FINANCIAL DECISIONS, TAX EFFECT AND INVESTMENT PERFORMANCE[1]

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ABSTRACT

The aim of the study is to measure influence of taxation while making financial decisions and predict it with the general application in Turkey. Except for equity returns of financial and negative capital institutions registered in Borsa Istanbul between 2000 and 2012, those of all other businesses were calculated. In order to measure cost of capital, Capital Assets Pricing Model(CAPM) was employed. Businesses were divided into for regions as stated in Tax Incentive Law according to the study. As stated in Tax Incentive Law, the businesses whose costs of capital were divided into six regions where statistical analysis was made to determine whether taxation influenced financial decisions of the related businesses based on Tax Incentive Law or not. Assessment of the findings within the study determined that businesses in 1 st, 2 nd and 3 rd regions were affected by taxation 5,69, 2,75 and 1,39 as means between 2007 and 2012, respectively. Accordingly taxation load of businesses in 1 st region provinces was found to be heavier than those of businesses in other regions. Considering the Tax Incentive Law, it was found to be statistically important that taxation load of the related region should be taken into account in making any financial decisions. In this respect, there is an impact of tax when one makes financial decisions. However, other relevant factors should also be considered.

Keywords: Financial Decision, The Kinds Of Financial Decisions, Tax, Tax Incentive Law, Borsa İstanbul.

JEL Classification: *G39, H2, K34, H29*

1.INTRODUCTION

[1] The present study has been prepared using the doctoral dissertation "Tax Effect on Financial Decisions: Application in Turkey" by Yasemin COŞKUN KADERLİ and it has been presented at Financial Decisions Tax and Investment Performance, ICESOS'14, Sarajevo, No.1676119.

In a rapidly globalised world, businesses are quite diffucult to survive. The fact that technology develops fast gradually makes it both easy and difficult for them to run their processes. Maintaining its existence, a business has to manage their competitors not only in its own but also in other sectors. Therefore, its survival and power to cope with its rivals depends on financial decisions which it has taken or would take.

Such decisions that businesses have taken or could take are of both economic and social nature involving the whole operational process. Any resolutions mistakenly taken could lead the business to a failure or even bankruptcy, thus financial executors are obliged to be very cautious in making a financial decision and if they are to do so, they have to make it following a comprehensive analysis.

Financial decisions made by businesses can be classified into two, such as financial and investment processes, the first of which is affected by the business's magnitute, capital volume and number of active personnel and by the state and its law, legislation and taxation structures.

Tax is a dynamic concept subjected to financial social political and judicial factors, significant varying nation to nation. Taxation has three basic functions namely financial economic and social functions. Because it is a financial means, tax motivates or does not motivate deposits, investments and exportation.

The purpose of the present study is to explain influences of tax-incentive acts and legislation performed in Turkey on financial decisions made by businesses in terms of regions. Accordingly, the study focuses on financial decisions first, then taxes, acts and incentives which affect financial decisions as well as on evidence from the application related to the study involving public firms.

2.FINANCIAL DECISIONS MADE BY BUSINESSES AND THEIR IMPORTANCE

Business executives should make the business various decisions in a way to enable it to serve general and particular purposes. It is financial decisions that is one of those of great importance.

Financial decisions are those to allow finance management to find available funds under available conditions and use them in most efficient ways. Dramatic economic and financial consequences could appear if such decisions were made improperly. Therefore financial decisions are of great importance in related business administrations. For example any financial decisions made improperly or and mistakenly are likely to create a serious interest overload. On the other hand, if those improper investment decisions were made on fixed assets, they could even lead to a bankruptcy, particularly when significant volumes of capital are in question.

Another reason why financial decisions are important is that consequences from their execution have impacts on both financial function and other processes (Yılmaz, 1999:

52).Since, it is only possible for other functions such as production and marketing to operate their missions efficiently thanks to the fact that financial function can finance other functions incessantly.

Business administrators have to consider a given purpose while making financial decisions, which is to enable the firms' market value or asset to be maximum. Financial executive is to consider a continous aquilibrium between targets of profitability, liquidity and security, which can permit business activities to be successful and continous (Berk, 1990: 8).

Financial decisions made by businesses includes such three factors as capital time and risk (Ersöz and Ban, 2003: 2). Businesses have to take these three factors into account in other to maximize the firms market value. Capital and its related time asset are vital in terms of financial decisions for current investments would create their benefits in future. Comparison of currently investment capital its future or prospective returns without considering time asset of capital is to cause misleading consequences. In addition, the business should also consider the risk factor when financial decisions are made. All most all investments cover risks. Therefore calculations without considering risk factor is boned to mislead business executives (Aydın Et al, 2003; 7-9).

Financial decisions is therefore of so great importance as to influence future and targets of the business since quality of financial management depends on whether it could fail or even go bankrupt or succeed (Okka, 2009: 7).

Financial decisions are made by financial administrators. Financial decisions are made to achieve financial targets, which are categorized into two major groups, namely financial and nonfinancial.

Financial targets are classified into five groups such as cash related, liquidty related, asset related and profitability related processes. Financial decisions made by the business are grouped into two decisions namely financial and investment decisions(Sarıaslan and Erol, 2008: 7; Canbaş and Vural, 2010: 5-7).

Financial executives to make financial decisions can be said to have three major missions which are previsions of funds to meed financial needs, and their efficient and affective uses(Ceylan and Korkmaz, 2006: 10-12; Uzun, 2008: 16-17; Gitman, 1992: 19-20).

It is a very important factor in terms of success of the business that cash input and output should be compatible with eachother in amount and time, which can only be accomplished by financial planning related to future activities. The fact that future includes numerious risks and ambiguities increases importance of financial management for achievement the function of above.

Success of financial plan depends on proper determination of business targets. Financial administrators has to prepare cash budget Proforma Balanced Sheet revenue table and fhsibility report considering their financial planning (Ceylan and Korkmaz, 2006: 10-11).

Financial inspection is one of the missions which financial managers should perform. Inspection and planning are closely related processes it is only the inspection that can establish the practices incompatible with future expectation or plans so that potential deviations from what has been planned could be easily established with due corrections. Inspection is impossible without planning(Ceylan ve Korkmaz, 2006: 11).

