



## A study of relation between accounting variables and legal entities' diagnostic taxable income (Case Study: Sanandaj City)

*Azad Khosh Namay Bahrami*1 and *Mohammad NazariPour*2\*

1 Master of Accounting, Islamic Azad University, Science and Research Branch of Sanandaj, Sanandaj, Iran

2 Assistant Professor, Accounting Department, Kurdistan University, Sanandaj, Iran

### Original Article:

Received 26 Jan. 2016 Accepted 1 March. 2016 Published 20 March. 2016

### ABSTRACT

As taxable incomes are collectable, governments give permission to their counties or states to collect them and the state's budget is determined according to taxable incomes. Therefore, the current research with purpose of investigating the relationship between accounting variables with legal entities' diagnostic taxable income was designed. Statistical population this research was all the taxpayers (legal entities) of Sanandaj County. And statistical sample size according to Cochran formula 370 people was determined. The tool of data gathering by using the questionnaire was collected. Data and information required for such researches are gathered through questionnaires. The results show that there is a significant statistic relation between all three accounting features with the individuals' diagnostic taxable income in Sanandaj. Therefore, the current research with purpose of investigating the relationship between accounting variables with legal entities' diagnostic taxable income was designed. Statistical population this research was all the taxpayers (legal entities) of Sanandaj County. And statistical sample size according to Cochran formula 370 people was determined. The tool of data gathering by using the questionnaire was collected. Also, the results of the research indicate that among accounting variables, growth opportunities, return on equity and investment are most related features to the diagnostic taxable incomes, respectively.

### Keyword:

- ✓ diagnostic taxable income,
- ✓ accounting variables,
- ✓ Growth opportunities,
- ✓ taxpayers,
- ✓ investment Return on equity (ROE)

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\* Corresponding author: Mohammad NazariPour

**INTRODUCTION**

Iran is an oil-rich country and most of its outcome is provided through selling oil. High oil price fluctuation and being unable to control it have caused multiple shocks to Iran's economy which have made negative effects. These results in independency of current costs to oil, providing it through tax revenues and assigning oil revenues to improve investment based on efficiency. Tax is one of the most important means of income for each country and it is mainly an instrument for balancing the public wealth, redistributing the incomes, development and rebuilding, and serving justice in the society. The main reason for collecting taxes by governments is to provide financial recourses to manage the general affairs of the country and serving the people socially and economically.

**Research problem**

Tax is the main source of incomes for governments. Economic theories demonstrate that government's activities in normal conditions reduce the efficiency of economy. Thus, government's earnings through economical activities are limited and mostly consist of offering goods and public services. Tax is an important means for fulfilling economic policies and is considered a major variable with which governments not only effect on major economic variables such as economic growth, inflation, unemployment, etc., but also influence highly on allocation of resources and distribution of incomes. Consequently, significant share of taxes from gross national product could be the sign of effectiveness of tax policy in economy. High fluctuations of oil revenues and being unable to control it have caused multiple shocks to Iran's economy which have made so many negative effects. Such issue has caused a more and better attention to tax revenues and its increase. To increase the efficiency of taxing process, we have to reduce such costs. According to researches and tax experts, discovering financial variables which effect taxable incomes in tax determination process, results in the effective use of organization resources and reduction of its costs and consequently improving tax efficiency. Therefore, the current research with purpose of investigating the relationship between accounting variables with legal entities' diagnostic taxable income was designed.

**Research Objectives:****Main Objective:**

To investigate the relationship between accounting variables with legal entities' diagnostic taxable income

**Minor Objectives:**

- 1-To identify the relationship between Growth opportunities and legal entities' diagnostic taxable income
- 2- To identify the relationship between investment and legal entities' diagnostic taxable income
- 3- To identify the relationship between Return on equity (ROE) and legal entities' diagnostic taxable income

**Research Hypotheses:****Main Hypothesis:**

There is significant relationship between accounting variables with legal entities' diagnostic taxable income

**Minor Hypotheses:**

- 1- There is significant relationship between Growth opportunities and legal entities' diagnostic taxable income

2- There is significant relationship between investment and legal entities' diagnostic taxable income

3- There is significant relationship between Return on equity (ROE) and legal entities' diagnostic taxable income

**Research background**

In their research, Hanlon and Shevlin (2005) concluded that although the company's overall interest comparing to taxable income can indicate the annual output better, taxable income can explain it more clearly.

