



Taxation and Corporate Finance: What Effects of Fiscal Measures on Financial and Economic Return? The Case of Tunisian Firms After the Finance Law of 2007

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Abstract

The main purpose of this paper is to measure the direct impact of taxation on economic and financial return of the company through a simulation of the tax effect using the information from the balance sheets of exporting firms belonging to the sector of the Electrical and Mechanical Industries (EMI). The originality of our work lies in highlighting the effects of tax incentives on economic return and financial profitability of exporting companies operating in the sector of EMI in Tunisia which represents a crucial sector of the Tunisian economic growth. The results suggest that a tax incentive policy has a strong effect on the economic and financial profitability of the firm and on the promotion of the exporting sector in Tunisia.

Keywords: Taxation, Exports, Economic Profitability, Financial Profitability.

JEL classification: F10, E62, L25

Introduction

It's an undeniable fact today that the search on performance and value creation has become the center of the financial strategy of firms. Indeed from the choice of capital structure of the company and its debt level, the management of economic and financial profitability is a crucial policy embodying the value of the business company but also other external factors which significantly affect the outcome of its profitability, among these factors: the tax system and fiscal measures. In this paper we try to determine the impact of taxation on economic and financial return of our sample. The paper is organized as follows. Section 1 presents a brief review of the literature and discusses the impacts of taxation on investment and profitability of the firm. Section 2 shows the methodology adopted. Section 3 presents results and interpretation.

Section I: Theoretical background

The debate on the relationship between taxation and the profitability has prompted several researches. The recurrent research of this relationship has manifested itself in many theoretical and empirical works. Indeed, the effective integration of taxation in empirical studies in finance was a result of the research paradigm articulated by Modigliani and Miller (1958, 1963).

At the end of the last century, we can notice a preponderance of extensive theoretical and empirical literature that addresses the issue of taxation and its impact on investment decisions and corporate finance. Many studies have shown the neutrality of the tax effect on investment decisions (MacKie-Mason (1990), Alvarez et al. (1998), Hassett and Metcalf (1999), and Pennings, (2000). Similarly Panteghini (2005), Sarkar and Goukasian (2006), and Agliardi Agliardi (2009) show that changes in tax rates do not affect investment decisions. The tax effect is accompanied with all activities of the company and all operations it makes, can affect the final result and also its value. Graham (2003) tried to present a synthesis in order to quantify the weight of taxation in the choice of capital structure and its influence on dividend policy. Panteghini (2012) studied the role of the effective tax rate in the comparison between different tax systems to promote investment. By invalidating their initial model of 1958, Modigliani and Miller (1963) have considered the impact of the deductibility of interest expense over the taxable income. These authors state that there is a proportional relationship between firm value and its debt-level, the value of an indebted firm equalizes the value of a firm without debt plus the value of savings tax expense under the condition to achieve a positive operating result.

As an instrument of government policy, tax incentives can be adopted to attract investors who want to increase the profitability of their firms to promote investment and enhance economic growth. Devreux et al (1994) attempted to estimate the impact of English Tax System on the cost of capital during the period 1968-1990. They showed that a situation of tax exhaustion has a significant impact on the cost of capital. Cummins et al (1995) and Schiantarelli (1996) argue that the adjustment of the ratio of Todin's Q through direct taxation of the firm, gives a clear idea about the traceability of the effect of tax rates and tax savings resulting from the deduction of depreciation expenses and resulting from tax incentives.

