Are mergers and acquisitions influenced by taxation?

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Abstract. Many times, in order to have successful mergers and acquisitions (M&As), investors rely on the taxation system. The aim of this paper is to analyse whether a state taxation characteristics can influence the investors' decision to take part in mergers and acquisition in that particular state.

Our database consists of the number and value of the mergers and acquisitions for more than 60 states from different continents. We took into account also the legal system of the states analysed because it is well known that it had a decisive role in establishing the fundaments of the taxation.

The results show that statutory corporate tax rate, labour tax or the time spent to register a business can be important factors in explaining the attractiveness of an economy to investors willing to make mergers or acquisitions in a state.

Key words: mergers and acquisitions, taxation, corporate tax, business environment
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1. Introduction.

Nowadays, mergers and acquisitions are considered to be a good strategy for companies attempting to maintain the competitive advantage or to win new markets so they can be in the front. Corporations usually spend a lot of money for this strategy and they are in permanent search for the best company to acquire in order to satisfy their needs.

In M&As companies are looking for ownership advantages. Ownership advantages usually arise from the change in ownership of the target firm that is expected to provide value due to the changes in the strategy, company's interest, management and perspective. All of this can result in the increasing of the target's future cash flows or in the decreasing of the business risk. However the change in operating performance following mergers and acquisitions can be also due to a better tax management. Even if in the literature there are not many studies that analysis this effect, the lowering of the target firm's tax burden is a solution for the acquiring company in order to generate ownership advantages.

To a great extent, taxes influence investment, the financing decisions and the investors' behaviour. Decision makers must cope with the complexity of the tax systems in order to obtain advantages. An investor often looks at the statutory tax rate when is making a decision, but there are a lot of other tax features that must be taken into account when a merger or acquisition decision is taken by a rational investors.

The aim of this paper is to study if the taxation features that characterize a state can influence the number of M&A transactions. We also want to analyze if some of the taxation system indicators can influence the behaviour of investors when it comes to mergers and acquisitions. We believe that this study is for the interest of both practitioners and academics as long as the taxation environment is a main interest in all fields and finding some key elements that link this with M&As are an overall interest.

The study is structured as follows. In the next section we are briefly presenting the main findings of other studies in the literature. Then the database and the methodology used in the study. After this, we will present the main results and in the final we will draw the conclusions.

2. Literature review.

In the literature there are analyzed several ways in which companies can rely on tax advantages when they decide to do mergers and acquisitions. Companies may reduce taxes through a merger or acquisition and this effect can be seen at both the corporate and shareholder level. Also, in some cases the tax benefits from a M&A transaction is available through other means, like the economic environment of another country, so these benefits are not necessarily attributed to the merger and acquisition process.

According to Devereux and Griffith (1998), in term of financial behavioral decisions, the role played by tax has two possible explanations. Using a logit regression, the authors analyze the determinants of a decision taken by a United States company to choose move in France, Germany and the United Kingdom. First, the simple investor choice is generally influenced by the effective average tax rate, because this can easily be analyzed right from the beginning. Second, if we take a specialized investor, his decision will probably depend on the effective marginal tax rate, because this tax is considered to be more relevant. Finally, investors' behavior is decisive in the decision to obtain a lower tax rate for their investments.

Other papers, Büttner and Ruf (2007) and Barrios et al (2012) use company level data to investigate the location choices of multinational companies. In both studies the authors look on acquisitions over time, and in many cases resulted that the decision for a company to invest in a specific country is independent of whether it invests in a third country. So, usually the decision take into account only the economic environment of the target country and not at a larger context.

Other studies like Di Giovanni (2005) and Coeurdacier et al (2009) examine the determinants of M&A transaction between countries, using data from 1990-1999 and 1985-2004, respectively. Di Giovanni finds that the size of domestic financial markets has a strong positive correlation with companies investing abroad, while Coeurdacier et al find significant effects in case that the countries are member of the EMU (Economic and Monetary Union) and the EU (European Union). Also in both papers there is a significantly negative impact of corporate taxation in the country of the acquired company.

There are also other studies that analyze the effects of taxation of mergers and acquisitions processes. Martin et al (2012) examine the link between target tax aggressiveness and acquisition premiums, and the authors find out that there is a strong correlation. Moreover, Chow et al (2013) and Col (2012) examine announcement returns of target companies and acquirers to determine if the future tax avoidance can be a way of capital gain.