In their researches, Lev and Nissim (2004) and Hanlon (2005) found that the difference between taxable income and declared profit is systematically connected to profit growth, stocks return and sustainable profit. They believed that the difference between taxable income and declared profit would be a useful criterion for evaluating the performance of the company.

Ayers and Laplante (2006) performed a research about taxable income as performance criterion. The study showed that the tax planning for minimizing tax liability overshadow the real performance of the company. They theorized that the content of taxable income data for the companies which apply tax planning to report their taxable profit is low. By analyzing financial statements, they believed that since the content of taxable income data is generally lower comparing to other performance criteria, the loss of extra data content for investors is lower due to tax planning. Moreover, they expected and supposed that the relation and content of extra taxable income data for the companies which have lower quality profits are higher. They also indicated that they had taken the lower quality profit for the companies whose profit consists of abnormal accruals. According to this assumption they noted that the content of extra taxable income data for the companies with high amount of abnormal accruals is more than other companies. For example, for the companies with high abnormal accruals, taxable income explains 66% of annual stock returns while such a criterion is just 49.8% for other companies.

Mara Faccio and Jin Xu (2012) applied many types of data related to changes in lawful rate of taxable income of companies and lawful rate of individuals' income tax in Faroe Islands from 1981 to 2009, and studied the influence of tax on the structure of the companies' capital. The results show that the company and individual taxes are statistically meaningful and determine the investment options. Also, according to this research they found that the effect of financial changes in different countries vary and in the countries which tax fraud happen, tax changes have no influence on the structure of the investment.

Mehrani and Seyyedi (2015) studied the effects of income tax and conservative accounting on tax avoidance in 146 companies from 2004 to 2013 and applied unbalanced panel model. The results show that there is a considerable and negative relation between the declared tax and conservative tax avoidance in companies. It also indicates that tax avoidance and conservatism are alternative tools for reducing the tax. As the tax avoidance increases the conservatism decreases and vice versa. Furthermore, the negative relation between average declared tax of the company in three years and its tax avoidance demonstrate that companies tend to be more conservative and with

lowering their profit, perform tax saving so that by tax avoiding, decrease their income tax.

Aghayi et al (2013), studied the relation between accounting variables and efficiency of tax investigation process for individuals in Tehran's department of grand taxpayers from 2003 to 2008. This study seeks to present a new tax investigation process by discovering variables which are most effective to differentiate declared profit and final tax profit. The results show that despite inventory turnover variable, debt-to-equity ratio, net income, returns on investment have a remarkable relation with reduction of difference between declared and final tax profit. Thus, such variables could be used in the process of investigation in spite of checking so many financial statements. This will lead to using the organization public resources more properly and increases the efficiency of tax process.

Modarres and Zareiyan Borji (2014) studied the data content of difference between declared and final tax and its relation with quality of companies' profits. This study probes correlation of difference between companies' declared and

final tax, and their stock market values and stock returns. It also probes the correlation ratio of the difference between declared and final tax in companies with low quality profit and their stock market value. The results show that there is no remarkable relation between differences of declared and final tax and stock market value and stock returns. Also, the difference between declared and final tax do not play an important role in the companies with low quality profit. The disagreement between declared profit of taxpayers and their calculated taxable income by tax department is one reason for the claim which came before. Hassani and Shafe'ei (2012) estimated the effective tax rate for jobs and legal entities. In this paper we try to study the rate of tax pressure on taxpayers by estimating effective tax rate on jobs and legal entities. The results show that the effective tax rate of legal entities from 2002 to 2009 had been ascending and it had increased from 6.08% in 2002 to 11.5% in 2009; though, it had been descending in job part and had swayed between 2.1% to 1.3% in the mentioned duration.