Strulik (2003) through a comparison of policies of firms in different economics shows that a decrease of 10% of tax would increase the firm's gain of 5%. The author emphasizes that the standard models (not taking into consideration the overall economy) overestimate the effect of tax reform on investment and profitability since they neglect the financial adjustments of the company. Similarly, Teraoui et al. (2011) confirm the positive impact of taxation on the financial results of the company through the estimation by the method of least squares (GLS). They showed that a change in tax rate by 1% would decrease by 0.31% the output of the company and an increase of the CT by 1% resulting in less 0.07% of net income. They also showed, through a survey by questionnaire on a sample of 60 exporting companies, that taxation affects the economic and financial performance of companies. In the same line of ideas, Simmons (2003) confirms the positive effect of taxation on investment. Through a survey by questionnaire on a sample of 600 executives of major multinational firms from seven countries such as Honkong Singapore, Australia, Canada, PR China, US and UK, it has verified the existence of a significant positive relationship uniting the indices of the attractiveness of the tax system of the countries selected and the size of FDI inflows. Through a study of three countries along the eastern and southern Mediterranean (Tunisia, Morocco and Egypt), Frikha (2005) studied the comparative attractiveness of FDI. The author has proved that the determinants of the attractiveness of FDI vary by country. In Morocco, the importance is given to the variable density of the rural population. While the second variable is the relative ratio of tax revenue, so a 10% increase in tax revenues induced a rise of 1.17% of FDI flows. For Egypt, this country is focused not only on the bank's credit policy to promote inward FDI, but also on the tax variable as a means of attraction of FDI, the author shows that a 10% decrease of generates tax revenue up 7.04% of foreign investment flows. In Tunisia, the political attractiveness of FDI depends to a large part of the fiscal policy. Indeed, over the period 1970-1996, the level of taxation of the private sector is a key factor in the choice of location for foreign companies. Obviously, a decrease on tax rate encourages the contribution of FDI.

Section II: Methodology

We try to measure the direct impact of taxation on economic profitability measured by the ratio between net income and total investment and financial profitability measured by the ratio between net income and capital invested in the firm of the exporting firm, using information from balance sheets of 14 exporting firms surveyed. Our sample consists of 06 totally exporting companies and 08 partially exporting companies belonging to the EMI sector. First, we study the direct impact of exemptions from corporate tax (CT) on economic and financial returns.

Then, we proceed by a simulation of the tax benefit on the basis data from the balance sheets of companies belonging to the sector of EMI during 2004 assuming that the past trend is projected into the future. Indeed, the choice of the EMI sector is justified by reference to the work of Teraoui and al (2011), in effect, the authors argue that it is one of the leading sectors of the Tunisian economy and comes after the Textiles Industries in terms of value but ranks first in term of growth rate relative to total exports thus occupying more than 25% of total Tunisian exports. In order to study the evolution of exports of EMI sector relative to total exports, the authors determined

econometrically the rate of increase in exports as well as the total EMI. The results clearly confirm the expansion of the sector over the period 1988-2004. It appears that exports products of the EMI sector grew at a rate of 14.7% per year over the period 1988 to 2004, a more rapid than that recorded by total exports (10.0%).

Indeed, this simulation is to calculate the tax due from export and from the local sales, after the promulgation of the Finance Act N°80 of 18/12/2006, applied on January 2008, totally exporting companies would no longer be exempt from tax but will be subject to a corporate taxation rate (CT) of 10%¹. Similarly, the legislature has reduced the CT rate from 35% to 30% for the portion of sales sold on the local market and this in order to decrease the fiscal pressure and to stimulate investment². While the company partially exporter will be subject to corporate tax rate for the portion of sales destined for export. We try to demonstrate the effect of this law on the profitability of exporting companies. So, we conducted a simulation of the tax benefit for that year assuming that the past trend is projected into the future.

Section III: Results and Interpretation

III.1-Direct impact of exemptions from corporate tax (CT) on economic and financial return

Remember that non-exporting companies are subject to a tax rate of 35%. But, in order to improve the profitability of Tunisian companies, the investment incentives code provides a specific tax regime for exporting companies. The rule adopted is the tax exemption. However, partially exporting companies are subject to a CT rate of 35% only for the local turnover. The sales for export are exempt from paying tax.

To successfully calculate the tax gain realized by the company following its partial export earnings of the tax benefit, we proceeded by calculating the tax due without tax benefit in other words, the tax that the company would have paid if it was not exporting (Table 1).