Having performed what is to be done involving financial planning, financial manager has to find out how to finance the difference when cash output exceeds cash inputs(Uzun, 2008: 17). In addition, search of due and proper provision of a fund necessary to be invested in long term and fixed assets would be inquestion. It is the financial manager to decide what sources needed funds could be provided from in time. All decisions made consirning this process are categorically called financial decisions.

Efficient employment of funds to be provided is an issue much more important than their provision. It is therefore necessary to make financial decisions after a careful and serious because improper and wrong employment of funds could lead to the business encountering irreversible losses. In order that financial administrators should not make wrong decisions, they should conduct a variety of studies prior to decisions for short-term fund uses and prepare comprehensive investment project fhsibility studies before deciding on investment in long-term fund uses that is in fixed assets. It is clear from the above that decisions to be made by the financial manager are related to investment and finance processes. Financial managers are in close association with financial markets and institutions, state administrations and tax officials.

3.TAXES AND LEVIES TO AFFECT FINANCIAL DECISIONS

Tax is all economic values inform of money which the state revenues based on its power of hegomony and judicial force considering legal essentials without return through officials and institutions assigned to levy or tax (Muter et al, 2003: 121).

Amount of funds transferred from private sector to public processes via taxation not only influences compasition of economic structure but uses of funds, and levels of output(production) and income(revenue) as well. Tax incentives to be applied private sector can plan unimportant role in accelariton of investment activities in this sector. Moreover, taxation can be employed as aneffective means in qualitatively and quantitatively increasing potantial of labor force for struggle against inflation and deflation, in encourgement of private deposits and investments, in accelaration of capital accumulation and exportation and finally in limitation in imports (Muter et al, 2003: 121).

Tax incentive policies can be defined as immunity of certain amount of income or income from taxation or postponement of taxes in a variety of ways (Tekin, 2006: 301).

Tax incentives can be classified into two major gruops namely legal and affective tax incentives, the former of which can be described as legal and more suitable taxational

processes applied to investment projects not subjected to private or privileged taxation conditions (Zee et al, 2002:1498).

In developing nations private sector can not create or develope economic growth and development alone, which is why the state is of importance as a pioneer in some activities. In such nations it is only possible for attempted for development to be initiated or with provisions of taxation incentives for those short of finance, However it is important to precisely determine those to be exempt from taxation by means of accurate and due preferences, which can only be achieved by state taxation administration. As long as taxational incentives are performed in right sections, they would be able to contribute to economic growth and development(Siverekli Demircan, 2003: 109).

Incentives for exemtions of Customes and Value-Added Tax enable investments to be supported which meet the condition on amount of least fixed investment determined and not included in investment issues not encouraged without any regional discriminations and other incentive practices in general investment incentive processes. Furthermore, if 6 th region(the least developed region) is not invested in, incentives for social security premium and income tax stoppage calculated on minimum wage for employees will be provided(Republic Of Turkey Ministry of Economics, 2012: 11).

In regional investment incentive practices are transition to a new regional map-province based regional incentive system, variable times and rates in incentive parameters, updating sectors to be supported, actractive incentives for the region (the socio-economically least developed region) and priority-requiring investments. Provinces in Turkey are separated into regions to benefit from tax exemtion/deductions(Republic Of Turkey Ministry of Economics, 2012: 13-15).

Table 1: Regional Map

1st Region	2nd Region	3th Region	4th Region	5th Region	6th Region
Ankara	Adana	Balıkesir	Afyonkarahisar	Adıyaman	Ağrı
Antalya	Aydın	Bilecik	Amasya	Aksaray	Ardahan
Bursa	Bolu	Burdur	Artvin	Bayburt	Batman
Eskişehir	Çanakkale	Gaziantep	Bartın	Çankırı	Bingöl
İstanbul	Denizli	Karabük	Çorum	Erzurum	Bitlis
İzmir	Edirne	Karaman	Düzce	Giresun	Diyarbakır
Kocaeli	Isparta	Manisa	Elazığ	Gümüşhane	Hakkari
Muğla	Kayseri	Mersin	Erzincan	Kahramanmaraş	Iğdır
	Kırklareli	Samsun	Hatay	Kilis	Kars
	Konya	Trabzon	Kastamonu	Niğde	Mardin
	Sakarya	Uşak	Kırıkkale	Ordu	Muş
	Tekirdağ	Zonguldak	Kırşehir	Osmaniye	Siirt
	Yalova		Kütahya	Sinop	Şanlıurfa
			Malatya	Tokat	Şırnak
			Nevşehir	Tunceli	Van
			Rize	Yozgat	
			Sivas		
8 Provinces	13 Provinces	12 Provinces	17 Provinces	16 Provinces	15 Provinces

Incentive parameters modified by Ministry of Economics are tax deduction, support for employers share in security premium and interest incentive.

Table 2: Percentage of Contribution to Investment in Regional Incentive Applications

Regions	Percentage of Contribution to Investment(%)			
	Regional Incentive Practices		Incentive for Large Scale Investments	
	Investments started until 31.12.2013	Investments started before 01.01.2014	Investments started until 31.12.2013	Investments started before 01.01.2014
I	15	10	25	20
II	20	15	30	25
III	25	20	35	30
IV	30	25	40	35
V	40	30	50	40
VI	50	35	60	45

Part of amount of contribution to investment can be applied to profits from all activities during investment period for firms which invest in 2 nd, 3 rd, 4 th, 5 th and 6 th regions (Republic Of Turkey Ministry of Economics, 2012: 13-18).

In order to take advantage of tax deduction for the incentive applications, provinces in Turkey are separated into regions whose tax deduction rates are as follows (Republic Of Turkey Ministry of Economics, 2012: 19):

Table 3: Tax Deductions in Applications of Regional Incentives

Tax Deductions in Applications of Regional Incentives				
Regions	Percentage of contribution to investment (%)	Percentage of Tax Deduction (%)	Percentage of contribution to investment to be applied in period of investment by business (%)	
			Period of investment	Period of business
1st Region	15	50	0	100
2nd Region	20	55	10	90
3th Region	25	60	20	80
4th Region	30	70	30	70
5th Region	40	80	50	50
6th Region	50	90	80	20

If investments to be made priority fields are made in 1 st, 2 nd, 3 rd, 4 th and 5th regions, they will benefit from incentives for 5th region which are all below(Republic Of Turkey Ministry of Economics, 2012: 36-37):

i. investments in mining

ii.those in rail road, maritime processes

iii.those in vehicle centers, wind tunnel and similar constructions

iv.those in tourism-related activities in regions for protection and development of culture and tourism

v.those in primary, middle and high schools to be constructed by private sector

vi.those in processes related to medicine production and defense industry which amount to 20 million TL

Within the context of targets to support and encourage formation and clustering of investment basins for regional incentive practices applications:

. Investments to be made in organized industrial zones

. those in sectoral cooperation

. those in manufacture of items developed by research-development projects supported by TUBITAK. Businesses can benefit from incentives in that just below the region categorized above in terms of supports and incentives for tax deduction and employers share in security premium (Republic Of Turkey Ministry of Economics, 2012: 40).

