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Tax Evaluation In Cross Border M&A: The Singapore Case

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Contents

Introduction 4
1 Definition and Classification of Merger and Acquisition 6
1.1 The Importance of the M&A Transaction 8
1.2 Valuation Techniques: An introduction 9
1.3 Estimation Methods: First Distinction 10
1.3.1 Financial Method 13
1.3.2 Net Income Method 14
1.3.3 Mixed Method 15
1.3.4 Equity Method 16
2 The Cross-Border Merger and Acquisitions 19
2.1 The Rationale of Cross-Border Mergers and Acquisitions 20
2.2 Cross-Border M&As as Mode of Entry in a foreign market 20
3 The Impact of Taxation on Merger and Acquisitions Activities 23
3.1 Taxes and Merger Activity 23
3.1.1 Shareholder Taxation 23
3.1.2 Corporate Taxation 24
3.2 International Taxation in the Cross-Border M&A Transaction: Empirical Evidence 25
3.2.1 Experimental analysis on variables impacting cross-border M&A volume: The Regression Model 26
3.3 Overview of Cross-Border M&A in the South-East Asia Context 37
3.3.1 Singapore Overview 38
3.3.2 Singapore Tax System: An Introduction 39
3.3.3 Taxes In Singapore 40
3.3.4 Income Tax 41
3.3.5 Corporate Tax 42
3.3.6 Goods and Services Tax 42
3.3.7 Withholding Tax 43
3.3.8 Taxation on Capital Gains 43
3.3.9 Dividend Tax 44
3.3.10 Comparison of the tax system between countries 44
4 Singapore as hub of Merger and Acquisition in the South-East Asia. 48
4.1 M&A Market in Singapore 48
4.1.1 Strategic location 48

4.1.2 Economical and Political Stability 49
4.1.3 Infrastructure 49
4.1.4 Capital Markets and Collaborative Attitude 50
4.2 Overview of M&A Activity 51
4.3 General Introduction to the legal framework for M&A 52
4.3.1 The Companies Act 53
4.3.2 Takeover Code for M&A 54
4.3.3 The M&A Scheme 55
5.Overview of the Case Study 59
5.2 Sector Analysis: Semiconductor Industry 59
5.3 Sector Player 61
5.4 Avago Technologies and its business model 63
5.5 Broadcom Corporation 66
5.6 Analysis of the merger between Avago Technologies and Broadcom Corporation 67
5.6.1 Deal Structure 68
5.6.2 Synergies from the Merger 69
5.6.3 Tax Considerations 72
Conclusion 74

Introduction

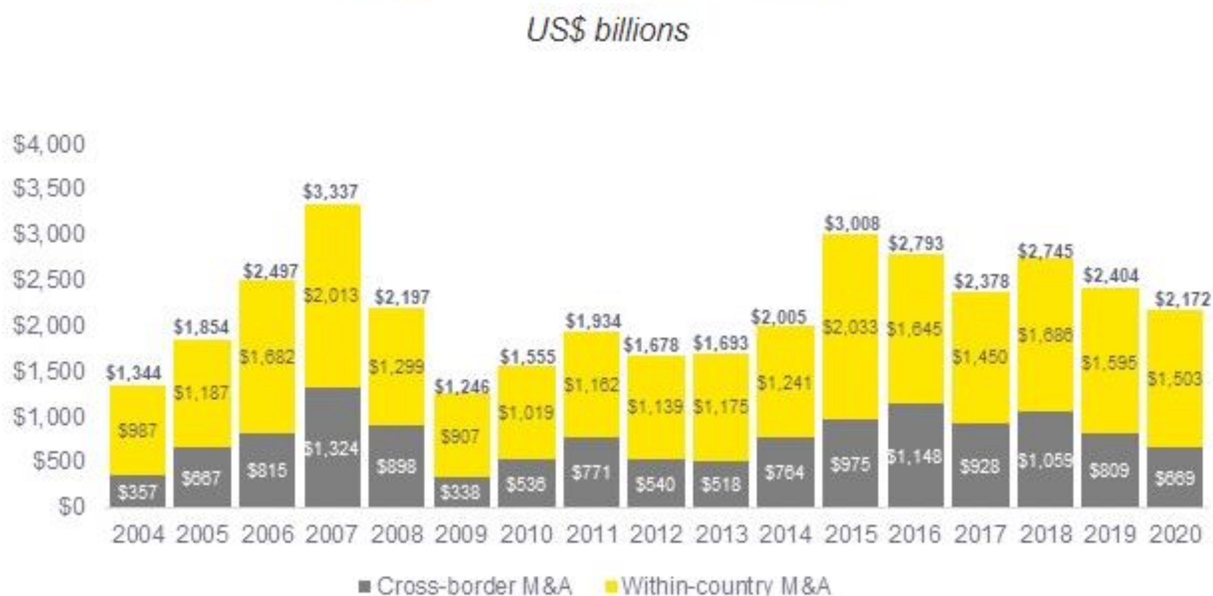
In the field of cross-border mergers and acquisitions (M&A), the tax aspect plays a crucial role in determining the structure, value, and success of transactions. In particular, tax evaluation holds significant importance for companies engaging in such activities. This thesis focuses specifically on Singapore, known as one of the most attractive countries for cross-border M&A transactions.The first chapter will provide an academic overview of M&A and the valuation methods used to estimate transaction value. The second chapter will delve deeper into the cross-border M&A market and its determinants. The third chapter will analyze the tax implications associated with cross-border M&A, both at the shareholder and corporate levels. Furthermore, using a statistical model, the chapter will examine the variables that have the most significant impact when a particular country decides to undertake a cross-border M&A. The third chapter will conclude with an in-depth analysis of Singapore's tax system and its advantages.The fourth chapter will highlight the importance of Singapore as an M&A hub and the various reforms undertaken to attract a greater number of investments.

Finally, the last chapter will present a case study involving a U.S. and Singaporean company, analyzing the tax implications and synergies created.Overall, this thesis aims to provide valuable insights into the tax evaluation of cross-border M&A transactions, with a specific focus on Singapore. By examining the tax implications, incentives, and reforms in Singapore, this research will contribute to a better understanding of the factors that influence the success of cross-border M&A and shed light on Singapore's role as a leading destination for such transactions.