A review of the above table, we notice that by obtaining the tax advantage, exporting firms realize gains tax representing the difference between the tax payable by submitting the company at a rate of CT equal to 35% (the rate applied to companies under common law) and the tax due after the tax benefit. We also observe a marked improvement in net income (taxable income minus tax) after the exemption from corporation tax, except Company N° 7 (which has made a loss and paid the minimum tax equal to 2000DT). The examination of the impact of tax on economic return and financial profitability is manifested in Table 2. The interpretation of this table summarizes the results obtained in terms of profitability and financial viability before and after the tax benefit. Indeed, with the exception of the company N°7 who paid the minimum tax because it is in deficit, the economic returns with a CT of 35% is lower than the profitability of their businesses after tax exemptions. Financial profitability with exemption is better than no relief appears in the graph (Graph 1). Similarly, the economic profitability is clearly present in the graph (Graph 2). Thus, according Graph 2, it appears that exemption of the CT, the economic return of exporting firms increased. This increase is remarkable especially in the totally exporting companies (E1, E2, E3, E8, E10 and E11). In case of exemption from CT, the profitability of the totally of exporting companies increased. While the profitability of the partially exporting companies increased as they pay tax on the portion of sales sold on the local market. A change in tax rates in the negative direction increases the economic profitability, but less than that observed by exempting totally exporting companies. Similarly, we tried to represent graphically the change in the financial profitability of exporting companies following the exemption of the CT (Graph 2). This variation has an upward trend. All exporting companies showed an increase in their profitability and specifically E1, E2, E3, E8, E10 and E11, except for the company No. 7 which is supposed to remain in deficit.

III.2-Simulation of the tax benefit to reflect the new tax rate

With the promulgation of the Finance Act No. 80 of 18/12/2006, applied the first January, 2008, totally exporting companies would no longer be exempt from tax but will be subject to a CIT rate of 10%. Similarly, the legislature has reduced the CT from 35% to 30% for the portion of sales sold on the local market and this in order to cut taxes and encourage investment. While the partially exporting will be subject to corporate tax rates for the portion of sales destined for export. The question that arises at this level is to know the impact this measure on the profitability of exporting companies. We conducted a simulation of the tax benefit for that year assuming that the

¹ Article N°7 of the Finance Law N° 80 of 18/12/2006.

² First article of the Finance Law N°80 of 18/12/2006.

past trend is projected into the future. This simulation is to calculate the tax due from export and from the local sales, after the enactment of the Finance Act No. 80 of 18/12/2006 and based on a data from balance sheets during 2004.

$$TI \times \left(\frac{SE}{\text{TOTALsales}} \right) \times 10\% = \text{tax due from export if exportation is subject to 10\% of CT}$$
$$TI \times \left(\frac{LS}{\text{TOTALsales}} \right) \times 30\% = \text{taxation due from local sales}$$

With: SE: sales for Export

LS: Local Sales

TI: Taxable income

NB: (The calculations are shown in Tables 4 and 5 and 6)

We are interested to know the degree of the impact of tax incentives to corporate tax. Overall, the results show returns lower than those observed in Table 2. Thus, all companies are negatively affected by this measure. In detail, it first appears that the vast majority of companies saw their profitability deteriorate (Graph 3). Indeed, an increase of the CT of 10% for companies that export and a decrease of 5% for partially exporting companies, has led to improved economic efficiency ranging from -204.84 points (Company No. 2) to 0.07 points (company N° 9) and an improvement in profitability from financial -56.65 points (Company No. 2) to 3.73 points (Company N° 7) (see Graph 4). Thus, by examining Graph 3, there was a slight decrease of economic efficiency at the enterprise level E6 (from 4.97% to de4.98%) and E7 (from -5.1% to -5.47%). However, there was a slight increase in the economic profitability of companies E5 (from 2.97% to 3.01%) and E9 (from 14.8% à14.87%). This is due largely to the fact that for partially exporting companies, part of sales for export is greater than that sold on the local market. In other words, instead of 35%, partially exporting the company pays 30% of CT in the local market. In our case, E5 and E9 firms export most of their sales and they will be submitted at the rate of 10%. However, there was a slight stagnation of financial profitability at the company No. 6 and a slight decrease at the company 13. We can say that this decrease is insignificant due to what these companies flow the majority of their turnover on the local market and they will then be subject to a rate of 30% of CT. We also note that the financial viability of most businesses is degraded due to the new measure. This decrease is accentuated for the company E1, E2, E3, E4, E5, E7, E8, E9, E10, E11 and E12.

