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Analysis on Efficiency and Opportunistic Perspective under the Pat

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ABSTRACT. *Since Positive accounting theory plays an increasingly important role in the economy, this article discusses the implications of Positive accounting, the meaning, the theory of accounting; the Efficiency perspective (Ex Ante) and Opportunistic perspective (Ex post); the consistency between two perspectives on the financial position basis; then analysis on the accounting methods and focus on intangible asset, and focus on the intangible asset, using the data of the MICROSOFT CORPORATION and Apple Inc. aim to explain the research and development (R&D) expense .*

KEYWORDS: *Pat, EX ante ex post, Intangible asset, R&D expense*

1. Introduction

Accounting theory plays a very important role in any accounting approaches. In general, there are three main approaches to apply accounting theory: a) Normative approach tells people what should be done and what is ought to be done based on logical arguments; b) Descriptive approaches provide explanations and predictions based on empirical evidence or observation; and c) Critical approach critically evaluates accounting theories. Among all, PAT theory, which is broadly understood as agency theory, is one of the most important accounting theories. There are two perspectives for PAT, namely Efficiency perspective (Ex Ante) and the Opportunistic perspective (Ex post). On one hand, Efficiency perspective interprets ways to reduce agency costs. On another hand, opportunistic perspective interprets ways to maximize the agency's benefits. This assignment focuses on explaining what is PAT and other related theories, as well as how to apply those theories into conceptual practices. This assignment provides an analysis of the relationship between PAT theory and other theories. Noticeably, we also discovered the contrary position of efficiency perspective and opportunistic perspective. Moreover, we also explore that the opportunistic perspective can not be completely abolished, due to we find that the two perspectives could be occasionally related. From another aspect, we had also analyzed intangible asset by using the research & development as our case study. After analyzing the capitalization and expenditure regards of R&D, we had our final analysis conclusion that expenditure would most likely be the efficient

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way to apply in practice. The accounting theories and perspectives mentioned above will be explained and analyzed as the following.

2. Literature Review

2.1 Efficiency and Opportunistic Perspective under Positive Accounting Theory

2.1.1 The Definition and Meaning of Opportunism and Efficiency under Pat

Sinha (2008) claims that the main purpose of positive accounting theory is focus on the prediction and explanation of company practices which have a high consensus in accounting communities. PAT is regarded as a significant part of the development of accounting since it has made a contribution to the financial accounting techniques, accounting methods (Demski J 1988). This means, it functions as guidance to the decision maker in companies (managers, accountants, investors and so on). PAT has a close relationship with various costs related to internal management and external management including agency costs, compensation contracts, contracting costs related to political costs and so on. These costs become the basis of important hypothesis in PAT. In their paper they use the term ‘contracting cost’ to cover wide kinds of costs producing form the transaction of an entity (Zimmerman & Ross 1990). The main purpose of the efficiency perspective in PAT is to minimize agency costs producing for all the parties related to the company, which will contribute to a maximum of profit to this stakeholder. These parties also include managers and employees except external parties, cooperation partners (Holthausen R, 1990). Zimmerman and Ross have a more advanced view on this explanation. In the whole market, every party try to limit the wealth flowing out from own party and gaining more wealth from other parties. However, the opportunistic perspective states that managers tend to maximum their individual wealth by choosing a specific accounting numbers which can be used to calculate their compensation and increase their wealth (Holthausen R, 1990). Apparently, opportunistic perspective is not aim to increase the stakeholder and the firm’s benefits, but the managers themselves. Nevertheless the reason why managers tend to operate opportunistically comes from three hypothesizes which is concluded by Zimmerman and Ross (Zimmerman & Ross, 1990). They are the bonus plan hypothesis, debt/equity hypothesis and political hypothesis.

2.1.2 The Arguments and the Consistency between Two Perspectives on the Financial Position Basis

Zimmerman and Ross (1989) shows the assumption of Positive Accounting Theory (PAT) that accounting numbers are used to investigate the relationship between accounting number and stock prices. One article shows that accounting numbers are considered to be an indispensable part of contracts in a company. When managers choose accounting methods to be adopted in a company, they will use efficiency or opportunism of their main purpose (Chirstine and Zimmerman, 1994). Meanwhile all taccounting choices in the empirical view are based on various costs.

