]

5. Research findings

The results of conducting descriptive statistics on the variables and testing the research hypotheses using PLS software are represented in table 1.

Table 1. Descriptive statistics of research variables

variables	observations	min	max	mean	standard deviation
RE	68	50.00	120.00	71.0735	20.14227
OI	68	1.00	4.50	2.6422	0.99554
PM	68	1.00	5.00	2.7500	1.05939

As tabulated in table 1, the information concerning major descriptive indices like mean and indices of dispersion like standard deviation reveal that the mean of compensation equals 71.035, suggesting that the managers of the sample firms receives 71000000 Rials on average. The values calculated for maximum and minimum indices indicate the maximum and minimum rates of the compensation received at 120000000 Rls and 500000000 Rls, respectively.

5.1. The fitting of the research model
Three measures of reliability, convergent validity and discriminant validity serve to examine the good-fitness of the research model.

5.1.1. Research reliability
The reliability of the research is calculated via factor loading, Cronbach's Alpha and mixed reliability coefficients.

5.1.2. Factor loading coefficients
Factor loadings are computed through calculating the correlation between the indices of a construct and the construct itself. If the resulting value is equal to 0.4, the variance between the construct and its indices is greater than the error variance of measuring that construct, thereby confirming the good-fitness of the model [17].

Table 2. The results of examining the research factor loadings

construct	item	factor loading	critical value	result
RE	1	1.000	0.4	confirmed
OI	2	0.873	0.4	confirmed
	3	0.948	0.4	confirmed
	4	0.948	0.4	confirmed
	5	0.872	0.4	confirmed
	6	0.962	0.4	confirmed
	7	0.756	0.4	confirmed
PM	8	0.944	0.4	confirmed
	9	0.965	0.4	confirmed
	10	0.927	0.4	confirmed

The first column exhibits the primary research variable. The second column includes the first item concerning compensation, the second to the seventh items about organizational identity and three last items measures earnings manipulation. As tabulated in table 2, all factor loadings are higher than 0.4, confirming the appropriateness of the measure of interest.

5.1.3. Cronbach's Alpha and Mixed reliability
Traditionally, Cronbach's Alpha serves as a proxy to measure reliability and internal consistency. Internal consistency is a way to assess reliability in structural equation modeling method. As Cronbach's Alpha is a traditional proxy to determine constructs, the structural equation modeling employs a more sophisticated method, namely mixed reliability since it the reliability of constructs is not calculated individually, but computed with respect to the correlation between constructs. Therefore, either proxies are used to run a more favorable assessment of reliability. In addition, internal reliability is argued to be appropriate for the models if the value of mixed reliability is higher than 0.7, [17]. The results of Cronbah's Alpha and mixed reliability are presented in table3.

Table 3. The results of examining Cronbach's Alpha and Mixed reliability

Construct	Mixed Reliability	Cronbach's Alpha	Critical Value	Result
OI	0.961	0.851	0.7	confirmed
PM	0.862	0.841	0.7	confirmed

As indicated in table 3, the higher-than-0.7 values of Cronbach's Alpha and mixed reliability confirms these variables, verifying the good-fitness of the model.

5.2. The research convergent validity
The convergent validity considers the level of correlation between each construct and its items (indices). The measure of AVE points to the average variance shared between a construct and its indices. The critical value of the measure equals 0.5, implying the acceptable level of convergent validity, [17]. As tabulated in table 4, the mean

value of the variance of the constructs is higher than 0.5, demonstrating the appropriate convergent validity of the research model.

Table4. The results of examining the mean value of the variance

Construct	AVE	Critical Value	Result
RE	1.000	0.5	confirmed
OI	0.804	0.5	confirmed
PM	0.894	0.5	confirmed

5.3. The research discriminant validity

Discriminant validity is the third determinant of the good-fitness of the models, which is used in the partial least square model. The acceptable discriminant validity of a model implies that a construct shows more interactive behavior with its indices than other constructs. A discriminant validity is accepted when the average shared variance for each construct is greater than that between the construct of interest and other ones [20]. The results are illustrated in table 5.

Table5. The results of examining the research discriminant validity

construct	OI	PM	RE
OI	0.897		
PM	0.278	0.941	
RE	- 0.041	0.115	1.000

As represented in the matrix, the root mean of the shared values of the first-order constructs is higher than the correlation value among them, suggesting the appropriate discriminant validity and good-fitness of the research models. Likewise, the results reveal that each construct shows more interaction with its indices that those of other constructs. Finally, the findings confirm the reliability, convergent validity and discriminant validity, and consequently the good-fitness of the research model.

5.4. The evaluation of the research structural model fitness accuracy

Contrary to the research evaluation models, the structural model is not concerned with the items (explicit variables), and merely discusses the latent variables and their interrelationship.

5.4.1. R square or R2

To examine the fitness of the structural model, the R2 of the endogenous latent variables (dependent) is adopted. The higher the R2 of endogenous latent variables, the greater the good-fitness of the model. It is noteworthy that three values of 0.19, 0.33 and 0.67 are considered as the standard values of weak, average and strong R2, respectively [17].

Table 6. The results R square or R2

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construct	R²	Fitness level	result
PM	0/333	average	confirmed

According to the table, the value of R2 is weak for earnings manipulation, confirming the fitness of the model.

5.4.2. Q2

This measure identifies the predictability potential of the model. Three values of 0.02, 0.15 and 0.35 connote the weak, average and strong predictability capacity of the model, respectively [17]. Table 7 represents the results of this measure.

Table7. The results Q2

Construct	Q2	Fitness Level
PM	0/286	strong

Given the fact that the value of Q2 is greater than 0.15, one can conclude that the model enjoys strong predictability and good fitness.