Other significant changes are the following:

. Those in iron or and lignite coal processes to be supported within the frame of regional incentive system,

. Where shipyards will be built, amount of social security premiums of minimum wage employees for which employers are supposed to pay will be provided by the related ministry (Republic Of Turkey Ministry of Economics, 2012: 41).

Large-scale investments will increase capacity of technology and R&D, creating an international competitive advantage. Support for large-scale investments will be maintained through ;

i.VAT exemption,

ii.Customes Tax Exemption,

iii. Tax Deduction,

iv. Incentive purpose-allocation of investment process and support for social security premium paid by employers (Republic Of Turkey Ministry of Economics, 2012: 43).

Supportive parameters in incentive for large-scale investments are as follows (Republic Of Turkey Ministry of Economics, 2012: 45):

Table 4: Supportive Aspects in Incentives for Investments

Supportive Aspects	**I**	**II**	**III**	**IV**	**V**	**VI**
Exception for VAT	x	x	x	x	x	x
Exemption for Customes Tax	x	x	x	x	x	x
Tax Reduction for all Businesses but Organised Industrial Areas	25	30	35	40	50	60
Percentage of contribution to investment(%) within Organised Industrial Areas	30	35	40	50	60	65
Sigorta Primi OSB DışıSocial security premiium except for Organised Industrial Areas	2 yıl	3 yıl	5 yıl	6 yıl	7 yıl	10 yıl
Support for employer's contribution to social security Premium within Organised Industrial Areas	3 yıl	5 yıl	6 yıl	7 yıl	10 yıl	12 yıl
Allocation for Investment Place	x	x	x	x	x	x
Support for Interest	-	-	-	-	-	-
Support for Stopage in Income Tax	-	-	-	-	-	10 years
Support for share of employees' social security premium	-	-	-	-	-	10 years

4.RESEARCH METHODOLOGY AND RESULTANT EVIDENCE

4.1. METHODOLOGY

Basic criterion of financial decisions concerning investment dimension in a business is excess of invested capital and that of financial decisions is cost of capital, both of which should be compared with eachother to make a decision concerning the whole business structure. The two issues of cost of capital are costs of equity and debt. All models can establish cost of debt and simultaneously consider influence of tax as well. However, because taxes are levied on divident model distributed to shareholders in Turkey, influence of tax on equity is to be considered and cost of capital and profitability of investment compared. In order to calculate effects of tax incentives applied in this process on financial decisions, financial data of the firms was used after excluding financial and negative equity institutions from those registered in Borsa İstanbul between 2000 and 2006. Predictions for 2007-2012 allowed for return from capital invested those years. Capital Assets Pricing Model(CAPM)

was employed to achieve cost of capital of the same businesses in 2012 and with their data base of prices being used for 2007-2012.

To compare concluded parametres considering tax incentives, businesses were divided into regions defined in the incentive law with their differences being studied and interpreted.

2000-2006 financial database of businesses registered in Borsa Istanbul was obtained from the official web site of Borsa Istanbul and prepared to be analysed by Excel. To be processed, in practice it has to be expressed by 2006 prices. For this purpose all database between 2000-2006 is multiplied by index number for the correspanding year. In order to zero impact of non-inflational factors on financial evidence(data), all data is multiplied by 2006 exchange rate of dolar. In conclusion, using the dolar-expressed tables, data of 2007-2012 was predicted to achieve return from the capital invested after tax of the businesses in 2012, which is a performance criterion to indicate profitability of the nettest investment of the firm. Following the above-said process, we initially have to use pricing model for capital assets, with data for 60 months from 2007 to 2012 being employed to calculate beta exponents which were found using basic equation of pricing model for capital assets of equity. In addition we should find return from Borsa Istanbul index on riskless interest rate according to the model. However, calculate both return from Borsa Istanbul and that from stocks and bonds, one should use Continous Combined Return, which is natural logarithm of division of the price in previous month by that in the related month. Cost of equity was achieved by neglecting impact of tax and adding riskless interest rate after beta exponents that we found by correlating return from the related asset via continous combined return with that from Borsa Istanbul. Later, considering impact of tax, cost of equity was obtained and cost of capital for the business calculated by correlating financial output in the related years with cost of debt and calculating weighted avarage capital cost. Comparing cost of capital of tax effect with return of invested capital previously found, one tried to understand to what extent tax generally influenced investment decisions. Then, businesses were divided into regions according to the incentive law to distinguish effect of tax on influence on investment decisions depending on incentive law using SPSS program.

Cost of capital is equal to weighted means of costs of all kinds of resources which are used or planned to be used.

Structural characteristics of resources used or planned to be used have impacts on establishment of independent resource costs. Therefore, weighted means of costs determined by specific characteristics of every independent resource implies cost of total used capital (Ceylan, 2004: 183).

Cost of capital is an important factor even in investment process since cost of capital is required as a discount element in order to calculate an investment. On the other hand, structure of capital in a business influences profit and profit-related risk to determine its value as well. In addition, leasing, long-term finance and similar policies requires cost of capital to be known(Brigham, 1996: 594).

The study used Capital Assets Pricing Model(CAPM) to calculate cost of capital.

Capital Assets Pricing Model(CAPM) is one of the most successful studies conducted to measure how cash flow risk was calculated from potential investment studies, amount of capital of investment, expected rate of return and whether or not the investment could be demanded given that rate(Civan, 2007: 337).

The fact that every investor has the same knowledge and opinions of prospective expectations from a financial asset means that they process and analyse them using the same methods(Yörük, 2000: 31). Market is perfect for financial assets and there are no disagreements as to potential assumptions such as lending and/ or borrowing upon infinite divisibility taxes, transactional costs and different riskless rates(Wang, 2003: 25-28).

