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Comparison between accounting profit and economic profit and its effect on optimal point of production

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Abstract

Profit is one of the main data indicators to assess economic firm that can be regarded as a proper indicator for decision-making. In spite of all various concepts that have been submitted for profit concepts, it seems these concepts are not acceptable by economists and accountants. This research investigates submitted concepts and definitions that are relatively comprehensive and accepted in two fields of economics and accounting; moreover, analyzing impacts of each definitionis accepted. Discrepancy in economists and accountants' view about cost leads to a difference between accounting profit and economic profit. Thus, opportunity cost is not deniable in this role. Moreover, the accountants use straight line or exponential method for calculating depreciation, whereas the economists utilize a method based on profit. This research has tried to present an acceptable concept for profit using the conducted studies and submitted theoretical basics.

Keywords: Economic profit, Accounting profit, Opportunity cost

Introduction

Primary objective of financial accounting is to provide useful data for investors in order to anticipate performance of economics unit. Necessity of profit report as a primary criterion to make decision was properly attributable for the investors also report of profit helps the economy in various ways as providing a basis for tax calculation, a criterion for successful measurement of the enterprise, determination of dividends, distribution of profit management, and management of an economic unit and so on.

Since value of a enterprise is related to its future and present profits, profit determination is highly important (FASB[1], 1985). Profit realization implies investment return and this return is merely fulfilled when the invested money can be maintained and recycled. Therefore, concept of capital maintenance is used for determining difference of return and investment and return of capital and also profit. Concept of capital maintenance includes two other concepts as physical capital and maintenance of financial capital. Maintenance of financial capital is shaped when monetary value of net assets in the end of period (excluding transactions with owners) is at least as much as monetary value of net assets at the beginning of the period.

This view is the very old view to maintain the capital which is used by the financial accounting. While physical capital refers to capital return and it is maintained when physical production capacity of an economic unit in the end of the period (excluding owners) is at least equal with size of physical production capacity at the beginning of the period. This concept refers to the fact that it is identifiable just after physical substitution of operating assets. Physical production capacity at a time is equal with the applied current net value of assets to create. The current values consist of the expectations relevant to profitability of assets. (Celyde, 2007). Considering the conducted items, this research intends to study this subject in terms of two economic and accounting views and in the next stage, we get to know review of literature and profit concepts in the first part of this research and we address to theoretical basics of the research after stating research method. We finally review summary results of the researches.

Review of Literature

Concept of Profit and its Applications

Concept of profit is of applicable concepts in an economic unit. Hence, considering various objec-

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tives of the users, several definitions and methods of measurement have been submitted for it. Application of profit for specific objectives as measurement criterion of management efficiency, prediction criterion of future performance of the enterprise or dividends in the future, measurement criterion of success rate of the enterprise, basis of determining tax, basis of determining regulations for the enterprise in order to supply public interests and finally evaluation criterion and judgment about how to allocate resources by economists for profits which can be plotted (Clyde, 2007). Considering objectives of the users, profit can be divided into three categorizations as structural, interpretation and behavioral which are being expressed as follow.

1- Concept of Profit by Structural View

In this view, the profit is the same income surplus on cost. It means the same issue which is known as reasonable and rational issues in the norm, tradition and regulations and they are based on concepts assumptions and principles that accountants have gained and submitted them in practice. But these concepts can be defined merely by principles like fulfilling a financial event, matching, accrual method and cost allocation method in terms of view of specific regulations because no second copy of them will be seen in the real world (Parsaeian, 2006;380).

2- Concept of Profit by Interpretive View

In this view, in order to submit a definition for profit both economic concepts of changes in welfare and profit maximization are focused. Moreover, the Financial Accounting Standards Board pointed implicitly to these two concepts by "preservation of capital" and "profit maximization". Preservation of profit is one of the main concepts of the profit because it is located between economic-theoretical based concept. This view is based on the expected changes of current value of cash money, but actual fee of the market and similar choices can be justified by the help of this view and it claimed that the said items can be proper substitution for the current value (Parsaeian, 2006,p.342).