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Also, when investigating effective contracting, Emanuel W, Wong J and Wong N (2003) presented in the article that normally an entity use accounting number and whether they follow the accounting technology is viewed as efficiency. In contrast, the opportunistic perspective shows us some variables, these variables are chosen based on the opportunistic perspective. In other words, Zimmerman & Ross (1990) explains further that if managers are given complete discretion and perquisites, then we can say it is not consistent with the efficiency and the interests in of all the shareholders and other stakeholders. When Zimmerman and Ross do their researches, they use two group of samples, one of them is the surviving companies' group and the other one is called non-random sample, which is clearly seen that surviving firms have a low rate to use the opportunistic perspective. From these views, it is clearly, on the face level, efficiency and opportunistic perspective are on the opposite side and efficiency lead to a success way and opportunistic method cannot be thought a decent way of accounting areas.

(1) Efficiency and Opportunistic Perspective Cannot Be Eliminated

However, these two perspectives cannot be separated completely. Except the earliest research, most of researchers agree that they have some positive relationship to each other and the affect between them cannot be easily eliminated. Zimmerman & Ross(1990) use a Figure and Picture to explain where is the boundaries of these two perspective, they use a joint part of two circles to explain that in fact, the Ex Ant and Ex Post are able be completely separated, which leads to the rewriting of contracts. Firms aim to eliminate the risk of opportunism of managers. We also can have a look of the opinion of Holthaues R (1989), it is difficult to distinguish efficiency behavior about the managers follow the accounting technology to strength the monitoring perspective and opportunistic behavior of managers.

(2) Efficiency and Opportunism Can Be Affected to Each Other

Another part of the arguments of the efficiency and opportunistic perspective is that the two perspective under PAT can be served for each other. Zimmerman and Ross explains that because of the asymmetric information and costly monitoring, all the contracting parties think that the expected managerial opportunism is considered rationally (1990). This means it can be accepted this kind of value loss in the contracting. However, they also mention that all the parties especially the external parties they use the price protection to reduce the managerial opportunism. In this circumstance, manager have incentive to less the opportunism in their performance, as a result, the expected opportunism can be efficient. Then we can say they are consistent. Chirstine & Zimmerman, 1994). They say that it is significant to decide that how to incorporate the ex ant and ex post can bring a bright future in the accounting communities (Zimmerman & Ross, 1990).

2.2 Efficiency and Opportunistic Perspective under Other Theories

According to the research of Matinez R and Dacin M (1999), transaction cost theory aim to guide organizations to pursue an efficient outcome. However, it is apparent that TCE cannot be universally relied on, when decision maker does the

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final decision of the company. In contrast, institutional theory is concern about how the company keep consistent with the institutional environment. Normally it is considered under the normative context. It supply more organizational behavior and present the phenomenon that many companies in the same area. Prone to use the same accounting method and it is called legitimacy imperative. Nevertheless, it is regarded as an inefficiency way of accounting. The authors continue to illustrate that operating company opportunistically is derived from the natural of human being, but the market will eventually pick out those who behave in this perspective. So if the company use the TCE is completely on the basis of efficiency. At the end, authors' opinion is that the best way for all companies is to integrate TEC and institutional theory. (Martinez R and Dacin M, 1999)

2.3 The Efficiency and Opportunistic Perspective in Accounting Method

Form previous literature review of positive accounting theory and other theory. It is clearly that the stakeholder's purpose is to maximizing the profit of the whole company. As a result they may give discretion to the manager and establish contract with managers to reach the profit goal. However, when aligning the company's interest with manager's personal interest, all the stakeholder, even debt holder will assume a risk about this discretion. These managers may play with accounting numbers, we can get evidence from the financial reports and the accounting method managers have chosen.

2.3.1 Review of <Empirical Research on Accounting Choice>

Fields T, Lys T and Vicent L (2001) organize their research and review on the basis of three accounting choice, which were the main topics of previous research. The three kinds of accounting choices are agent costs, information asymmetries and externalities affecting non-contracting parties. How to enlarge the profit and avoid agency cost is a balanced problem.