FIRST CHAPTER

1 Definition and Classification of Merger and Acquisition

M&A transactions reached USD 2.2 trillion in 2020, of which the majority is represented by domestic M&As (about 70%), while the rest is represented by cross-border M&As. Looking at the years from 2004 to 2022, we can see that there has been an increase with global economic growth peaking in 2007, but due to the great recession in 2008-2009, there has been a decrease in cross-border transactions. After bottoming out in those years, global M&A reached USD 2 trillion in 2014 and cross-border M&A has remained around USD 1 trillion since 2015, except for 2019 and 2020.



Source: Ernst & Young LLP analysis; Thomson Reuters M&A database

Merger and Acquisitions, or M&A, involve the consolidation of companies or their major business assets through the financial transaction between two companies. A company could purchase another company to merge with it or acquire some or all of its assets, make a tender offer, or stage a hostile takeover. Each process is an M&A activity to try to achieve synergy.

Usually, the terms Merger and Acquisitions are used interchangeably, however, they have different meanings. *Merger* describes two firms that force to move into one new entity instead of remaining separately owned, the firms that agree to merge are equal in terms of size, customers, and scale of operations.

Usually, a merger can be carried out by:

- Absorption: where the absorbed company transfers its asset to the absorbing company. The latter continues to exist while the absorbed company ceases to exist.

- Creation of a new company: when the company involved agrees to lose its identity and create a Newco in which they operate. If the transaction is financed by cash, acquiring shareholders take on the entire risk that the expected synergy[1] value in the acquisition premium will not realize. If the transaction is made by stock the synergy risk is shared in proportion to the percentage of the combined company the acquiring and selling shareholder will own.

Merger can be divided also as follow:

- *Vertical Merger*: occurring between two companies involved at different stages in the supply chain for a common good or service. In 1996, the merger of Time Warner and Turner Broadcasting System allowed Tim Warner to own the content produced and the channels it was broadcast on.
- *Horizontal Merger*: occurring between two companies that operate and compete in the same industry. In 1999, Exxon and Mobil merged in a deal valued 81$ billion. The merged entity became the third-largest company in the world.
- *Conglomerate Merger*: occurring between two companies that operate in totally unrelated business activities or operating in different geographical locations. There are two forms: pure conglomerate merger, when two companies have no common business area and mixed conglomerate merger involves firms that are looking for product extension or market extension. In 1995 Disney acquired the American Broadcasting Company, getting entry into ABC's national television.
- *Market Extension Merger*: occurring between two companies that deal with the same product but in separate markets. In 2002, the acquisition of Eagle Bancshares Inc by RBC Centura in the industry bank
- *Product Extension Merger*: occurring between two companies that deal in products that are related to each other and operate in the same market. In 2002, the merger between Broadcom Corp and Mobiling Telecom Inc in the microchip industry.

On the other hand, *Acquisition* describes the process in which a company acquires and gets control of another company. Commonly, an acquisition can be friendly, a term that involves various considerations such as purchase price, payment terms, and any conditions related to the acquisition, in which a public offer by the buyer is made by cash or stock, then the Board of Directors(BoD) of

[1] Synergy means when two companies are going to combine their operations and performance wherein the value of the two entities combined is greater than the sum of the value of the entities individually.

the target will approve the buyout terms in order to continue the transaction and typically the company's management may work together to facilitate a smooth transition. On the other hand, a hostile takeover takes place when the acquirer takes control of another company without the approval of the Board of Directors of the buyout terms and generally also the target's management company is not in favor of the takeover. There are several types of the hostile takeover:

- Tender Offer: It consists of an offer being made to the shareholders bypassing the Board of Directors. The tender offer is typically used when the BoD has expressed its position to the takeover attempt.
- Proxy Fight: The acquiring company attempts to replace the target company's BoD with individuals who are more amenable to the acquisition. This process is done by soliciting proxy votes from the target company's shareholders.

1.1 The Importance of the M&A Transaction

M&A has potential benefits which are mainly focused on increasing profits and the value for the shareholder through the economies of scale produced by increasing of the market share, the diversification of the business, the extension of a strong production capability into a new market and the use of an existing distribution network by the acquisition of new products[2]. The M&A transaction has become an essential tool for companies development in today's market which is characterized by talent, competition, and technology.

There are many reasons why a company decides to pursue an M&A deal. The first reason is the determination to grow. There are two types of growth internal or organic growth(hiring new salesmen, expanding consumption etc.); and inorganic growth(acquisition or mergers with other firms). In response to good growth, M&A, like investments, tends to increase the capital base, as concluded by Andrade, and Stafford(2004).

A second reason for M&A is *synergy*. As Gaughan(2007) stated, the term synergy refers to the results or reaction after two substances or factors combine to produce a greater effect together than the sum of the two operating independently could account for. The phenomenon of synergy can be summed up as 2+2=5. According to DePamphilis(2003), we have two types of synergy, *the operating synergy* which consist of economies of scale and economies of scope; and *the financial synergy* which refers to the impact of Merger And Acquisitions on the cost of capital of the acquiring firms.

[2] "The importance of Merger and Acquisitions in today's Economy", Rima Tamosiuniene, Egle Duksaite

A Third reason is the access to intangible assets. Today the value of knowledge-based intangible resources has grown exponentially in companies. According to Saint-Onge and Chatzkel(2009), the intangible assets include:

1. *Human capital*, which is the sum of the capabilities of who is working in the company (experience, competencies, managers etc)
2. *Customer Capital*, which consists of strategies, processes, leadership and. It can include innovation, company organization, and processes

Another reason to pursue an M&A is also for tax benefits since certain studies have claimed that acquisition could be an effective tool to secure tax benefits (Ghosh, Jain200) and for cost reduction, changes in technology and industry.

1.2 Valuation Techniques: An introduction

The process of evaluating a company's capital requires recognizing that:

- It is a part of the logic of investment appraisal with which it must be consistent. The evaluation is carried out on data collected within the company, and as its first objective, it has an estimation of the company's performance in the medium-long term. The calculated capital value is referred to as **economic capital**[3](W);

- Shares are listed on regulated markets, expressing the market value(W) of the capital to which other market valuations can be added.

- The valuation of capital is carried out from within the company using data available to management, employing **direct analytical methods** of various kinds; or from outside the company using information received from the company as well as market data used through so-called **indirect methods.**

[3] " Principi di Valutazione di Impresa", Mario Cattaneo, chapter 17, pag 441-453

- The capital value is the first objective of the valuation. Any investor interested in acquiring a stake in a company, or a company interested in acquiring another, should pay no more than the price that expresses this value.