The results are in line with several previous empirical researches. Indeed, Halger Strulik that, through a general equilibrium model based on production functions of Cobb Douglas, detailing the account of the firm (investment function, employment, operating profit) showed a reduction of 10% tax would increase the firm's gain of 5% and vice versa. Similarly, Teraoui et al (2011) found that tax incentives have a positive impact on profitability and business performance. Currently, even with the promulgation of the Finance Law of 2012, the tax rate was reduced from 35 to 30% for all companies with the exception of the financial sector, telecommunications and leasing while export remained exempt until our days, the application rate of 10% on profits from exports has been postponed.

And now seen the new circumstances such as the increase in unemployment in Tunisia, as well as the financial and economic crisis that has affected everyone and Tunisia in particular especially after the Tunisian revolution on January the 14th, 2011. In this context Kaddour et al (2011) studied the role of the private sector in the accentuation of risky and the creation of financial crisis. The role of taxation is strengthened to advantage in that tax incentives can be a real tool that helps to attract FDI, promote investment and mitigate effects of crises and the problems of unemployment.

Conclusion

This paper has attempted to measure the impact of taxation on the change in the economic and financial profitability of exporting companies belonging to the sector of Electrical and Mechanical Industries (EMI) in

Tunisia. The empirical results show that a tax incentive policy increases the economic and financial profitability and promote the exporting sector. The IME sector is an emerging sector in our country that hasn't traditions in mechanical and electrical industries. Despite the effort made by public authorities to promote exports, the current system of tax benefits, as shown in the survey by Teraoui et al. (2011) on a sample of 60 exporting firms belonging to the IME sector, argues that the sector suffers from several disadvantages such as non-qualification of the workforce, competition from Asian products that invaded the business world especially in terms of EMI, also, the high costs of raw materials.

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Finance law of 2007.

Appendix

Tables

Table 1: The tax due: without and with tax advantage

Firms	Taxable Income	Tax payable without advantages= taxable income* 35%	Net profit without advantage	Tax payable with advantage	Net profit with advantage	Tax gain
1	344694	120642.9	224051.1	0	344694	120642.9
2	663865.261	232352.841	431512.42	0	663865,261	232352.841
3	139176.640	48711.82	90464.816	0	139176,64	48711.82
4	70193.206	24567,622	45625,584	2225	67968,206	22342,622
5	10193	3567,55	6625,45	2600	7593	967,55
6	21504	7526,4	13977,6	4897	16607	2629,4
7	-39793	2000	-41793	2000	-41793	0
8	333489,72	116721.4	216768,32	0	333489,72	116721.4
9	63802,85	22331	41471,85	15444	48358,85	6887
10	18881	6608.35	12272.65	0	18881	6608.35
11	3933149	1376602.15	2556546.85	0	3933149	1376602.150
12	11563	4047	7516	653	10910	3394
13	2286859	800400,65	1486458,35	485412	1801447	314988,65
14	14662966	5132038,1	9530972,9	386965	14276001	4745073,1