5.5. The fitness of the general model

The general model of the research comprises of both evaluation and structural models. The index of GOF is the most comprehensive index to examine the efficacy of the model in structural equations modeling approach based on partial least square model, [20]. Developed by Tenhouse et al [46], it is calculated as follows:

$$GOF = \sqrt{\overline{communalities} \times \overline{R^2}}$$

Communalities refers to the mean shared values of each construct (latent variable), and R² points to the R square values of the endogenous constructs. As recommended by Tenhouse, GOF index is used to proxy the model fitness. Three values of 0.1, 0.25 and 0.36 account for weak, average and strong GOF index. That is to say that if this value is equal to or greater than 0.36, the model has good fitness, if it falls between 0.25 and 0.1, the fitness is average, and if it is less than 0.1, the model is weakly fitted, [17].

Table 8. R² and Communality level

Construct	Communality	R²
RE	1.000	0.000
OI	0.804	0.000
PM	0.894	0.333

Table 9. Results of the fitness of the general model

Communality	R2	GOF
0/899	0/333	0/547

According to the obtained value for GOF, the model is highly fitted.

5.6. Testing the research hypotheses

As indicated in figure 2, the results of PLS software demonstrate that the path coefficient and significance coefficient of the variables of compensation and earnings manipulation are 0.129 and 2.125, respectively (higher than the absolute value of 1.96), verifying the significance of the correlation. Therefore, the results reveal that managerial incentives significantly influence earnings manipulation. In the second hypothesis, the path coefficient of organizational identity between compensation and earnings manipulation is computed - 0.200, and the significance coefficient between the mentioned variables is 2.244, implying the significance of the relationship. Organizational identity thus exerts a significantly negative effect on the relationship between compensation and earnings manipulation. Regarding the third hypothesis, the path coefficient between organizational identity and earnings manipulation is calculated 0.261, and the significance coefficient between the mentioned variables is 3.512, confirming the significance of the relationship. The results are based on the data gathered via the questionnaire developed by Aberthny et al [2].
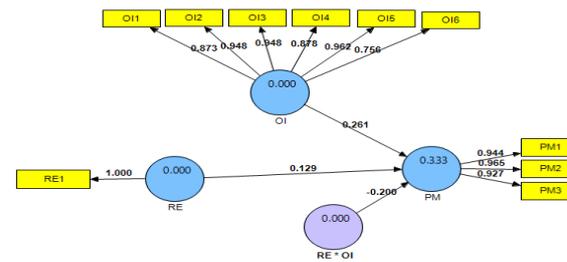

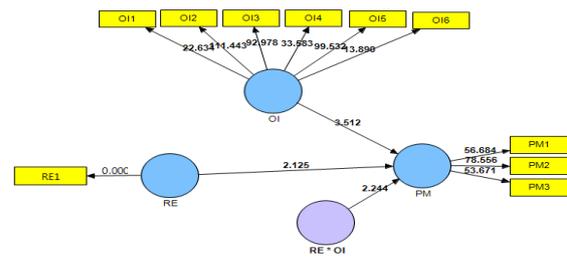**Figure 2.** The standardized path coefficients of the research hypotheses

Figure 3. t-values of the research hypotheses

As depicted in figure 3, the t-value of the first, second and third hypotheses are obtained greater than 1.96, thereby verifying the significance of the hypotheses at 95% level.

Table 10. the results of the direct relationship and significance coefficients of the research variables

Hypotheses	path	Path Coefficient	t-Values	Result
first	RE --- PM	0/129	2/125	confirmed
second	OI * RE --- PM	- 0/200	2/244	confirmed
third	OI --- PM	0/261	3/512	confirmed

6. Conclusions

Considerable research has looked at the question of what motivates earnings management. It describes the role of incentive contracts and the extent to which managers exercise their financial reporting discretion opportunistically. Consistent with the extant literature we assume and find that incentives are related to misreporting. But this does not mean that incentives should be abandoned altogether. Our findings suggest that when incentives become stronger, agents on average are more likely to misreport. But not all agents misreport.

The first hypothesis predicts a significant relationship between the mentioned variables. To put it differently, compensation contracts talk managers into engaging in opportunistic reporting behaviors to maximize annual compensation rate. These findings are in accordance with those reported by Hosseininia and Amiridoomari [31], which assert that managerial incentives are significantly correlated with increased discretionary and real earnings management. These findings are in accordance with those reported by Bergstresser & Philippon [13], which document that CEOs with high compensation tend to engage more than their counterparts in earnings manipulation.

The second hypothesis is concerned with testing the probability of the negatively mediating effect of organizational identity on the connection between the dependent and the independent variables. The results indicate that organizational identity mitigates the agency costs arising from compensation. In other words, if individuals highly identify with their firms, then the relationship between compensation and earnings manipulation is partially significant. That is to say that identification with organization motivates managers to avoid misreporting despite any strong financial incentives. These findings conform to the ones documented by Aberthny al [2], which propounds the view that those managers who identify with their firms are less inclined to conduct

opportunistic manipulation. Moreover, the results conform to those documented by Amjad zeirdast et al [6], which undertakes a study on the relationship between organizational identity and social capital among faculty members

The third hypothesis sets out to verify the likely negative association between organizational identity and earnings manipulation. Organizational identity plays a pivotal role in this regard. This suggests when individuals are obsessed about being fired or seek to find an appropriate position, they choose to implement opportunistic reporting. To put it differently, other factors than managerial incentives persuade managers to undertake earnings manipulation. Under such circumstances, organizational identity is expected to have a negative correlation with earnings manipulation, .i.e. motivations other than compensation-oriented ones trigger earnings manipulation, which is curbed by organizational identity.

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