When a company choose agent cost as an accounting method, it means they choose an efficient accounting contract perspective. It also includes executive compensation agreements and debt covenants. However, for example, LIFO can reduce the tax by decreasing income number, while, FIFO are likely to increase reported earnings. The second method, information asymmetries, because of the lack of information of company, all managers are more likely to do the self-interests methods. The third one is that managers want to influence external parties.

2.3.2 Review of <Efficient and Opportunistic Choice of Accounting Procedures: Corporate Control Contest>

In this article, authors claim that when managers choose income increasing method, it means they are more likely to choose opportunistic perspective. The evidence can be seen from the income-increasing depreciation, inventory and investment tax credit ways, because the takeover target managers use the methods more than surviving firms in the same areas. Also, managers may choose income

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inflating increase method may reflect that the managers have more possibility of opportunistic perspective.

2.3.3 Review of <Efficient Contracting and the Choice of Accounting Method in the Oil and Gas Industry>

This article is a case study, it discuss whether the oil and gas industry use full cost or successful cost perspective, which is related to the efficiency and opportunistic perspectives. The full cost is related to the efficiency and the successful cost is related to the opportunistic perspective. It concludes that companies which will survive for a long time must use efficient contracting perspective. They cut the agent cost, as a result managers will bear more risk and they may choose the opportunistic perspective. An accounting method is used to reflect that the manager is operate their authority appropriately.

3. Analysis

3.1 Analysis of Accounting Methods

To be consistent with the literature review, Zimmerman and Christine (1994) explains that in most companies efficiency perspective is more important than the opportunistic perspective. However they made assumption that income-increasing method is used to satisfy managers' self-interest, because these methods can increase the present value of their compensation. Nevertheless, when stakeholder control the effect and the extent of opportunism of managers, they may have problems in evaluating and estimating opportunism. Malmquist and David (1989) claims that successful cost method is more opportunistic because using this method can show a high income number on the financial report. The full cost method is likely to be more efficient. The author also explains the reason why most companies are likely to give a higher compensation is that the cost of renegotiation and changing new managers are more costly. Accounting methods choice and procedures are complex. They may also relate to the consolidate companies and parent companies and their subsidy companies. How to present their financial report using suitable accounting method. We need to consider more, such as the size, the area, the unique environment of the companies. Except these points, we also need to balance the efficiency and opportunistic under many costs related to the companies. It is not such a simple problem (Holthaysen R, 1989).

3.2 Focus on Intangible Asset

As mentioned previously, several of accounting methods are used by accountants. However, which method is determined by manager. An increase number of accounting method issues show up, especially, in intangible assets. As a new asset, challenge problems are not only focus on how to measure the intangible asset, but how to satisfy shareholder and debt holder. In the management process, the

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measurement of intangible asset many have existing opportunistic behavior (David H. 1989). Landry and Callimaci (2003) study that treating intangible asset as capital or expense is a problem in accounting area. In fact, intangible asset as a capital in the information era, but some company never mention it in the balance sheet. Intangible asset should include computer information and data, innovative property, economic competencies. Our group analyze one of the intangible assets: research and development. In the innovative property part, there are few accounting methods to measure research and development (R&D).

Firstly, there are two assumptions for R&D, then deeply study mainly on which one is better to company, and all of stakeholders. Moreover, it is still confuse with whether there is an oppose relationship between manager and shareholder, or whether there is an opportunism in the agency cost.

Hypothesis 1 R&D costs capitalization effects on company.

Hypothesis 2 R&D costs expensing effects on company.

H1:

Accordingly, Markarian (2008) believes that among firms decision to capitalize R&D costs. Recently, Aswath (2014) states the process of R&D expending transforms to the capitalization in MICROSOFT CORPORATION in YouTube. At the same time, borrowing the APPLE INC. annual report 2014&2013, and estimating the company performance when R&D capitalization.

Sheet 1 output: all of the financial data about R&D in apple Inc.