Kaplan (1989) and Devos et al (2009) estimate the extent to which tax savings are responsible for M&A gains. The results are surprising because it looks like many transactions are driven by taxation purposes. On the other hand there are studies that examine if there are changes in taxable income of domestic companies after being acquired by foreign one (Blouin et al, 2005).

Taxation can be a characteristic of the cultural environment of a country, but in many cases culture and social issues can influence the behavior of investors in cases of M&A transaction (Ciobanu and Bahna, 2015).

3. Database and methodology.

To determine how taxation features are affecting mergers and acquisition we used a database that includes the number of M&A transactions for 46 countries of the world. We took the most important countries in terms of the M&A activity. The data is provided by Zephyr and includes aggregated data on acquisitions and mergers in the last 5 years. We can see that the highest numbers of M&As in 2014 are recorded in the most developed economies of the world, but there are also countries in Asia and Extreme Orient that are caching up.

Table 1: The number of M&A transactions in 2014

Country	M&A Number	Country	M&A Number
Australia	3933	Lebanon	7
Austria	199	Lithuania	111
Belgium	466	Malaysia	1389
Bulgaria	776	Netherlands	1357
Canada	3892	New Zealand	389
China	7245	Norway	592
Croatia	71	Philippines	193
Czech Republic	187	Poland	1471
Denmark	513	Portugal	221
Finland	996	Romania	616
France	2097	Russian Federation	2673
Germany	1919	Singapore	644
Greece	52	Slovak Republic	69
Hungary	187	Slovenia	63
India	2946	Spain	2563
Indonesia	397	Sri Lanka	137
Ireland	275	Sweden	1300
Italy	1325	Switzerland	445
Japan	3379	Thailand	452
Jordan	80	Turkey	544

Kazakhstan	148	UK	6218
Korea, Rep.	2855	US	14141
Latvia	269	Vietnam	1083

Source: Zephyr Annual Report 2014

Next we will analyze if the taxation features are influencing the numbers of M&A transactions. We used linear regression models. In order to do so, we conducted several regressions by using taxation variables that characterize the stats' economy, variables that can express the taxation level of each state. The variables used are explained in Table 2. We used World Bank Databases in order to extract these variables. The values of the indicators are those recorded in the last 3 years in each state.

Table 2. Dependent variables used in the model

Indicator	Explanation
GDPc	**GDP per capita (USD)** - In regression we used a logarithmic value.
SCTR	**Statutory Corporate Tax Rate** - The tax rate for the highest bracket of all taxes on corporate income.
ETR	**Effective Tax Rate** - The tax rate obtained by dividing the total corporate tax TaxpayerCo pays by its pretax earnings.
LT	**Labor Tax** - The sum of all labor-related taxes payable by Taxpayer, including payroll taxes, mandatory social security contributions, mandatory health insurance, mandatory unemployment insurance, worker's compensation insurance contributions, and any local contributions that are proportional to payroll or number of employees. It is expressed as a percentage of pretax earnings.
OT	**Other Taxes** - The sum of all taxes payable for the taxpayer other than corporate income taxes and labor taxes where the statutory incidence is on the firm. It is expressed as a percentage of pretax earnings.
VAT	**VAT and Sales Tax** - The sum of all consumption tax rates payable or collected by Taxpayer
PIT	**Personal income tax top marginal rate** - The tax rate for the highest bracket of tax on personal income. Only taxes at the national level are included.
NrTax	**Number of tax payments** - The tax payments indicator reflects the total number of taxes paid
Bussden	**Business density per 100 people** - The number of limited liability corporations (or their country-specific equivalent) legally registered divided by the working-age population (total population aged 15 to 64).

The descriptive statistics show trends in taxation at a multinational level. The statutory corporate tax rate has an average value of 28.1% with a high values in US and Japan and low value in Bulgaria, Ireland, Romania, Baltic countries, etc. This trend is also registered in case of effective tax rate where surprisingly in some countries the amount of taxes paid by at a corporate level drops under 5 percent (Lithuania, Slovak republic, etc). The VAT has an average level around 16%, with high levels in France, Norway, Switzerland, and low level in Asian countries. The number of tax payments is high in Romania, Russia, China and low in UK, US and Nordic countries, but record a average value of 27 taxes to be paid for a company.