### Research Conceptual Model

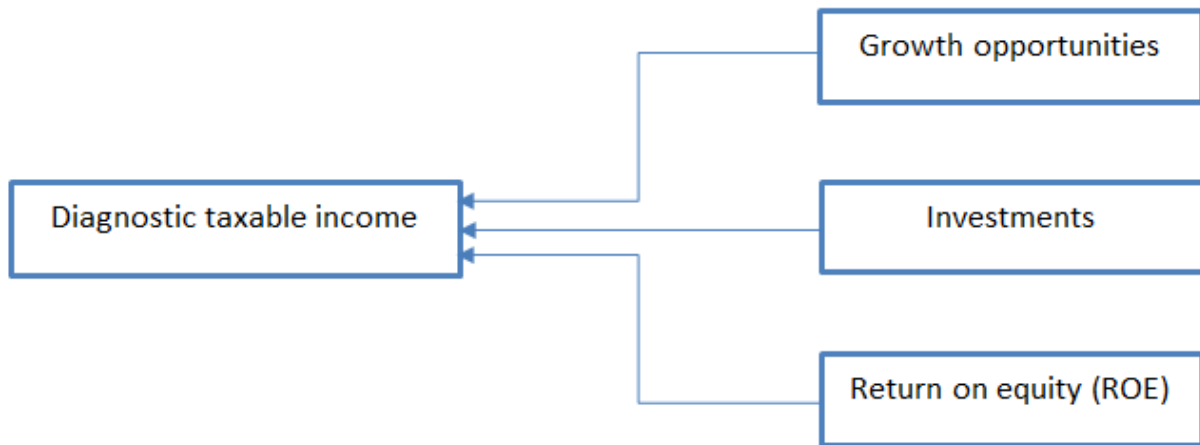


Fig1. Conceptual Model of Research

#### Research Method

This study in terms of purpose is applied research, and in terms of method is descriptive - correlational research. This study tries to investigate the accounting variables with legal entities' diagnostic taxable income in Sanandaj city.

#### Statistical Population

Statistical population of research is all the taxpayers (legal entities) of Sanandaj County in 1994 whose data was available that is the legal entities whose tax cases have been registered in tax department and their taxes have been confirmed. These taxpayers are counted as 9964 companies. 5000 ones have been active and 4964 of them have not been investigated in tax department of Sanandaj.

#### Sample size and Sampling method

Sampling is performed randomly from the statistical classes of society. They have been chosen randomly based on the type of their activities and their numbers.

#### Sample Size

According to Cochran Formula, for the society of 5000 numbers, 370 sample companies are required which will be distributed according to the type of taxpayers activities.

$$n = \frac{t^2 \cdot p \cdot q \cdot N}{d^2(N - 1) + t^2 \cdot p \cdot q}$$

$$n = \frac{1.96^2 \cdot 0.5 \cdot 0.5 \cdot (9964)}{0.05^2 (9964 - 1) + 1.96^2 \cdot 0.5 \cdot 0.5} = 370$$

#### Testing the Research Hypothesis

There is significant relationship between accounting variables with legal entities' diagnostic taxable income in Sanandaj City.

To study the above hypothesis, stepwise multiple regression analysis has been applied. In this analysis, all the independent variables are applied at once and the independent variables which have no considerable effect on

the dependent variables will be removed from the analysis and do not make their ways to the equation.

Before performing stepwise regression analysis, correlations between the variables have been studied through measuring correlation matrices and the results are presented in table 1.

**Table 1: Correlation matrices between taxable income and accounting variables**

| Dimensions             | 1     | 2     | 3     | 4     |
|------------------------|-------|-------|-------|-------|
| Taxable income         | 1/000 |       |       |       |
| Growth opportunities   | 0.579 | 1/000 |       |       |
| Investment             | 0.169 | 0.160 | 1.000 |       |
| Return on equity (ROE) | 0.391 | 0.394 | 0.144 | 1.000 |

Considerable relation in 5% error level ( $p < 0.05$ )

Durbin Watson statistics is 1.823 and it shows that the errors are separate from one another and there is no autocorrelation between the errors; so, the assumption of correlation between errors is denied and regression analysis is usable. The result is shown in table 2.