3- Concept of Profit by Behavioral View (Pragmatism):

This concept consists of some issues as decision-making processes of investors and creditors, reaction of stock prices about benefit reporting, decisions of management regarding expenses, capital and reaction of manager and accountants in response to feedback information. One of the behavioral characteristics is that one can predict future profits. If other effective elements are considered carefully, future operations can be anticipated using net profits of several periods (Parsaeian, 2006, p.428). However, all concepts of profit cannot be rational in terms of practice and theory for submitting effective information on investors and others. On the other hand, they lack necessary interpretation in view of the real world or they cannot affect decisions of the investors or others for they lack any behavioral characteristics.

Methodology

The research method used in this study is library studies and theoretical basics written about this subject.

Theoretical Research Basics

1: Accounting Profit

To most of financial statements users, accounting profit which is determined using accrual system is a tool to measure performance of the enterprise. Measurement of enterprise performance means general evaluation of financial status and results of the operations in order to make sound decisions. For example, accounting profit can be considered as a validation base for banks to the enterprise or terms of entry into Exchange Market. In circular No.6, the Financial Accounting Standards Board compelled using accrual method in the accounting. According to reflection of transactions effects and enterprise events does not necessarily mean entry and exit of cash money. In the other word, in accrual method, principles as "fulfillment" and "matching" are used to reflect incomes, expenses and calculation of accounting profit. As a result, success of a enterprise depends on its capability in creating cash flows (The Financial Accounting Standards Boards, 2006).

According to accounting view, the capital is measured based on net base of assets of financial institutions due to current ambiguities in future cash flows and lack of accessibility to proper discount rate.

On the other hand, the profit in accounting results from a difference between capital of business unit from beginning of fiscal period to the end. In this concept, the capital is equal with net assets and measurement of profits is influenced by measurement basics of assets and depts. In accounting, various methods as accrual accounting, cash accounting, semi-accrual accounting, modified accrual and modified cash are used in order to determine profits. Obviously, the above-mentioned methods will present different pros and cons, so that based on this matching; accountants follow approach of "matching principle of costs with income". Reference to this principle, expenses of one period of incomes of the very period is deduced till the real performance of the results is reflected. Correct method of accounting for income identification should be theoretically in a way that firstly that income is realized or is realizable and secondly, that income is acquired. Considering this view, in case one of the above conditions occurs, the income can be identified (Teimouri, 2001). Following the above-mentioned explanations, one can conclude that accounting profit holds high reliability since it is based on documentation and past events, but no thoughtfulness is beholden in it.

Economic Profit

Definition of economic profit concept is generally referred to certain economists like Hikess (1939):

Objective of profit calculation in specific issues is to show people how much they can consume without being needy. It seems that profit of an individual is as the maximum value that he/she can consume through a week and in the end of the week it is as well as the first week that they commenced. Although Hicks focuses on individual profits, this concept can be regarded as a base for determination of current profit by altering "consumption" term to "distribution". Therefore, business profits will be changing net assets resulting from business activities through an accounting period. On the other hand, business profit is changing net assets excluding investments of owners and profit distribution among them. It should be noted that this concept of profit determination is called "capital maintenance" by accountants (Barker, 2008, p.7).

Economic profit and current value (net) are both sides of a coin that economic profit is one of the components of economic theory and current value of cornerstone of financial economics. To Marshal (1890) economic profit was of the essential concepts of economic theory. Economic profit represents surplus profits resulting from an investment in which the best alternative has been lost more than profit amount (Rea, 1992, p.87). On the other hand, economic profit resulting from an investment is the difference obtained from the conducted investment and profit of the best option which is remembered as opportunity cost. The economic profit is remembered by various interpretations as realizable surplus profit, surplus income, abnormal profit, extraordinary profit and residual income, as well as other titles as Economic Value Added (EVA), Cash Value Added (CVA) and Value Added of shareholders are used under meaning of economic profit (Maggy, 2007, p.165). Discounted cash flow analysis has been identified and used from the eighteenth century. The current net value is a function of discount rate. This rate can be obtained based on "Capital Asset Pricing Model".