- Starting from the assumption that capital value can be determined through discounting of expected cash flows from the investments, whether cash flows or income. The starting point is always the valuation of the economic capital (W).

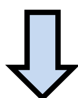
- ***W*** is a complex value, referring to a company intended to last, to which the expected cash flow may be irregular(cyclical business, with alternating performance, unexploited patent holders, etc.).

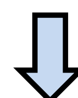
- The verification of capital valuation processes is carried out using several valuation methods, the first has a **main function**, and the others have a **control function.**

1.3 Estimation Methods: First Distinction

There are several methods to estimate the economic capital of the company. A first distinction can be made between:

Direct Methods	Indirect Methods



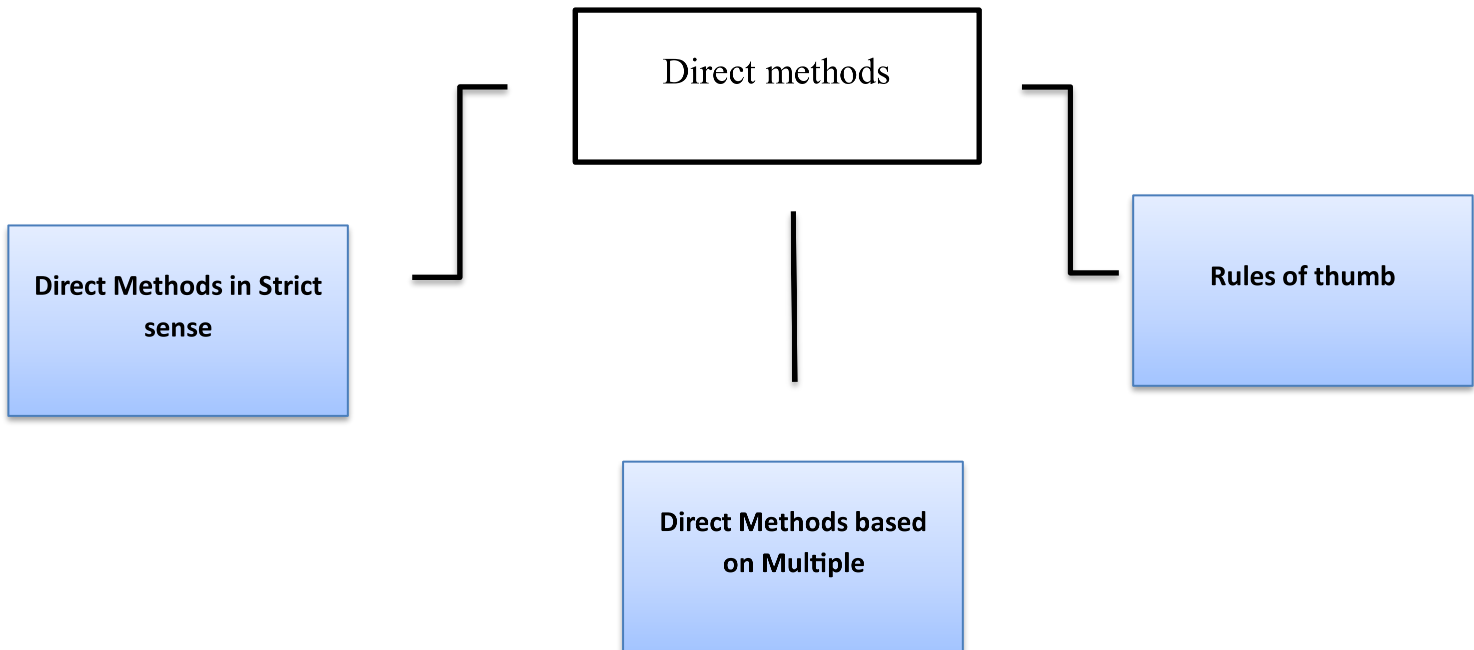


They are based on market prices.

They are based on accounting values.

Direct methods[4] are defined as those methods that refer to the observation of price market or indicators (not necessarily economic-financial) in the assumption that: (i) the market is efficient and expresses correct estimates, (ii) there is consistency between the value and the indicators selected.

Direct methods can also be divided as follows:



Direct Methods in a strict sense assess the economic capital of a company based on:

- Prices expressed by the market where the company operates.
- Price made in an extraordinary transaction involving the company being evaluated.

If the company is listed, its value will be given by the current market value of its capital where:

$$W_i = P_i * n_i$$

P_i = price of shares
n_i = number of shares

[4] "Special Cases of Business Valuation", Marco Vulpiani

If the company is not listed, its value will be given from the arithmetic mean of the economic values of a sample of companies like the one being estimated where:

$$W = \frac{\Sigma(P_i * p_i)}{\Sigma p_i}$$

n_i = Weight assigned to each transaction.

P_i= Prices made in transactions involving the capital of the company being valued.

Direct Methods based on multiples can be applied to assess both the listed company as well as the unlisted company. The method is based on the observation of ratios (so-called 'multiples') between 'prices made' in the market and specific company quantities, generally from the balance sheet, expressed by:

n_i the prices of a sample of comparable listed companies (multiples of comparable companies).
n_i the prices of transactions involving comparable companies (multiples of comparable transactions).

Moreover, companies deemed comparable must be as 'similar' as possible to the company being valued in terms of business and size.

Market multiples referring to balance sheet size can be:

- *Asset-side multiples* (multiples of net invested capital, or net assets);

- *Equity-side multiples* (multiples of risk capital, or equity).

Rules of Thumb are applied for the valuation of small companies and the indicators are being used as starting points for methods more complex.

In the US literature they are divided into four groups:

- Multiples (or percentages) of sales in a certain period
- Multiples (or percentages) of net profits

- Multiples for significant physical units (e.g.: number of available rooms for a hotel company, beds for a hotel, beds for a healthcare company...)
- Multiples of sales or net profits plus all or some asset classes

The indirect methods are methods based on stock, cash flow-stock, and cash flow. The valuation of the company consists of the estimation of the Enterprise Value (EV) through the discounted of the cash flow to a rate called Weighted Average Cost of Capital (WACC)[5]. In the following chapter, we are going to analyze in more detail each indirect method.