Table 2 illustrates that in the first step, aspect of growth opportunities have entered the regression equation before other predictive since it has a more powerful correlation with taxable income and it contains the multivariate correlation coefficient 0.579 and coefficient of determination of 0.491 which shows that about 49% of changes in taxable income have been determined by growth opportunities. In the second step, aspect of Return on equity (ROE) has had a more powerful correlation with taxable incomes in runner up place after growth opportunities and is added to regression equation. Multivariate correlation coefficient of second model is 0.684 and the coefficient of

determination is 0.526. The square of coefficient of correlation illustrates that about 52% of changes in taxable incomes have determined by two aspects of growth opportunities and Return on equity (ROE) and total share is up from 49 to 52. Also, in the third step, aspect of investment which has the third place of correlation with taxable income after growth opportunity and Return on equity (ROE), It is added to regression equation that multivariate correlation coefficient is 0.761 and the coefficient of determination is 0.560. it can be seen that about 56% of changes in taxable incomes have determined by three aspects of growth opportunities and Return on equity (ROE) and investment Simultaneously and increases the total share a bit. Thus, according to the table 2, aspects of growth opportunities, Return on equity (ROE), and investment could predict the taxable income of Sanandaj taxpayers.

**Table 2: multivariate correlation coefficient and coefficient of determination in analyzing the multivariate regression**

| Model | multivariate coefficient correction (R) | coefficient of determination (R2) | Standard error of estimate | Durbin-Watson |
|-------|---|-----------------------------------|----------------------------|---------------|
| 1     | 0.579=A                                 | 0.491                             | 4.262                      |               |
| 2     | 0.684=B                                 | 0.526                             | 5.064                      | 1.823         |
| 3     | 0.761=C                                 | 0.560                             | 3.794                      |               |

A=Predictive: growth opportunities

B= Predictive: growth opportunities and Return on equity (ROE)

C=Predictive: growth opportunities, Return on equity (ROE) and investment

**Conclusion**

**First Minor Hypothesis**

There is significant relationship between Growth opportunities and legal entities' diagnostic taxable income. The findings resulted in this research showed that there is significant relationship between Growth opportunities and legal entities' diagnostic taxable income, also the results taken from regression analysis show that Beta coefficient of this aspect is 0.579 which means as each unit of standard deviation is added to the aspect of growth opportunities, 0.579 unit of standard deviation is added to taxable income and it proves high effect of this aspect to taxable income. In fact, considering that growth opportunities are based on people's new ideas and thoughts and they step towards the development and success of companies and reducing costs by using resources perfectly, the companies' revenue is increased and as their income grows, they have to pay more taxes.

**Second Minor Hypothesis**

There is significant relationship between investment and legal entities' diagnostic taxable income.

The findings resulted in this research showed that there is significant relationship between investment and legal entities' diagnostic taxable income, also the results taken from regression analysis showed that Beta coefficient of this aspect is 0.416. It means that, it can be said that as each unit of standard deviation is added to the aspect of investment, 0.416 unit of standard deviation is added to taxable income and it proves high effect of this aspect to taxable income. The results of this research is agree with findings resulted of Marfasiv and Jin (2012), and Kalami and Saeidi (2010).the results of their researches showed that there is significant relationship between tax on income of companies and investment of companies. Investment means commitment on paying money or investment for buying stuff or other properties in order to receive profit in forms of interest, dividend, or capital gains. If investment is performed by organizational vision and careful analyses, it will cause revenues for the companies which will cause higher taxable income.



**Third Hypothesis**

There is significant relationship between Return on equity (ROE) and legal entities' diagnostic taxable income.

The findings resulted in this research showed that there is significant relationship between Return on equity (ROE) and legal entities' diagnostic taxable income, also the results taken from regression analysis showed that Beta coefficient of this aspect is 0.362. Therefore, it can be said that as each unit of standard deviation is added to the aspect of Return on equity (ROE), 0.362 unit of standard deviation is added to taxable income and it proves low effect of this aspect to taxable income. The results of this research is agree with findings resulted of Bagheri and Amouri (2010). The results of the research indicate that ten financial ratios below are on the priority. Net income, gross profit ratio, profit per share, stock returns, the ratio of price to profit, inventory turnover ratio, return on investments, inventory turnover period, the ratio of public costs to sale, and capital return on taxable income.

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