Concept of economic profit and current net value is the same and mostly the economic profit is hidden "current value" term. Hence, maximizing the economic profit is the same as maximizing the current value and all tries and attempts of businesses are exclusively used for maximizing current value of net cash flow and regulation of current net value shapes basis of neo-classical investment (Discky and Pendic, 1994, p.5). Considering the above explanations, on can conclude the economic profit has more relevance capability compared to accounting profit since the economic profit takes into account all aspects of the activity and measures effect rate of the passes events.

Comparison between Economic and Accounting Profit

In order to comprehend difference between economic profit and accounting profit, it is required to specify objectives of this concepts' definition. Accounting profit is defined based on its objective, namely report submission of the enterprise's performance. Therefore, calculation of implicit costs in the balance sheet does not seem reasonable. When an accountant submits report of income, expenses and business profits, implicit costs as opportunity cost of the missed options are never been studied because it is against the accepted principles of accounting. In contrast, purpose of economic profit is to submit a decision-making criterion for economic businesses and investors. Since behavioral analysis of economic unit is of requirements of profit analysis, analyzing cost-benefit is highly important, so that decision-making criterion in analyzing market structure and continuum of activities of a business or interrupting it is based on cost-benefit analysis and finally positivity or negativity of economic profit (Awma, 1998). Moreover, view of economists differs with view of accountants, so that economic profit and accounting profit will not be the same. Accountants mostly tend to take into account "explicit costs of production" means all costs of daily wage, management, interest and raw materials as cost of production. But economists take into account "opportunity cost" or "implicit cost" in addition to paid and explicit costs. For example, when a manufacturer owns a manufacturing unit, no rent is paid in order to use it, so that production cost for rent is zero in accounting terms. From an economic perspective, since this manufacturer has the opportunity to rent his manufacturing place to any economic agent and receives rent and he is not able to acquire this amount of money at the moment, the rent is lost, opportunity cost is using the building and it is considered as costs of production in terms of economic, so that the difference between economic profit and accounting profit are essentially costs of capital that the accountant cannot subtract costs of capital in profit calculation. In contrast, the economists consider opportunity cost which have been invested for shareholders of the capital.

Among economists, profit has a broader concept though (Mankio, 2008, p.270). In short, it is possible to say that accounting profit is difference between income and explicit costs of doing issues but economic cost is difference between income and implicit and explicit costs.

Explicit costs- Income = Accounting profit

(Implicit costs + Explicit costs) – Income= Economic profit

These two equations can be rewritten as follows:

Accounting depreciation – Explicit costs- Income = Net accounting profit

Economic depreciation – Explicit and implicit costs- Income = Net economic profit

Difference between these two figures of the profits roots from various method of depreciation calculation. Accountants use direct linear methods or exponential method, whereas economists use interest-based method. Thus, to theoretical point of view, it seems that in case it was possible to compel enterprises to use an interest-based method, the way of calculating accounting profit will be similar or compatible with calculation method of economic profit. To achieve such result is not an easy task because parameters which should be constant in each pattern are not constant in the real world.

Inflation causes changing of the finished costs of the assets and the expected changes in inflation rate will lead to change of discount rate. Factors of supply and demand affect a enterprise's risk and such factors will negate parameters' stability. This process or analysis is continuously changing. Such circumstance calls for accountants to calculate the net profit every day in order to coordinate it with economic realities (Parsaeian, 2006, p.386). However, one of the differences between accounting profit and economic profit depend on users of these two concepts. The investors are looking for estimation of price fluctuations and deciding about their own investment by using constant analysis, but the accountants are not in charge of the same responsibility. The accountants are not only responsible for calculation of economic profit, but also they are in charge of data submission for the market in order to let investors to calculate economic profit accordingly. On the other hand, the accountants presented data related to cash flows and other calculations related to economic profit is assigned to the investors (Parsaeian, 2006, p.387).