1.3.1 Financial Method

The Financial method is one of the most used methods to evaluate a company's economic capital and is expressed as the sum of a firm's future cash flow for a hypothetically *unlimited duration*, the value is given by:

$$Value = \sum_{t=1}^{\infty} \frac{CF_t}{(1+r)^t}$$

Where;

CFt= Cash Flow in period t

R= Discount rate reflecting the risk and the time factor of the estimated cash flows

Regarding the configuration of the cash flow, one can choose one single constant for the valuation, and in this case, we are talking about the financial pure method, or we can calculate each cash flow for each year taken into account, usually five to six years, and in this case, we are talking about the financial complex method. Another aspect to underline is that the unlimited duration is considered acceptable since companies have a long-term expectancy.

The main financial methods are Discounted Cash Flow (DCF) and the Adjusted Present Value(APV).

[5] The WACC represents the weighted average cost of the different sources of financing that make up the company's investment projects which is given by Re(E/D+E)+Rd(D/D+E)(1-t). As the opportunity cost and the weighted average cost of capital decrease, the number of projects that can reasonably be implemented increases, and the Return> WACC.

1.3.2 Net Income Method

Continuing our analysis of the Indirect method, the Net Income method is used to determine the value of the economic capital based on the estimation of the projected come flows that the company is able to produce in the future.

This method is based on the identification of *Expected average normalized earnings* which represent the company's ability to produce a stable flow within a given period.

The formula that describes the Net income method is as follows:

$$W = \frac{R_1}{(1+i)^1} + \frac{R_2}{(1+i)^2} + \ldots + TV$$

,where

R= Normalized income arising from operation each year

i=discount rate

TV= terminal value

W= economic capital

The flow that provides the net income flow results is the flow that can be obtained by supplementing and adjusting the accounting flow:

- *Income Normalization* aims to remove the randomness of a series of components to ensure recognition in the period taken into account. The normalization process entails:
    - The redistribution of extraordinary income and costs over time.
    - The elimination of income and expenses not directly related to the business
    - Neutralization of accounting policies that are deemed distortive as regards the objective.
- *Integration* considers the dynamics of the intangible assets and other assets that are not recognized in the account.

- *Alignment/Adjustment is* used to eliminate the effect of inflation and gives uniformity to the flow of various years.

1.3.3 Mixed Method

The mixed method combines aspects of both equity and income methods trying to mediate between the advantages and disadvantages thereof. As we have already discussed in the previous paragraph, the equity method considers the size, structure, and profitability of the company's assets instead the income method takes historical or future trends into account. The mixed method tries to balance between the objectivity and verifiability needs of the assets base and the rationality expressed by the assessment of expected income inflows.

The mixed method involves three valuations:

- UEC Method
- The Mean Method
- EVA Method

The *UEC Method* allows calculating *W* made up of an equity component and income component:

$$W = K + (R - iK)\ a_{\overline{n}|i'}$$

goodwill

The determination of goodwill (R-iK) is made through a comparison of the average normalized income produced by the company and the average return for the sector multiplied by the adjusted net worth. If $R > iK$, we are talking about goodwill., instead if $R < iK$ we are talking about badwill.

The *Mean Method* estimates the economic value of the enterprise capital through the simple arithmetic average or wweightof the results obtained by applying the income method and the equity method.

$$W = (K+R/i'')/2$$

However, this method suffers from a lack of consistency between the methodology for determining K and R.

The *EVA Method* is used primarily for the evaluation of the company's performance and with reference to prospective data, it becomes a method of estimating the corporate value. The calculation for the Economic Capital is given by:

$$EVA = NOPAT - IC*wacc$$

where:

IC= Invested Capital

NOPAT= Net Operating Profit after Taxes

1.3.4 Equity Method

The last indirect method that we are going to analyze is the Equity Method. The equity valuation is based on the identification of the market value or its current value of the assets and fewer liabilities on a going concern basis.

This value corresponds to the replacement or reconstruction value both for intangible and tangible assets. Equity estimation is based on the analytical valuation of individual asset and liabilities. Moreover, the equity method can be divided into: the simple equity method in which you consider only the tangible asset, and the complex equity method in which you consider both the tangible and intangible assets.

The calculation for the Economic Capital with the complex equity method is given by:

$$K' = K + I * (1 - t)$$

Where:

K’= the adjusted net capital in the presence of intangible assets

I= Intangible Assets

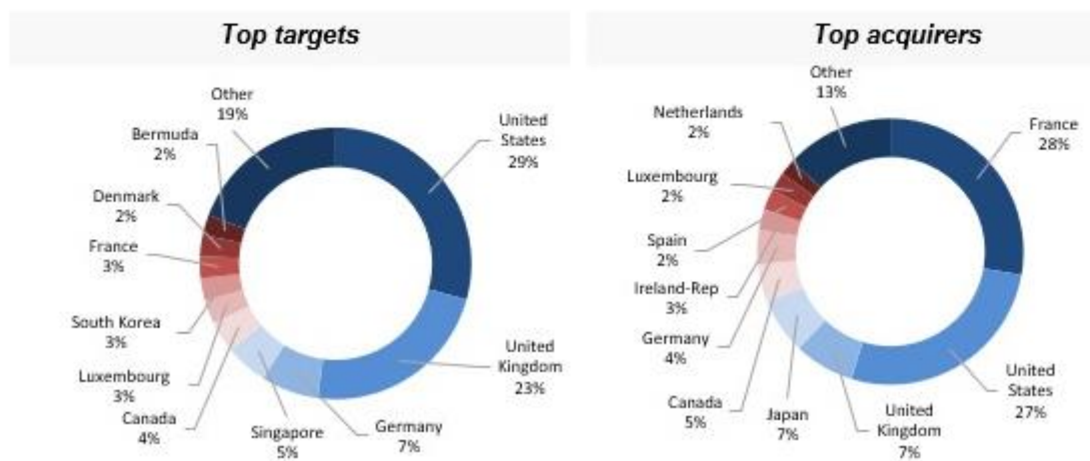
While the simple equity method, the formula does not consider the variable I