Table 2: The economic and financial returns: Before and after the tax advantage

investment	Equity	Economic return without advantage	Financial return without advantage	Economic return with advantage	Financial Return with advantage
235536	1595160	95.13	14.04	146,35	21.61
197625,979	714490,313	218.34	60.4	335.92	92.91
161333,079	308371,881	56.07	29.33	86,27	45,13
262336	215226	17,39	21,2	25,9	31,58
255431	10000	2,59	66,25	2,97	75,93
332977	366383	4,19	3,81	4,98	4,53
818197	1255045	-5,1	-0,33	-5,1	-0,33
2626520	583480	8,25	37,15	12,69	57,15
326671	375369	12,7	11,04	14,8	12,88
43490	124941	28,22	9,82	43,41	15,11
10305561	18723204	24,80	13,65	38,17	21
36042	68636	20,85	10,95	30,27	15,89
106207723	52392004	1,39	2,83	1,70	3,44
12154228	19400024	78,41	49,128	117,45	73,58

Table 3: Sales: local, export and total

Firms	Taxable income	Tax payable without advantages= taxable income* 35%	Total sales	Local sales	Sales for export
1	344694	0	2546147	0	2546147
2	663865.261	0	4048130,193	0	4048130,19
3	139176.640	0	1067242,635	0	1067242,64
4	70193.206	24567,622	1067242	96655	970587
5	10193	3567,55	12639337,57	9204866	3434471
6	21504	7526,4	1217463	792176	425287
7	-39793	2000	2923292	355017	2568275
8	333489,72	0	4731544	0	4731544
9	63802,85	22331	706283	488335	217948
10	18881	0	279249	0	279249
11	3933149	0	18811209	0	18811209
12	11563	4047	425675	68684	356991
13	2286859	800400,65	19519842	11838028	7681814
14	14662966	5132038,1	79444308	5990245	73454063

Table 4: The tax due after the finance law of 2007

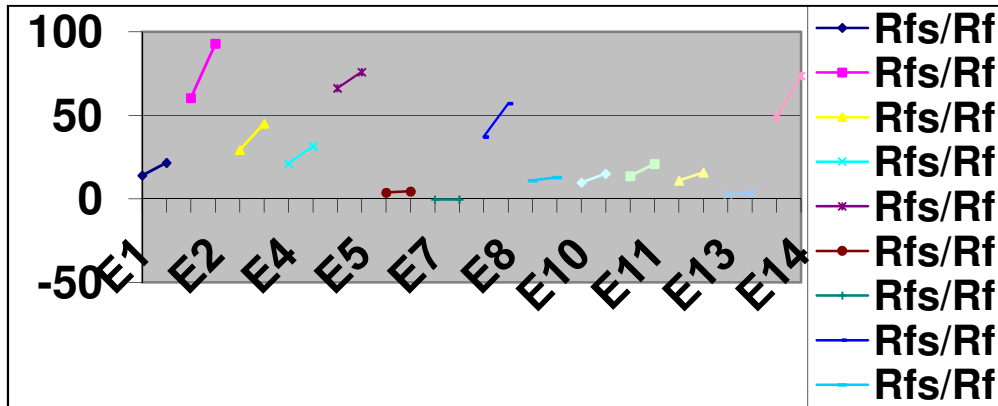
Firms	Taxable income	Tax due from export	Tax due from Local sales
1	344694	254614,7	0
2	663865.261	404813,019	0
3	139176.640	106724,264	0
4	70193.206	6384	1907,1
5	10193	277	2227
6	21504	751	4198
7	-39793	2923,29	-
8	333489,72	33349	0
9	63802,85	1969	13234
10	18881	27924,9	0
11	3933149	1881120,9	0
12	11563	970	560
13	2286859	89997	416067
14	14662966	1355735	331684