Considering the mentioned definitions, difference aspects of economic profit and accounting profit are as below:

Scarcity

The easiest and most comprehensive definition for economics is "Science of Optimal Specialization of Scarce Resources". Scarcity is the most significant issue of Economics. Merely Economics addresses to Scarcity. In case scarcity hadn't existed, no economics would have been created. Scarcity means facilities are limited in comparison with unlimited demands. For example, an individual's salary is limited but he/she has tendency to purchase abundance of goods and services, budget of the country is limited but there are an infinite demands and needs in the society. Due to infinity of humanbeings' demand and limitation of productive facilities, "Selection" subject is inevitably introduced. Because resources are limited, choosing an option leads to missing other options which is called "Opportunity Cost" in economics (Matkio, 2008, p.3).

Opportunity Cost

Opportunity cost is value of earnings raising from the best accessible options in comparison with former selected option. Opportunity cost is one of the most significant components of decision-making process of enterprises, but it is not mentioned in financial statements as real costs. Opportunity cost is a criterion of desirability rate resulting from a decision, especially in investment. It is a key concept in economics and its man application is in selecting desirable option among all incompatible options. Using opportunity cost as a selection criterion has essential role to ensure that scarce resources will be allocated effectively. Economics are looking for the best method to allocate resources due to unlimited human needs and limitation of resources that this importance with "opportunity cost" will be best determined. Opportunity cost is an example of the concepts which are taken up in economical projects and its main objective is to study optimal allocation of the available resources. Therefore, it is possible to say that opportunity is one of the key concepts which has central role on theorizing about investment.

Cost of the missed opportunity is measured by physical measurement units, not money. In fact, term "real cost of missed opportunities" (which is real value of sacrificed good) can be sometimes used in order to distinguish between missed opportunities and monetary cost. (Although they are not measured by money, because of this reason that we measure value of the sacrificed goods by money, upon hearing price of an object, we implicitly take an action in order to compare cost of the missed opportunities by money. But unit of opportunity cost is indeed subjective value not money). Therefore, opportunity cost means ignoring values of other goods and that sacrificed goods should have any value. Accordingly, opportunity cost is usually a positive cost. However, for free goods, factors of production that don't have more than one application and mass unemployment, opportunity cost is zero.

Opportunity cost which is also called economic costs, real costs with shadow prices are the very cost that is paid for the missed opportunities. Namely, in case the first option hadn't been selected, there would have been other options with different values. Opportunity cost is highly associated with decision making process and selecting. The decider evaluates in his mind the opportunities that are missed by his own decisions and the selection is done afterwards (Mankio, 2008, p.270). With another look at the opportunity cost, we find out that opportunity cost is cost of missing benefits of an opportunity in order to achieve another opportunity. Concept of opportunity cost was seen for the first time in the early 19th century. This attitude soon got taken into the account against real costs and turned into one of the issues of classical economics and modern economics.

Sunk Costs

In economics and business decision-making, a sunk cost is a retrospective (past) cost that has already been incurred and cannot be recovered. Sunk costs are sometimes contrasted with prospective costs, which are future costs that may be incurred or changed if an action is taken. Both retrospective and prospective costs may be either fixed (continuous for as long as the business is in operation and unaffected by output volume) or variable (dependent on volume) costs. Note, however, that many economists consider it a mistake to classify sunk costs as "fixed" or "variable." For example, if a firm sinks 1 million Dollar on an enterprise software installation that cost is "sunk" because it was a one-time expense and cannot be recovered once spent. Sunk costs are called by other names as well as: the cost into the account, amortized cost, put cost, wasted cost, put and primary cost, initial irretrievable cost of production, non-continuous cost, integrated cost, missed final price, variable final price.

In traditional microeconomic theory, only prospective (future) costs are relevant to an investment decision. Traditional economics proposes that economic actors should not let sunk costs influence their decisions. Doing so would not be rationally assessing a decision exclusively on its own merits. Alternatively, a decision-maker might make rational decisions according to their own incentives, outside of efficiency or profitability. This is considered to be an *incentive problem* and is distinct from a sunk cost problem.