SECOND CHAPTER

2 The Cross-Border Merger and Acquisitions[6]

I will now proceed with an analysis of cross-border M&A, starting with the global market size, mainly analyzing it from the perspective of the acquirer and the target. Subsequently, I will explain the dynamics and implications for companies undertaking cross-border operations. Mergers and Acquisitions have long been a strategy for firms and represent a crucial alternative for strategic expansion. While the majority of these transactions involve two companies within the same country, over 40% of the M&A completed in the last decade involved firms in two different countries, and thanks to the increase of the globalization of business, it has heightened the opportunity and pressure to engage the Cross-Border M&A. Moreover, the last research about the Cross-Border M&A transaction has focused on important issues which they can be useful for the company to be successful, such as the mode of foreign direct investment or entry, performance outcomes from the acquisitive entry, and shareholders' wealth creation by Cross-Border M&A. In terms of numbers, there has been a significant increase in cross-border M&A activity in 2021, particularly involving a few countries. From the perspective of the target company, these include countries such as the United States, the United Kingdom, Germany, Singapore, and Canada. Meanwhile, from the acquirer's side, we can see that the major countries undertaking this activity are France, the United States, the United Kingdom, and Japan.

Figure 3. Cross-border M&A in Q1 2021, top targets and acquirers



Source: Ernst & Young LLP analysis; Thomson Reuters M&A database.

In the next paragraph, we are going to analyze the theoretical perspective.

[6] "Theoretical foundations of cross-border mergers and acquisitions: A review of current research and recommendations for the future", Journal of International Management, 2004

2.1 The Rationale of Cross-Border Mergers and Acquisitions

The dynamics of cross-border M&A are similar to those of domestic M&As, but due to their international nature, they have different challenges since countries have different economic, regulatory, and cultural structures (Hofstede,1980; House, 2002).

Cross-Border Mergers and Acquisitions can be utilized to gain new and lucrative markets and expand the market for a firm's current goods, in fact, many scholars have pointed out that suppliers often follow the international expansion of the related buyers. The pursuit of Cross-Border M&A is not without challenges. Firms that want to engage in these transactions, face risks such as "liability of foreignness" (Zaheer, 1995) and "double-layered acculturation" (Barkema. 1996). Uncertainty and information asymmetry in foreign markets can make it difficult for firms to adjust and learn from both the local market and target firm, thus the liability of foreignness and double-layered acculturation serve as barriers to learning new knowledge and capabilities.

Companies must consider various conditions in pursuing cross-border M&As, including country- industry- and firms levels factors that are related both to the acquiring and to the target firms. At national and industry levers, it is necessary to consider factors such as capital, labor, and natural resources in addition to the country level such as the legal, political, and cultural environment.

2.2 Cross-Border M&As as Mode of Entry in a foreign market

A company may decide to pursue a cross-border M&A to gain market share and the mode of entry in a foreign market is various. Entry mode can vary among equity-based (greenfield, acquisitions, and joint ventures) and non-equity based(export and alliance)

Equity-Based Entry

- *Greenfield Ventures:* establishing owned subsidiaries in new geographic market. This operation provides the best and highest form of control over internal resources but are also likely to have v the highest costs(Hennart and Park, 1994)
- *Acquisitions:* Acquiring a foreign business can allow the acquiring firm to obtain its resources such as technology, human resources, and know-how and gain access to the market- This option provides high control over assets however, the control is less than greenfield ventures.

Non Equity-Based Entry

- *International Alliances:* they can provide access to important resources and obtain new opportunities to share the costs and risks of entering new foreign markets. When an alliance is formed, the cost and risks for the firms are moderate relative to the other equity-based modes of

entry. Regarding control, alliances offer lower control to participating firms and require substantial transaction costs to realize benefits.

External Research suggests that the choice of a company to undertake a cross-border M&A as the mode of entry into a foreign market is influenced by:

- Firm levels factors: these can include multinational experience, local experience, product diversity, and international strategy. At the firm level, the types of resources most valued to undertake the Cross-Border M&A by investing firms are intangible assets and mainly knowledge-based resources[7].
- Industry Level factors: these can include technological intensity, advertising intensity and sales force intensity. In their studies, Anand and Delios (2002) identified technological capabilities that are fungible across countries, and brand sales more specific to each market. Both argued that firms are used to distinguish between capability-seeking and capability-exploiting.
- Country levels factors: it can include market growth in the host country and cultural idiosyncrasies between the host and home country. The cultural issue is very crucial for a cross-border M&A. An important aspect that can influence the mode of entry is the ability to integrate resources. The problem of integrating different cultures has been examined, and the majority of scholars claim that high levels of cultural distance can prevent the success of Cross-Border M&A. (Brouthers and Brouthers,2000; Hennart and Reddy, 1997; Kogut and Singh, 1988).

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[7] However, identifying and managing intangible assets can be extremely difficult for investing firms.

THIRD CHAPTER

3 The Impact of Taxation on Merger and Acquisitions Activities

As we have discussed thus far, Mergers and Acquisitions are an expansion strategy for companies looking to expand into new markets. However, one cannot ignore the significant impact that taxation can have, influencing the choice of the operation structure and the outcome. In this chapter, I will examine the role of taxation on M&A operations, the tax implications, the impact on the shareholders of both the acquirer and the target, and the advantages and disadvantages from a tax perspective. As a conclusion, I will analyze the tax system in Singapore and how it influences M&A operations. I will examine the tax laws in relation to these operations, and tax policies such as capital gains tax, and tax losses. Understanding these will be essential for companies looking to conduct M&A operations in Asia, with a specific focus on Singapore, as the choice of the country can have a significant impact on the value and success of the operation itself.

3.1 Taxes and Merger Activity

There are different ways in which companies may reduce taxation through a M&A activity, and it can achieve tax benefits at corporate level and shareholder levels.

3.1.1 Shareholder Taxation[8]

When the Target company is acquired, the Shareholders can receive different forms of payment when they decide to sell the share because of a Merger and Acquisitions. All these different forms can be taxable and non-taxable. If we consider the taxable solution, then the shareholders have to pay capital gains taxes on their gains obtained from the sale of the target company. If we consider not taxable solution, shareholders do not pay taxes until they sell the shares in the acquiring company that they receive from the acquiring company.