Table 3. Descriptive statistics

	Mean	Median	Standard deviation	Max.	Min.
GDPc	29735.3	21844.74	23479.94	100818.5	1498.87
SCTR	28.10%	29.50%	0.0751	45.20%	12.50%
ETR	16.16%	16.50%	0.0601	28.66%	4.14%
LT	17.43%	14.80%	0.0980	37.65%	0.00%
OT	1.13%	0.52%	0.0137	5.26%	0.00%
VAT	16.80%	18.00%	0.0573	27.20%	5.00%
PIT	35.87%	37.00%	0.1152	60.00%	11.50%
NrTax	27.61	2300.00%	19.1385	8900.00%	300.00%
Bussden	6.22	559.25%	3.9147	1577.58%	9.73%

4. Results

In this section we tested whether the taxation features of an economy can influence the behaviour of investors in terms of mergers and acquisitions. As presented before, we used the linear regression model to analyze if taxation factors mentioned above influence the number of mergers and acquisitions. The study is made on 46 countries of the world, and we used mainly the values recorded for 2014 on every economy. The results are presented in Table 4.

Table 4. The model estimated results

This table estimates if taxation features influence the number of the M&A transactions. The M&A market data is provided by Zephyr Database for the year 2014 and the dependent variables used in the model are provided by the World Bank database. We used the logarithmic value for the number of M&A transaction. We did not consider in the same regression the variables correlated at a higher level than 0.4. T-statistics are in parentheses. The symbols *, **, *** represent significance levels of 10%, 5% and 1%.

Variable	(1)	(2)	(3)	(4)
GDPc	**0.45****	**0.35***		
	(2.15)	**(1.91)**		
SCTR		**8.28*****		**7.33*****
		(3.21)		**(3.41)**
ETR	**5.02***		**5.09***	
	(1.74)		**(1.77)**	
LT		0.56		0.34
		(0.26)		(0.18)
OT	**-31.21*****	**-20.94****	**-29.31****	**-21.07***
	(-2.55)	**(-2.28)**	**(-2.13)**	**(-1.86)**
VAT	-1.87		-2.01	
	(-0.55)		(-0.58)	
PIT	1.75	0.63	1.76	0.87
	(0.88)	(0.39)	(1.06)	(0.63)
Nrtax			**-0.03***	**-0.02***
			(-1.89)	**(-1.61)**
Bussden	-0.05	-0.05	-0.03	-0.03
	(-0.63)	(-0.66)	(-0.49)	(-0.58)
INTERCEPT	0.68	0.27	**6.04*****	**4.64*****
	(0.32)	(0.15)	**(4.71)**	**(4.87)**
R-squared	**27.87%**	**36.66%**	**34.74%**	**39.83%**
Number of observations	**46**	**46**	**46**	**46**

The results show that the taxation indicators of an economy can influence the investor behaviour in cases of mergers and acquisition. From the beginning we can see that the GDP per capita is a determinant factor for the number of M&As. We expected that because many of the transactions are placed in developed countries where this indicator has high values.

When we analyze the explicit taxation variables, the results show that both statutory corporate tax rate and the effective tax rate have a positive effect on the number of mergers and acquisition. This results can be due to the fact that usually in develop countries the corporate tax has a higher value so we cannot draw a conclusion that investors do not take into account the corporate tax value when they decide a mergers of a acquisition.

On the other hand, the other taxes variable has a negative effect on the investors' behaviour. So companies are more willingly to invest in countries where other taxes except corporate income taxes and labour taxes have a low value. A possible explanation can be that investors feel safer in a clear tax environment where other taxes, besides the widely known ones, are a minimal level in order to reach their investment forecast. This is somehow reflected also in the number of taxes paid by a company in a specific country. The level of mergers and acquisitions is higher where there are a few taxes to be paid, not lower if there are a lot of taxes imposed by the authorities.

The labour tax and personal income tax do not influence the level of mergers and acquisition so we can say that companies are more interested in the taxes that can influence their profits and not in those of the employees.

5. Conclusions

The aim of the study was to analyse if taxation indicators can influence the level of merger and acquisition from the investors' behaviour point of view. The results showed that statutory corporate tax rate, the effective tax rate, other taxes besides corporate income and labour taxes and the number of taxes paid by a taxpayer are significant in explaining the number of mergers and acquisitions in the world.

Further research will analyze if the possibility of legal tax avoidance and the capital transfer tax can influence the decision of an investors and the mergers and acquisition number and value. Also a more elaborate analysis can be done to see if there are other corporate taxation features that can have an impact on the investors' behaviour.

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