Formula of pricing model for capital assets is as follows:

$$r_i = r_f + \beta(r_m - r_f) + e_i$$

Cost of debt is calculated as below:

$$\text{Cost of Debt} = \frac{\text{Expenses of Paid Finance}}{(\text{Financial Debt in Previous Year} + \text{Financial Debt in Current Year}) / 2}$$

Cost of weighted capital means is calculated by the following:

$$\text{Cost of weighted capital means} = (\text{Cost of capital stock} \times \text{Weight of capital stock}) + (\text{Cost of debt} \times \text{Weight of debt})$$

The model, return of stock is obtained by multiplication of market risk premium by beta exponent which indicates correlation between stock and market on riskless interest rate. Market risk premium is however obtained by subtraction of riskless interest rate from market return. This formula presents return from stock as well, which means cost of capital stock in terms of business itself. In other words, the value is return for with stocks on one hand and cost of capital stock for the business which has issued the stock concerned on the other. Accordingly, Capital Assets Pricing Model(CAPM) is used to determine cost of capital stock. To find cost of capital stock using the equation above, beta exponent is calculated by the regression equation to establish return of stock, market risk premium and riskless interest rate as dependent variable, independent variable and constant exponent, respectively. Prediction of return from stock via beta exponent finds cost of capital stock as r_i in the formula. Cost of debts is calculated through relationship between interest and debt to find cost of weighted capital means that has two constituents namely, cost of debt and that of capital stock. Cost of capital stock can be estimated from beta exponent using equation of capital assets pricing model to find cost of capital stock by predicting it via the equation. Cost of debt are added to that of capital stock to obtain cost of weighted capital means, which is the first data that we can utilize to compare profitability of the invested capital. Cost of weighted capital means is compared with profitability of the invested capital in terms of taxability.

2000-2006 balance sheets and revenue tables of database of businesses registered in Borsa Istanbul were prepared by Excel. Because the tables are composed of database which were not corrected for inflation, the values were multipled by annual wholesale price index

and recorrected accordingly. In order to prevent the obtained values from being affected by variations in purchasing power, they had to be reexpressed as US dollar, the purpose of which is to be able to define 2000-2006 financial data as exchange rates in 2006.All the values were multipled by 2006 exchange rates to obtain data of 2006 in dolar and predict it for 2012. Process of prediction makes it necessary to form the rates which consist in business estimations which are used to calculate growth rates based on previous database. The growth rates were therefore employed to predict return of after and before-tax capital investments for 2012. In general sales percentage method is used for prediction. After sales growth has been calculated, items related to sales by business are determined. Consequently, constant-assumed items are added to equilibrate balance sheet using the related growth until short term debt plus of securities. This is in deed the essence of the sales percentage method. Two parameters exist in return of invested capital such as pre and post tax processes.

There are six essential phases only after of which is to obtain return of invested capital. The first is obtained by dividing net tangible fixed assets into net sales using data of sales involving years,the second by dividing net working capital into sales, the third by adding net tangible fixed assets and net working capital, fourth by subtracting difference between other assets and other debts from the above addition, the fifth by (net working capital +net tangible fixed assets)+(other assets- other debts) and finally the sixth by adding the previous year and the current year values and subtracting the result into two to calculate profitability of the invested capital, which is the mean invested capital. Invested capital profitability is calculated by division of net sales into invested capital. Calculation of return of pre-tax invested capital requires division of activity profit into invested capital. Calculation of return of post-tax invested capital calls for division of net activity profit into invested capital to find return of invested capital.

4.2.Obtained Findings

Regional numbers of businesses were also processed by Excel and assessed according to tax incentive law in the consequence of the above the activities. Provinces in Turkey are divided into six different regions by the tax incentive law with the following difference of businesses between their pre-tax and post-tax net investment returns.

Table 5: Return of Net Investment for the 1st Region

Businesses	Region	Return from Capital invested in pre-taxation (%)	Cost of capital in pretaxation	Return from Investment for pretaxation	Return from capital invested after taxation (%)	Cost of capital after taxation	Return from investment after taxation	1st Region	Mean Standard Deviation
ADEL	1	33,4	14,94	18,46	26,8	13,04	13,76	4,7	5,696765
ALCAR	1	110,7	11,89	98,81	88,6	9,47	79,13	19,68	7,666705
ALCTL	1	-132,1	7,24	-139,34	-105,7	4,04	-109,74	29,6	
ANACM	1	8,2	12,42	-4,22	6,6	10,09	-3,49	0,73	
ARCLK	1	16,1	13,88	2,22	12,9	11,8	1,1	1,12	
ASELS	1	-15,5	13,71	-29,21	-12,4	11,6	-24	5,21	
ASLAN	1	37,2	16,42	20,78	29,8	14,77	15,03	5,75	
AYCES	1	-6,7	11,59	-18,29	-5,4	9,12	-14,52	3,77	
AYGZ	1	74,2	12,5	61,7	59,4	10,18	49,22	12,48	
BFREN	1	-49,5	16,78	-66,28	-39,6	15,19	-54,79	11,49	
BRISA	1	11,2	11,55	-0,35	8,9	9,07	-0,17	0,18	
BROVA	1	-21,1	16,47	-37,57	-13,7	14,82	-28,52	9,05	
BRSAN	1	18,6	11,76	6,84	14,9	9,32	5,58	1,26	
BTCIM	1	20,5	10,94	9,56	16,4	8,36	8,04	1,52	
BUCIM	1	40,3	11,02	29,28	32,2	8,46	23,74	5,54	
BURCE	1	-3,9	11,21	-15,11	-3,1	8,68	-11,78	3,33	
CELHA	1	1,8	9,02	-7,22	1,4	6,11	-4,71	2,51	
CEMTS	1	-11	12,4	-23,4	-8,8	10,07	-18,87	4,53	
CIMSA	1	46,1	14,23	31,87	36,9	12,2	24,7	7,17	
CMENT	1	18,6	16,95	1,65	14,9	15,39	-0,49	2,14	
ECYAP	1	-8,5	12,41	-20,91	-6,8	10,08	-16,88	4,03	
EDIP	1	-55,7	14,17	-69,87	-44,6	12,14	-56,74	13,13	
EGEEN	1	6,4	10,43	-4,03	5,1	7,76	-2,66	1,37	
EGGUB	1	-3,1	12,14	-15,24	-2,5	9,76	-12,26	2,98	
EMNIS	1	4,3	12,13	-7,83	3,5	9,75	-6,25	1,58	
FENIS	1	13,9	10,87	3,03	11,2	8,28	2,92	0,11	
FMIZP	1	-107,7	9,23	-116,93	-86,2	6,36	-92,56	24,37	
FRIGO	1	6	12,98	-6,98	4,8	10,75	-5,95	1,03	
FROTO	1	20,2	12,82	7,38	16,1	10,56	5,54	1,84	
GEDIZ	1	175,2	12,82	162,38	140,2	10,56	129,64	32,74	
GOODY	1	12,8	10,09	2,71	10,2	7,37	2,83	0,12	
GUBRF	1	35,1	13,07	22,03	28,1	10,85	17,25	4,78	
HEKTS	1	7,9	13,09	-5,19	6,3	10,88	-4,58	0,61	
HURGZ	1	4,5	13,48	-8,98	3,6	11,33	-7,73	1,25	
HZNDR	1	14	12,9	1,1	11,2	10,66	0,54	0,56	
INTEM	1	-23,4	9,24	-32,64	-18,8	6,37	-25,17	7,47	
IZMDC	1	55,2	13,93	41,27	44,2	11,86	32,34	8,93	
IZOCM	1	22,4	14,14	8,26	17,9	12,1	5,8	2,46	
KAPLM	1	5,1	12,41	-7,31	4,1	10,08	-5,98	1,33	
KARTN	1	2,2	7,42	-5,22	1,8	4,25	-2,45	2,77	
KENT	1	11,6	24,06	-12,46	9,2	23,7	-14,5	2,04	