Transaction Cost

Adam Smith believed that human being's life is based on transaction. Transaction enables people to benefit from benefits of return increase (which is resulting from extension of division of labor). Realization of each transaction requires bearing some costs so that extent of transaction (and extent of benefits resulting from the transaction) depends completely on transaction costs (Renani, 1977, p.326). A major criticism of neoclassical economics is that the transaction costs in neoclassical economics are considered equal to zero. This criticism is great and bearable as long as Ronald Cows (1960) identified in social cost issue that neoclassic pattern holds merely the said specialized results in case of shortage of transaction cost and if the transaction cost is positive, structure type of property rights will affect on the market's efficiency. And many will question the results of the neoclassical pattern. Transaction cost is unexpected costs which are imposed to one of the transaction's parties due to lack of compliance with the obligation by one party (Renani, 2006). In other words, transaction cost is costs that individuals are imposed through transaction process in order to identify, define and guarantee their own property rights. Therefore, transaction cost includes costs of data collecting about seller, buyer and quality of good or service which is exchanged, cost of contract, monitoring performance of another party and above all costs related to definition of property rights and guarantee these rights (Renani, 1997, p.327).

Thus, transaction cost is acost that is given to an individual, group or organization to control behavior and monitor transactions when it is imposed to the people who are doing economic interaction with others (Williamson, 1996). So that transaction cost can be attributed to two dimensions of human behaviors (current limitations for complete data and tendency to self-interests) (Lion, 2005). Transaction cost is divided into market transaction cost, management transaction cost, political transaction costs and natural transaction cost in terms of definitions and types (Alavi, 2005).

Impact on Optimal Point of Production

According to the explanations of the Accounting Profit and Economic Profit and according to the opinions of experts in the field of research has been, managers can make the difference between economic profit and accounting profit at the optimal point of production can be divided into two categories:

The first category is the optimum production managers who prefer to arrive earlier and thus have more profit. These managers have relied on the accounting profit and profits of documenting and reliable because of its ability to measure know the profits of the only basis for that produce optimum and practically do not use the optimal point of production and economic profit due to the scarcity of those costs, such as opportunity costs and costs irreversible. So do not be involved in determining the optimum production point to the optimum point of production, lower gain.

The second category managers who prefer a more Related to optimize their production closer to reality and thus achieve higher profitability in the long term. These managers, in addition to accounting profit in determining the optimal point of production to the optimum economic profit to real production use. Additionally, the earnings can be documented because they know reliable information on the economic profit, clearer and has fewer restrictions than the earnings call.

Thus, itseems Managers tend to achieve more accurate optimum point is better,in addition to earnings, the difference between economic profit and accounting profit as earnings limitations in determining the optimum production use

Conclusions

One can conclude, since accounting profit has generally more evidences; it can be more reliable comparing to economic profit, but economic profit considers all aspects, and it is more relevant than accounting profit. Consequently, using both profits can have more effectiveness. When a business studies an investment project, it firstly looks for estimating economic profit. The mentioned economic profit is estimated using input flows (incomes) and outputs (costs). The business should pay in cash the final price of acquiring required assets. This payment shows a missed opportunity cost which could be used for more efficient alternative options. Hence, the business should measure future net costs. Clearly, accounting profit does not reflect initial need for input and output flows of cash money in the future years and it is merely for economic profit that reflects real cash transactions related to investment projects. The investors are seeking high reliability of input flows in their analysis in order to guarantee the primary investment and approach of economic profit can fulfill management analysis of the investment.

To calculations' view, the economic profit has less calculation ambiguity compared to the accounting profit. There are a number of various methods for available sharing in the stocks, cost allocation and calculating depreciation to calculate accounting profit, so that different net profits will be gained as accounting procedures. Obviously, an economic approach which is based on valuing a project is not more than this circumstance and it holds an accounting approach. In the end, the economic profit focuses on "time value of money" by denying its own calculations, whereas it ignores accounting approach of it. Reference to usual regulations of accounting, invoice is registered as an income while this document may stay there untouched for months and years without flow of any cash money. In contrast, costs are registered upon being fulfilled without any real payments.

However, although accounting profit is a very useful criterion to assess performance, it is not a complete criterion for decision-making. Thus, from perspective of capital management, an economic approach can supply a better basis to estimate future investment resources.

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