Of course, this second treatment is preferable to the first from the perspective of the acquired firm's shareholders. This case can also represent a net gain to shareholders relative to a no-takeover situation since they could be likely to sell their shares in the new company and incur capital gain taxes than they would have been had no acquisition occurred. In exchange for these benefits through the avoidance of capital gain taxes, there are certain costs to bear. To avoid taxes at the individual level, the corporate combination has to qualify as *reorganization* that can bring certain restrictions on the transaction. The most crucial is the consideration that has to be paid to the shareholders of the acquired company since the stock must have voting rights and that the tax positions of the acquired company are taken over by the acquiring company. Another aspect to be considered in shareholder taxation is the use of cash that can be attractive to the acquiring firm.

[8] " The impact of taxation on Merger and Acquisitions", Alan J.Auerbach, David Reishus

In the use of the cash, there is a nontax advantage since it is easy to use in an hostile tender offer, but cash might be attractive for tax purposes as well. The acquiring corporation with cash for the transaction has the funds available for distribution to its shareholder instead if it does not use the cash for the acquisitions. The cash can be used in two ways: Dividends and Share Repurchases, and each of these ways can lead to a different taxation for the shareholders. Dividends lead to taxes that would be higher for shareholders of the parent firm compared to the capital gains taxes paid by the acquired firm's shareholders in a taxable transaction. So, a taxable cash transaction would result in lower considered the personal taxes on the two firms' shareholders than a nontaxable stock transaction combined with an increase in dividends. But a company can also use Share Repurchase but in this case the tax advantage of using cash disappears. A nontaxable transaction could produce tax benefit by allowing shareholders in the acquired company to attain a more diversified portfolio. Taxable cash transactions instead offer a tax advantage to shareholders only to the extent that they facilitate the transmission of cash out of the acquiring corporation at capital gain rates.

Other many studies conducted by scholars suggest that in the taxable transaction the premium demand is higher than non-taxable transactions (Sullivan 1993). At the same time, the probability of a cash takeover transaction is a decreased function of the dividend payout ratio and M/B ratio. (Carleton,1983).

3.1.2 Corporate Taxation

The tax treatment of mergers and acquisitions at the corporate level depends on whether the acquiring company treats the acquired company as being incorporated into the parent company with its tax characteristics, or as a sub-asset received after liquidation. As noted above, tax-exempt transactions must follow the first route, as this will result in a reorganization. If the acquiring company adopts the tax characteristics of the acquired company, it has no opportunity to increase the asset base but will benefit from unused tax credits and tax losses carried forward by the target company and accumulated in the tax losses the company will incur in the future.

Another incentive at the corporate level for the acquiring company is the deducibility of the interest on corporate borrowing and this can be one of the reasons why an M&A transaction ensures its attractiveness. The deductibility of interest can lead to an increase in mergers and acquisitions, as the acquiring company may have more debt capacity due to this tax advantage. In addition, the two merging companies may reduce the business risk and make it possible for the created entity to borrow more than the two companies can borrow separately.

3.2 International Taxation in the Cross-Border M&A Transaction: Empirical Evidence

We will now continue our analysis of the impact of taxation on Cross-Border M&A, studying how the parent-subsidiary structure is affected by the prospect of international double taxation.

Generally, when we talk about cross-border M&A, the company carrying out the transaction has its headquarters in one country and subsidiaries in one or more foreign countries. In this context, from a tax point of view, the location of the parent firm affects the taxes in the parent country and in the other countries where it has its subsidiary. What needs to be taken into account when conducting a cross-border M&A is precisely the location of the parent firms, as some jurisdictions tax the income of all locations where companies operate, while other jurisdictions do not tax foreign income but only domestic income. For this reason, a company that resides in a jurisdiction that taxes not only domestic income but also foreign income (so-called worldwide taxation) risks being subject to international double taxation on the income generated outside the country where it is based.

In this chapter, an attempt will be made to demonstrate how the issue of double taxation influences the choice and outcome of engaging in cross-border M&A and what is the impact of taxation in the parent-subsidiary structure. Before we begin this analysis, I would like to bring practical examples of how taxes can influence whether one chooses to engage in a cross-border M&A. One of these concerns the merger of Daimler in Germany with Chrysler in the United States in 1998. In this case, it was decided to locate the parent company in Germany and its subsidiary in the U.S. One of the reasons was the exemption of taxation by Germany on dividends income from abroad, which contrasted with the US system of worldwide taxation.

Let us imagine, now in our example, that two companies in two different countries want to merge to create a multinational company. The first question they should ask themselves is to choose one of the two countries where the parent firm will be located. Suppose we call the two countries i and j. In addition, the new entity must consider if it wants to establish a subsidiary or a branch in country j. The choice of these aspects can have *tax consequences* from a multinational point of view. As we said before, some countries generally tax the overall income on a worldwide basis, instead other countries tax only the income generated on a territorial basis, and this is one of the reasons why the selection of the parent company is affected by the legislation of each country. The second element by considering is the choice between the subsidiaries and the branch as well, as parent countries tax foreign source income in the form of dividends received from the subsidiary in a different way from foreign active business generated by the foreign branch. The income generated in country j is taxed in the country at a specific corporate tax rate t, having 1-t the opportunity to be reinvested, moreover, country j could apply a non-resident withholding tax to dividends repatriated to country I at rate g. In

total, the subsidiary country taxes the income to be paid as dividends at a rate t(11-t) g. Let denote tij double the rate of the double taxation as a result of the tax rate paid by the multinational on income from country j in excess of the corporate income tax ti in a subsidiary of country j. Of course, this double taxation depends on the parent country taxation. If the parent country does not impose international double taxation, the tax paid by the multinational on the income is equal t(11-t) g, reflecting the parent country's corporate income tax and the subsidiary withholding tax.

3.2.1 Experimental analysis on variables impacting cross-border M&A volume: The Regression Model

Given the set of factors that contribute to determining the elements that make a country more attractive from an entrepreneurial standpoint and, at the same time, capable of engaging in M&A actions in geographically different territories from its own national one, this report aims to analyze whether and to what extent the number of companies acquired by a country depends on more strictly econometric (e.g. per capita GDP) and/or financial factors (corporate taxation, capital gains, dividends, etc.). In the first section of this chapter, secondary sources from which the data used in the analysis were acquired will be introduced, along with a description of the dataset employed and the variables under study. A descriptive study of the variables under investigation will then be conducted, followed by a correlation analysis among the selected variables based on our primary hypothesis in order to estimate an appropriate linear regression model. Finally, the chapter will present the conclusions summarizing the main insights obtained from our investigation.