KNFRT	1	48,6	11,19	37,41	38,9	8,66	30,24	7,17	
KORDS	1	10,3	11,82	-1,52	8,2	9,39	-1,19	0,33	
MAALT	1	34,2	9,28	24,92	27,4	6,42	20,98	3,94	
MAKTK	1	166,7	15,55	151,15	133,4	13,75	119,65	31,5	
MERKO	1	2,5	8,15	-5,65	2	5,1	-3,1	2,55	
MIPAZ	1	63,4	16,72	46,68	51,7	15,12	36,58	10,1	
MRSHL	1	29,3	7,56	21,74	23,5	4,4	19,1	2,64	
MUTLU	1	8,2	12,97	-4,77	6,6	10,73	-4,13	0,64	
NETAS	1	-126,3	16,29	-142,59	-101	14,61	-115,61	26,98	
NETTUR	1	17,7	11,3	6,4	14,1	8,79	5,31	1,09	
OLMKS	1	12,3	13,5	-1,2	9,8	11,35	-1,55	0,35	
PARSN	1	16,4	12,38	4,02	13,1	10,04	3,06	0,96	
PETKM	1	39	10,38	28,62	31,2	7,7	23,5	5,12	
PINSU	1	14,1	14,64	-0,54	11,3	12,68	-1,38	0,84	
PKENT	1	-43,9	14,08	-57,98	-35,1	12,03	-47,13	10,85	
PNSUT	1	4,7	13,64	-8,94	3,7	11,52	-7,82	1,12	
PRKAB	1	36,7	9,63	27,07	29,3	6,83	22,47	4,6	
SARKY	1	15,8	13,08	2,72	12,6	10,86	1,74	0,98	
SNPAM	1	-0,4	17,79	-18,19	-0,3	16,37	-16,67	1,52	
SONME	1	-38,7	18,69	-57,39	-31	17,42	-48,42	8,97	
TATKS	1	8,8	14,68	-5,88	5,7	12,73	-7,03	1,15	
TBORG	1	-26	16,03	-42,03	-20,8	14,32	-35,12	6,91	
THYAO	1	-6,8	12,98	-19,78	-5,4	10,75	-16,15	3,63	
TIRE	1	14,8	14,28	0,52	11,9	12,26	-0,36	0,88	
TUBRAS	1	29,2	10,6	18,6	23,4	7,97	15,43	3,17	
UCAK	1	21,7	10,83	10,87	17,3	8,23	9,07	1,8	
VKING	1	4,7	18,95	-14,25	3,8	17,72	-13,92	0,33	

Table 5 shows 68 businesses allotted in the first region registered in Borsa Istanbul according to tax incentive law in Turkey.Subtraction of pre-tax investment return from pre-tax capital cost yields calculation of pre-tax net invested return. Calculation of post-tax net invested return requires subtraction of post-tax capital cost from post-tax invested return. Tax load amounts to 32% in the 1st region with a means of 5,69 and a standard deviation of 7,66.

Table 6: Return of Net Investment for the 2nd Region

Businesses	Region	Return from Capital invested in pre-taxation (%)	Cost of capital in pretaxation	Return from Investment for pretaxation	Return from capital invested after taxation (%)	Cost of capital after taxation	Return from investment after taxation	2nd Region	Mean Standard Deviation
ADANA	2	68,3	14,87	53,43	54,7	12,95	41,75	11,68	2,755238
ADBGR	2	39	12,65	26,35	31,2	10,36	20,84	5,51	2,793363
ADNAC	2	0,9	12,97	-12,07	0,7	10,73	-10,03	2,04	
ALTIN	2	9,4	8,45	0,95	7,5	5,46	2,04	1,09	
ATEKS	2	-7,8	12,77	-20,57	-6,2	10,5	-16,7	3,87	
BOLUC	2	36,8	11,96	24,84	29,5	9,55	19,95	4,89	
BOSSA	2	12,5	10,42	2,08	10	7,75	2,25	0,17	
BRMEN	2	6,7	12,99	-6,29	5,3	10,76	-5,46	0,83	
BSHEV	2	10,5	19,84	-9,34	8,4	18,77	-10,37	1,03	
DENCM	2	1,8	13,03	-11,23	1,4	10,8	-9,4	1,83	
DERIM	2	51,8	8,17	43,63	41,5	5,12	36,38	7,25	
ERBOS	2	32,7	12,87	19,83	26,2	10,61	15,59	4,24	
GENTS	2	23,3	12,26	11,04	18,7	9,9	8,8	2,24	
GOLTS	2	15,8	13,83	1,97	12,6	11,73	0,87	1,1	
KONYA	2	21,7	9,33	12,37	17,3	6,48	10,82	1,55	
KRTEK	2	6,8	13,62	-6,82	5,4	11,5	-6,1	0,72	
LUKSK	2	22,2	9,56	12,64	17,8	6,75	11,05	1,59	
OTKAR	2	25,4	10,82	14,58	20,3	8,22	12,08	2,5	
SKTAS	2	-6,7	14,48	-21,18	-5,4	12,5	-17,9	3,28	
TRKCM	2	10,2	12,41	-2,21	8,1	10,07	-1,97	0,24	
YUNSA	2	13,8	8,36	5,44	11	5,35	5,65	0,21	