Sheet 2 amortization and comparison

As the result, from two tables find a big difference on company's capital between capitalizing the R&D expense and keeping the R&D as an item of expenses. Firstly, the operating income after tax goes up by $2612.66. However, the R&D expenses are added to the operating income after taxes directly. It can be used to get a tax benefits. In the future, may be the law will change the regulation, and impose a tax regulation, if we want to capitalize R&D. Secondly, the return on capital does not change too much. Thirdly, the return on capital drops to 27.47%. The free cash flow never change. Actually we just capitalize the R&D expense and then add it into the capital of the company, then the total values of the company enlarge. The company will show a better performance compared with expenditure all R&D expenses.

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Output(in million)				
Year	R&D Expense	Unamortized portion		Amortization this year
Current(2014)	6041.00	1.00	6041.00	0.00
2013	4475.00	0.67	2998.25	$ 1,491.67
2012	3381.00	0.33	1115.73	$ 1,127.00
2011	2429.00	0.00	0.00	$ 809.67
	0.00	0.00	0.00	$ -
Value of Research Asset =			$10,154.98	$ 3,428.33
Investment on asset as capitalizer in current year =			6041.00	
Amortization of asset for current year =			$3,428.33	

	Without capitaliz	With capitalizing
Operating income	$52,503.00	$55,115.67
Operating income after taxes	$38,786.04	$41,398.70
Net Income	$39,510.00	$42,122.67
Book value of capital	$140,534.00	$150,688.98
Return on capital	27.60%	27.47%
Capital expenditures	$9,813.00	$15,854.00
Depreciation &Amortization	$7,946.00	$11,374.33
Net Capital expenditures	$1,867.00	$4,479.67

Fig. 1 < https://www.youtube.com/watch?v=Y_UpzqNk3I4>

H2:

In accordance with (Financial Accounting Standards Board) (SFAS) No. 2 (FASB, 1974, para. 12) states that it has been offer to report their R&D as an expense in the annual report, due to two reasons. One is that expenditure R&D may have a chance to decrease discretionary management chance, another one is that company value normally does not be influenced by totally capitalizing R&D. The way of expenditure is to calculating all the expenses related to R&D, and then using these expenses account to calculate the profit and loss. The benefit of expenditure is related to the conservatism principle, because if to do so, it will not have any probability to enlarge the profit and try its best to reflect the true value of a firm.

Criticism

IASB regulation and Australia regulation on manager has discretion to capitalizing R&D. Guidara and Boujelbene (2014) claim that managers may intentional to reach the earning targets which may have a close relationship with their compensation. Similarly, Ahmed and Falk (2006) confirm the reason why US accounting standards do not use capitalization when dealing with R&D is that they aim to avoid risk of manager's excessive discretion. Furthermore, Ahmed and Falk (2006) also claims that they think capitalizing the R&D does not contribute to enlarging a firm's value. Then, let's have a look of the function of expense. According to the research of Kothari S, Laguerre T & Leone A claimed that the

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main function of capitalization is to increase the securities price through increasing the firm value. If a company totally expense all R&D, the security price may not be reflected in its real value. It is not denying that R&D can bring future value of a company. If R&D can generate the real cash inflow for a company, we should keep consistency with the accounting principle. As a result R&D expense can be capitalized but should in a reasonable way. Guidara R & Boujelbene (2014) compare the different hypothesis when choosing what kind of R&D expenses should be capitalization.

4. Conclusion

Now, we conclude all own consideration. Expenditure may be consistent with efficiency, because it aim to reflect a firm value in the most accurate number. However it ignore the profit that can be gained from the capitalization. The capitalization may increase the opportunism of managers, which means they have a variety of discretion of a manager. From the perspective of us, we think recording should separate the expenses in R&D, such as salary expenses, material expenses and fees paid to outside and so on. These expenses are related to R&D. We should measure the probability of bringing the future benefits of expense. If the level of relevant is lower, then expensing it. Also, if some expense happened in one accounting period and not be related to the profit, we need to expense it as well (accrual principal). The left expense, which can bring future benefits we can capitalizing it.

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