Presentation of the database and its preparation for data analysis

Within this paper, our analyses will be carried out from a dataset consisting of a group of variables collected from various secondary sources, described below:

- *E&Y Worldwide Corporate Tax Guides*: produced by E&Y, one of the world's largest business consulting and professional services firms including tax, legal, business transformation, audit, financial and management consulting services. The company works with organizations of different sizes, including public and private sector clients. Specifically, Worldwide Corporate Tax Guides brings together a series of publications that provide detailed information on corporate tax regulations in different countries around the world, aimed at supporting multinational companies and tax professionals in understanding and applying local tax laws when operating in a particular country or seeking to expand their business internationally;

- *PWC Worldwide Tax Summaries*: like E&Y, PWC also offers consultancy services to companies, channelling part of its resources into research and development initiatives, with sustainability and corporate social responsibility issues at the centre of its vision. The PWC Worldwide Tax Summaries is also, like the previously described E&Y publication, a publication that provides an overview of the tax regulations of numerous countries around the world;

- *World Bank Data*: a platform offering a range of indicators and statistics on a wide range of topics, including economics, demography, environment, health, education and more. These data are collected through official sources and national statistics of World Bank member countries;

- *Orbis M&A:* Orbis M&A is a service offered by Bureau van Dijk, a company specialising in the collection and provision of corporate data. Orbis M&A provides information on global M&A activity as well as a wide range of M&A data, including completed transactions, pending deals, M&A announcements and information on the parties involved. Users can access details such as transaction values, acquiring and target companies, completion dates and other related information.

The analysis of the data was carried out using Excel and STATA in parallel, with which the dataset produced by merging the different data sources was properly prepared. Overall, our dataset consists of 7 variables and a total of 20 countries, and the data refer to the year 2015-2022. The selected variables are listed below:

- *country*: Identifier showing the name of the 20 analyzed countries;
- *tax_impr:* quantitative variable reporting the taxation in force for enterprises within the country;
- *tax_plus*: a quantitative variable reporting the taxation of capital gains, i.e. the taxation of gains realized on the sale or disposal of an asset or asset that has increased in value relative to its original cost. Capital gains may arise from the sale of shares, securities, real estate, investment goods or other types of assets.
- *tax_divid:* the taxation of dividends, i.e., the taxation of periodic payments made by companies to their shareholders as a distribution of corporate profits. Dividends represent the share of earnings that is distributed to shareholders based on their shareholding.
- *GDP_per capita*: represents the countries' GDP per capita.

- *Acquiror*: number of companies acquired by individual country in other territories.
- *Target:* number of companies acquired in the individual country by foreign players.

In the next section, the monovariate analyses necessary to describe the distribution of the sample will be carried out. The hypothesis underlying our research is that the number of firms acquired by a country is influenced by factors such as GDP per capita and taxation levels. In short, we want to investigate whether and to what extent the acquisition of companies by a country is influenced by greater or lesser market liberalisation and per capita wealth.

Single-variate sample analysis

Before proceeding to the analysis of the correlation between our variables of interest, and estimating our predictive model, it is appropriate to give an accurate description of the descriptive statistics of our sample.

Table 1: Descriptive Sample Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
tax_impr	20	.22754	.0448985	.15	.3
tax_plusv	20	.22764	.0449065	.15	.3
tax_divid	20	.19025	.1168048	0	.35
pil_procap~e	20	41828.68	30709.36	2256.6	133590.1
acquirente	20	1363.3	1762.16	15	7135
target	20	1363.3	1560.757	117	6546

Analysing Table 1 we can see that corporate taxation and capital gains taxation tend to overlap almost completely (23%), while dividend taxation is on average lower than the former (19%). We find a similar trend between flows of corporate acquisitions within a country by foreign players and vice versa (on average 1363).

The distribution of GDP per capita (fig.1) shows that Luxembourg, Singapore and the USA dominate the ranking while countries such as Italy and Spain lie well below the sample average.