Table 5: Economic and financial return after finance law of 2007

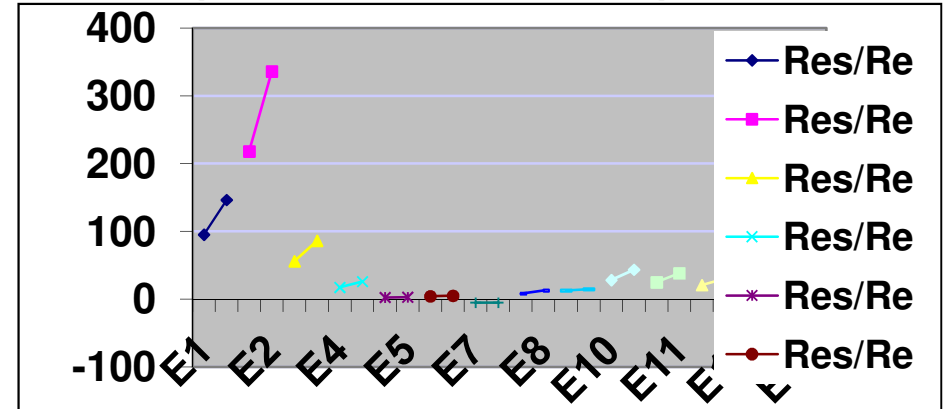
Firms	investment	Equity	Net profit	Economic return	Financial return	Variation of economic return	Variation of financial return
1	235536	1595160	90079,3	38,24	5,65	-108.11	-15.96
2	197625,979	714490,313	259052,242	131,08	36,26	-204.84	-56.65
3	161333,079	308371,881	32452,376	20,115	10,52	-66.155	-34.61
4	262336	215226	61902,106	23,6	28,761	-2.3	-2.815
5	255431	10000	7689	3,01	76,89	0.04	0.96
6	332977	366383	16555	4,97	4,51	-0.01	-0.02
7	818197	1255045	-42716.3	-5,22	-3,4	-10.32	3.73
8	2626520	583480	300140,72	11,43	51,44	-1.26	-5.71
9	326671	375369	48599,85	14,87	12,94	0.07	0.06
10	43490	124941	9043,9	20,8	7,238	-22.61	-7.872
11	10305561	18723204	2052028,1	19,91	10,96	-18.26	-10.04
12	36042	68636	10033	27,83	14,61	-2.44	-1.28
13	106207723	52392004	1780795	1,68	3,4	-0.02	-0.04
14	12154228	19400024	12975547	106,76	66,88	-10.69	-6.7

Graphs

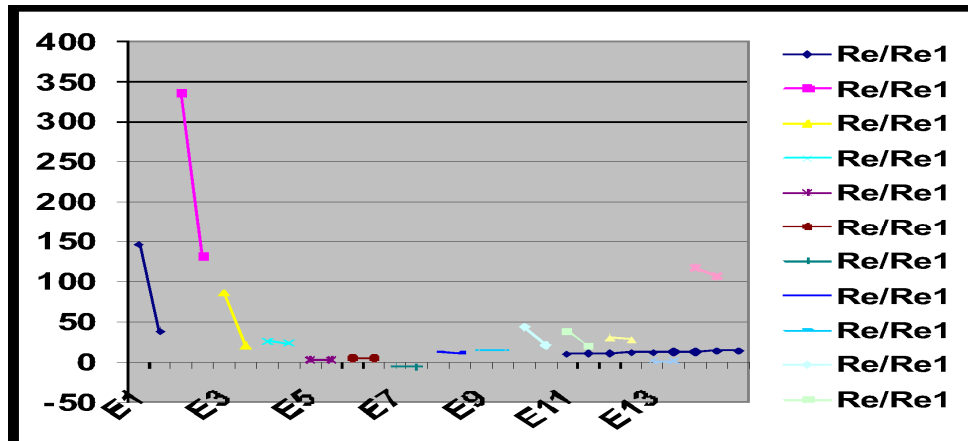
Graph 1: Financial return: without and with exemption of CT



Graph 2: Economic return: without and with exemption of CT



Graph 3: Economic return after the finance law of 2007



Graph 4: Financial return after the finance law of 2007