Table 6 shows 21 businesses in 2nd region registered in Borsa Istanbul in Turkey. Subtraction of pre-tax investment return from pre-tax capital cost yields calculation of pre-tax net invested return. Calculation of post-tax net invested return requires subtraction of post-tax capital cost from post-tax invested return. Tax load amounts to 11% only in one business in the 2 nd. Tax loads of other businesses amount to 7,5% maximum in the second region with a means of 2,75 and a standard deviation of 2,79.

Table 7: Return of Net Investment for the 3th Region

Businesses	Region	Return from Capital invested in pre-taxation (%)	Cost of capital in pretaxation	Return from Investment for pretaxation	Return from capital invested after taxation (%)	Cost of capital after taxation	Return from investment after taxation	3 rd Region	Mean Standard Deviation
BAGFS	3	2,9	10,14	-7,24	2,3	7,43	-5,13	2,11	1,397143
BANVT	3	20,1	15,53	4,57	16,1	13,72	2,38	2,19	1,157018
EREGL	3	8,5	14,69	-6,19	6,8	12,74	-5,94	0,25	
TUDDF	3	7,2	12,37	-5,17	5,7	10,04	-4,34	0,83	
TUKAS	3	-2,4	10,19	-12,59	-1,9	7,48	-9,38	3,21	
USAK	3	16,3	13,69	2,61	13	11,57	1,43	1,18	
VESTL	3	9,4	14,91	-5,51	7,5	13	-5,5	0,01	

Table 7 points out that there are 7 businesses in 3rd region registered in Borsa Istanbul in Turkey. Subtraction of pre-tax investment return from pre-tax capital cost yields calculation of pre-tax net invested return. Calculation of post-tax net invested return requires subtraction of post-tax capital cost from post-tax invested return. Tax load amounts to 3,21% only in one business in the 3 rd. Tax loads of other businesses amount to 2,19% maximum in the second region with a means of 1,39 and a standard deviation of 1,15.

Table 8: Return of Net Investment for the 4th Region

Businesses	Region	Return from Capital invested in pre-taxation (%)	Cost of capital in pretaxation	Return from Investment for pretaxation	Return from capital invested after taxation (%)	Cost of capital after taxation	Return from investment after taxation	4 th Region	Mean Standard Deviation
AFYON	4	15,6	-10,02	25,62	12,5	-16,14	28,64	-3,02	
KUTPO	4	-11,7	22,78	-34,48	-9,4	22,2	-31,6	-2,88	

Table 8 points out that there are 2 businesses in 4th region registered in Borsa Istanbul in Turkey. Subtraction of pre-tax investment return from pre-tax capital cost yields calculation of pre-tax net invested return. Calculation of post-tax net invested return requires subtraction of post-tax capital cost from post-tax invested return. Because tax loads can not calculated only for 2 businesses to infer proper consequences, they were excluded from the study.

Table 9: Return of Net Investment for the 5th Region

Businesses	Region	Return from Capital invested in pre-taxation (%)	Cost of capital in pretaxation	Return from Investment for pretaxation	Return from capital invested after taxation (%)	Cost of capital after taxation	Return from investment after taxation	5 th Region	Mean Standard Deviation
DITAS	5	-4,2	9,46	-13,66	-3,3	6,63	-9,93	-3,73	
UNYEC	5	36,3	13,56	22,74	29,1	11,43	17,67	5,07	

Table 9 illustrates 2 businesses registered in Borsa Istanbul and included in 5th region in Turkey. Subtraction of pre-tax investment return from pre-tax capital cost yields calculation of pre-tax net invested return. Calculation of post-tax net invested return requires subtraction of post-tax capital cost from post-tax invested return. Because tax loads can not calculated only for 2 businesses to deduce proper consequences, they were not included in the study.

Table 10: Return of Net Investment for the 6th Region

Businesses	Region	Return from Capital invested in pre-taxation (%)	Cost of capital in pretaxation	Return from Investment for pretaxation	Return from capital invested after taxation (%)	Cost of capital after taxation	Return from investment after taxation	6 th Region	Mean Standard Deviation
MRDN	6	34,1	14,61	19,49	27,3	12,66	14,64	4,85	

Table 10 illustrates only 1 business registered in Borsa Istanbul and included in 6th region in Turkey. Calculation of post-tax net invested return requires subtraction of post-tax capital cost from post-tax invested return. Tax loads can not calculated only for 1 business to reach proper consequences. Therefore, they were excluded from the study.

Tables calculated according to the regions above show that businesses in all provinces in them did not participate in the study considering their limited number. Now that number of businesses is sufficient in the first 3rd regions, other regions were excluded from the study.

Difference between return of pre-tax invested capital and pre-tax capital cost showed return of pre-tax net investment in terms of examining influence of tax on the first 3rd regions, which indicates the tax effect. Means of tax effects were calculated for all three regions each considering magnitute of tax effect. Figure 1 shows on which levels mean tax effect are in the first 3rd regions as below.

Figure 1: Mean Tax Effect

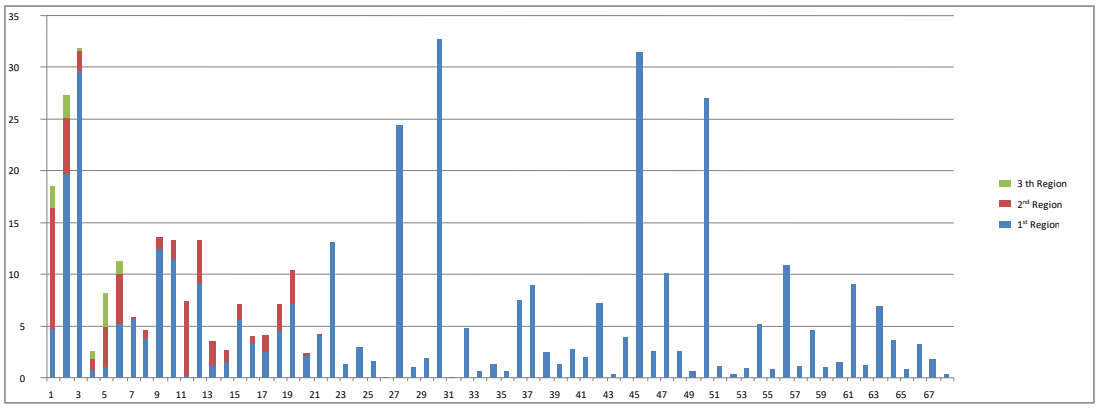

Figure 1 illustrates from calculations that tax effects are in percentages and magnitutes are easily understood in the first 3rd regions. Difference of tax effects between provinces of 1st and 2nd regions is less than that of those in 3 rd region. While tax effect in 2nd region is higher than that in 1st region, this is not the case for 3rd region at all. Tax effect of 3rd region is more significant than those of 1st and 2nd regions, which means that the difference diminished, in other words tax effect decreased. Because number of businesses in 4th, 5th and 6 th regions were found not to be available for analysis, they were not included in the study. Difference between return of pre-tax and post-tax net investments in 1st region amounts to 30%. Tax load in 1st region was found to be higher with a mean of 5,6.However, incentive in 2nd region was greater and thus up to 12%. Tax effect on return of investments in 2 nd region was much less than that in 1st region. Tax incentive law positively influenced businesses in 2nd region just because of less tax effect. Whether number of businesses is little or not, addition of 3rd region to the study showed that tax effect was less than those of other two regions. Tax effect for the first 3 regions was calculated to form Figure 2.

Figure 2: Mean Tax Effect by Regions

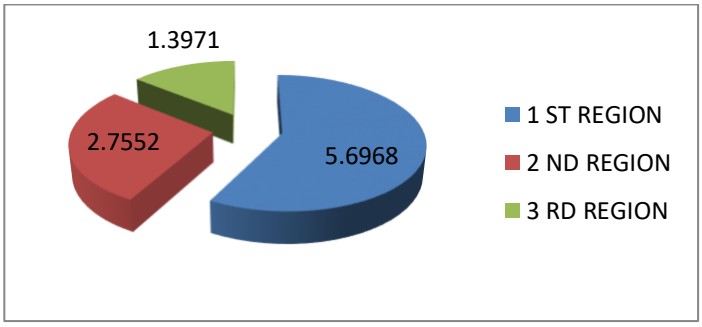

Figure 2 shows that businesses in provinces of 1 st, 2nd and 3rd regions were affected by taxation in 5,69, 2,75 and 1,39, respectively. In other words, tax effect of 1st region was found to be higher than those of 2nd and 3rd regions under the significant influence of tax incentive law.

The aim for us to choose variance analysis is to test whether difference variable (pre-tax and post-tax net investment returns) showed any significant variations in regions to regions. Although there are six regions according to tax incentive law in Turkey variations of means between three regions were tested because data is not sufficient.

Statistical analysis method used to test whether means of two and more independent groups are different from each other is called one-way variance analysis. To do so, measurements from such groups should have been made in the level of least equal intervals. Anova requires variances of groups to be equal or homogenous. Homogeneity is measured by levene test (Sipahi et al., 2008: 124).

Table 11: Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
5,048	2	93	,008

Considering the result of Levene test, in H_0 hypoothesis variances are equal whereas in H_1 hypoothesis variances are not equal. Sig. Value $\leq$ 0,05 then H_1 hypoothesis is accepted. That is, variances of groups are not homogenious, in which case one-way ANOVA test is not provided with primary condition when. Such unavailable conditions emerge Welch and Brown-Forsythe tests are available alternatively.These tests are alternative to F test, of which Welch test is strongest and widely used(Sipahi et al.,2008:133).

Table 12: Robust Tests of Equality of Means

	Statistic value	Degree of Freedom 1	Degree of Freedom 2	p (The level of significance)
Welch	8,926	2	40,365	,001
Brown-Forsythe	9,117	2	92,181	,000

Since both tests have p values less than 0,05, differences can be concluded to exist between difference variables of regions. Tamhane's T2 test is used to determine from what region the difference has resulted because equations of variances in Levene test was rejected, this multiple comparisons test has been chosen (Sipahi et al.,2008:133).

Table 13. Multiple Comparisons

(I) bölge	(J) bölge	Mean Difference (I-J)	Standard Error	p (The level of significance)
1	2	2,94153*	1,11173	,029
	3	4,29962*	1,02744	,000
2	1	-2,94153*	1,11173	,029
	3	1,35810	,75020	,228
3	1	-4,29962*	1,02744	,000
	2	-1,35810	,75020	,228

* Mean difference of 0,05 is statistically significant.

From results of Tamhane's T2 test, it is clear that there are between 1st, 2nd and 3rd regions in terms of difference variable.

5.CONCLUSION

Businesses have difficulties in surviving let alone competing with other firms in globalised world where technology changes rapidly. Survival of businesses requires financial decisions to be made. Therefore, it is of great importance that ability of a firm to survive depends on continous output, power to invest in fixed and circulating capitals and financial policies to be conducted. Every financial decision includes money, time and risk parameters. Finance is actually related to evaluation of future cash flows. Uncertainties in future increase possibility of making mistakes. Failure to make financial planning is one of the unsuccesses in businesses. Major reasons why businesses fail and encounter risks are such problems as not taking steps for due fonds to assume responsibility, greater desire to grow beyond present capacity, fixed responsibilities caused by excesive borrowing more than business undertakings, ambibalance or disagreement between the period of using sources and just in time procedures for means, absence of policies to distrubute profits which may weaken financial structure of firms failure to make decisions to motivate business to progress, and such policies and decisions as to cause businesses to fail.

Within the context of the study, one seeks to find answers to questions "What Is Financial Decision?", "What Are Financial Decision Types?" and "What Kinds Of Taxes Are Considered In Making Financial Decisions?"

Findings from the study, show that there are 101 businesses whose analyses are positive except for financial instutions and firms whose recorded capitals are negative following 2000. Such financially successful businesses are classffied into 6 regions including their provinces according to tax incentive law in Turkey. In addition, these firms are already registered in Borsa Istanbul considering related city index regulations and necessary analyses are performed.

Taxation is an important factor as well as other parameters such as Money, time and risk while making a financial decision since financial structure, share in industry, present and

prospective profits, the region in which to include etc. will determine levels of taxes to be levied. Therefore, the state is itself interested and how much profit businesses will gain in what sectors. Accordingly, tax management belongs to managers in charge of business finance.

Findings of the study covers a total of 101 businesses, 50% of which is included in 1st region with a total of 68 firms. 2nd region has 21, 3rd 7, 4th 2, 5th 2 and 6th only one.

Because the first three regions heavily focuse on majority of businesses and other regions do not have sufficient number of firms, 4th, 5th and 6th regions were excluded from the study.

The findings show that pre-tax investment returns and per-tax capital costs of 68 businesses in 1st region were calculated to find the difference between them as net investment returns and returns of post-tax invested capital and post-tax capital cost were calculated with the difference being obtained as pre-tax net investment return to finally measure post-tax invested capital return and post-tax capital cost with the difference as post-tax net investment return and return of pre-tax and post-tax investments.

The present findings showed this difference to rise to 33% in 1st region with a means of 5,69 and a standard deviation of 7,66. The difference found in 2nd region was about 12% with a means of 2,75 and a standard deviation of 2,79. The 3rd region showed a difference of 3% with ameans of 1,39 and a standard deviation of 1,15.

According to the findings of the study, businesses of 1st, 2nd and 3rd regions including their provinces were found to be affected by taxation in 5,69, 2,75 and 1,39, respectively. In conclusion, it was observed that businesses in 1st region have heavier tax loads than those in others. In this respect, tax incentive law has different effects in different regions with tax loads of those in 2nd and 3rd being lighter than those in 1st region.

Because tax load of 3rd region is less than those of 1 st and 2nd and considering tax incentive law,3rd region is likely to have higher possibility to invest in it financially. However, in spite of the advantage of low tax load, financial decisions are believed to be negatively affected by lack of infrastructure, higher transportation costs insufficient organised industrial areas and absence of qualified personel as unavailable parameters.

Due to insufficient means and staff to calculate tax load of businesses in provinces of 4th, 5th and 6th regions, they were not included in the study. Accordingly, geographical distiribution of firms was found to be effective and important as to taking financial decisions if sufficient investments hade been made in those under developed regions, many more businesses would have existed and thus been included in the study.

REFERENCES

Aydın, N., Coşkun, M., Bakır, H., Ceylan, A. ve Başar, M. (2003) Finansal Yönetim, AÖF Yayınları, Eskişehir.

Berk, N. (1990) Finansal Yönetim, Türkmen Kitabevi, 6. Baskı, İstanbul.

Brigham, W.B. (1996) Essentials of Managerial Finance Eleventh Edition, The Dryden Press, USA.

Canbaş, S. ve Vural, G. (2010) Finansal Yönetim, Karahan Kitabevi, Adana.

Ceylan, A. (2004). Meslek Yüksek Okulları İçin İşletmelerde Finansal Yönetim, Ekin Kitabevi, 1.Basım, Bursa.

Ceylan, A. ve Korkmaz, T. (2006) İşletmelerde Finansal Yönetim, Ekin Kitabevi, 9. Baskı, Bursa.

Civan, M. (2007) Sermaye Piyasası Analizleri ve Portföy Yönetimi, Gazi Kitabevi, Ankara.

Ersöz, S. ve Ban, Ü. (2003) Finansal Plânlama Sürecine Katkısı Açısından Üretim Sistemlerinin Uzman Sistemlerle Çözümlenmesi, Mevzuat Dergisi, Yıl:6, Sayı:64, İstanbul.

Gitman, L.J. (1992) Basic Managerial Finance, HarperCollins Publishers, 3rd Edition, New York.

Muter, N. ve diğerleri (2003) Kamu Maliyesi, Emek Matbaası, Manisa.

Okka, O. (2009) Finansal Yönetim, 3.Baskı, Nobel Yayın Dağıtım, Ankara.

Sarıaslan, H. ve Erol, C. (2008) Finansal Yönetim, Siyasal Kitabevi, Ankara.

Sipahi, B., Yurtkoru, E. S., Çinko M. (2008) Sosyal Bilimlerde Spss'le Veri Analizi, 2. Baskı, Beta Yayınları, İstanbul.

Siverekli Demircan, E. (2003) Vergilendirmenin Ekonomik Büyüme ve Kalkınmaya Etkisi, Erciyes Üniversitesi, İktisadî ve İdarî Bilimler Fakültesi Dergisi, Sayı 21, Temmuz-Aralık, ss.97-116.

T.C. Ekonomi Bakanlığı, Teşvik Uygulama ve Yabancı Sermaye Genel Müdürlüğü (2012) Yeni Teşvik Sistemi Yatırımlarda Devlet Yardımları, İstanbul.

Tekin, A. (2006) Vergi Teşvikleri ve Ekonomik Etkileri, Dumlupınar Üniversitesi, Sosyal Bilimler Dergisi, Aralık.

Uzun, E. (2008) İşletme Finansmanı ve Finansal Yönetim, Birleşik Matbaacılık, Muğla.

Wang, J. (2003) Capital Asset Pricing Model 15.407 Lecture Notes.MIT Sloan School of Management, Cambridge.

Yılmaz, H. (1999) İşletmelerde Finans Karar Destek Sistemi, DEÜ Sosyal Bilimler Enstitüsü Dergisi, Cilt 1, Sayı 1, İzmir.

Yörük, N. (2000) Finansal Varlık Fiyatlama Modelleri ve Arbitraj Fiyatlama Modelinin İMKB'de Test Edilmesi, İstanbul Menkul Kıymetler Borsası, İstanbul.

Zee, H. H., Stotsky, J.G. ve Ley, E. (2002) Tax Incentives for Business Investment: A Primer for Policy Makers in Developing Countries, World Development, Vol. 30, No: 9, ss.1497-1516.