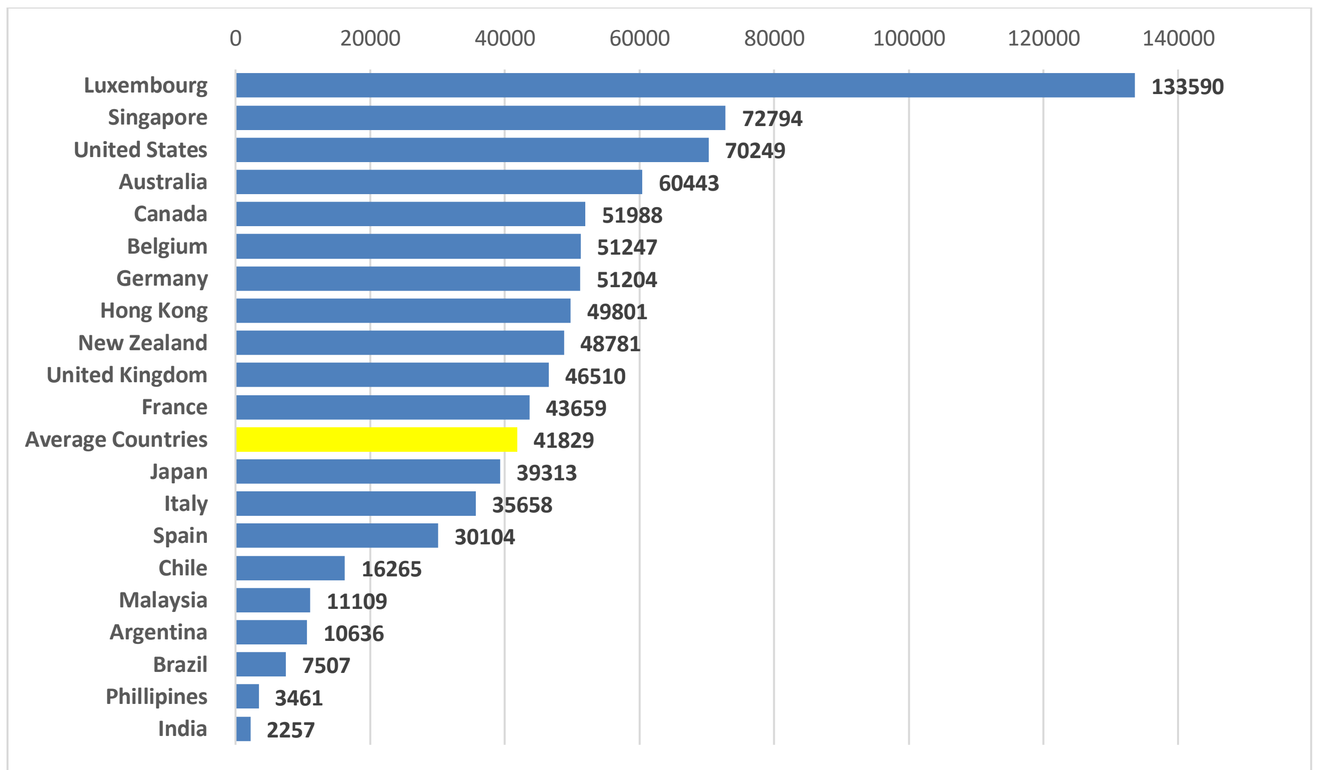


Figure 1: Per capita GDP distribution of countries

The country's per capita wealth, however, is not the only element that could influence the purchasing power or attractiveness of a country in the case of M&A transactions. There are in fact many concomitant factors that determine an economic actor's greater or lesser ability to be fluidly active within market contexts (i.e. taxation, logistical interests, local labour costs, etc.). In fact, Fig. 1.2 shows how the distribution between a nation's per capita wealth and M&A flows do not collide with each other, a sign that there are multiple factors acting on market processes and, especially in the case analysed here, M&A.

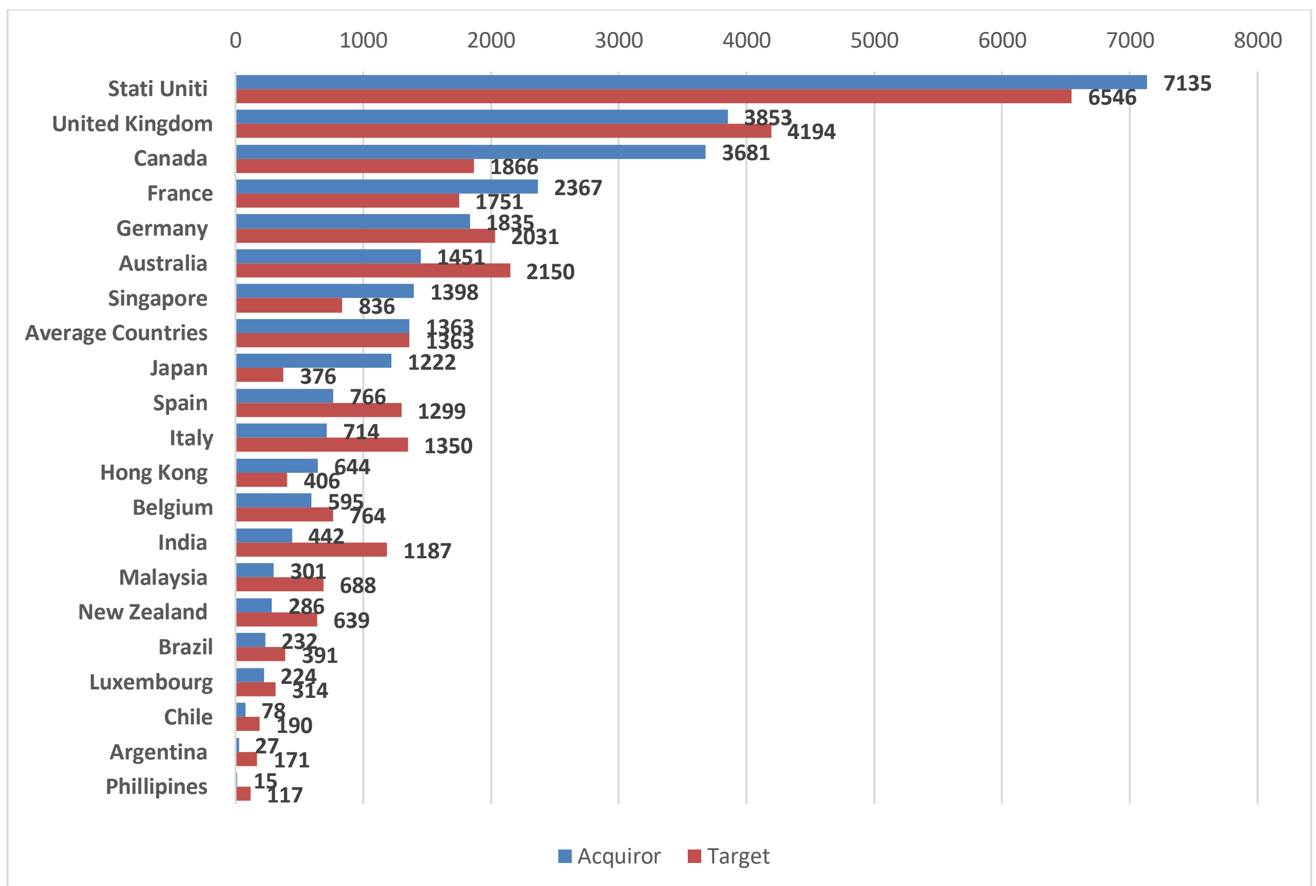


Figure 2: number of companies purchased by and in the country

From the analysis of the trend of the individual distributions for the 20 countries under study, a clear distinction emerges (fig. 2) between countries with a greater capacity to acquire companies in other global contexts (such as the USA, Great Britain, Canada and France) compared to others that are more oriental and less economically developed such as Chile, Argentina and the Philippines, which are nonetheless targeted by the other countries even in the face of potentially lower labour costs and liberalisation of the entrepreneurial market. Again, Italy is below the sample average, together with other European countries such as Spain, Belgium and Luxembourg, characterised not so much by its ability to acquire new companies abroad, but by being the target of acquisitions by foreign partners (in fact, the number of target companies in Italy is almost double its ability to penetrate foreign markets).

Finally, an analysis of the distribution of corporate taxation, capital gains and dividends (fig.3,4,5) shows that our country is always at the top end of the distribution, well above the general average. In particular, Italy ranks second in terms of the level of corporate taxation and capital gains, only 2 percentage points behind Australia, which leads all countries (30%) and a good +7 percentage points above the USA, a country which, as seen, leads in M&A transactions.

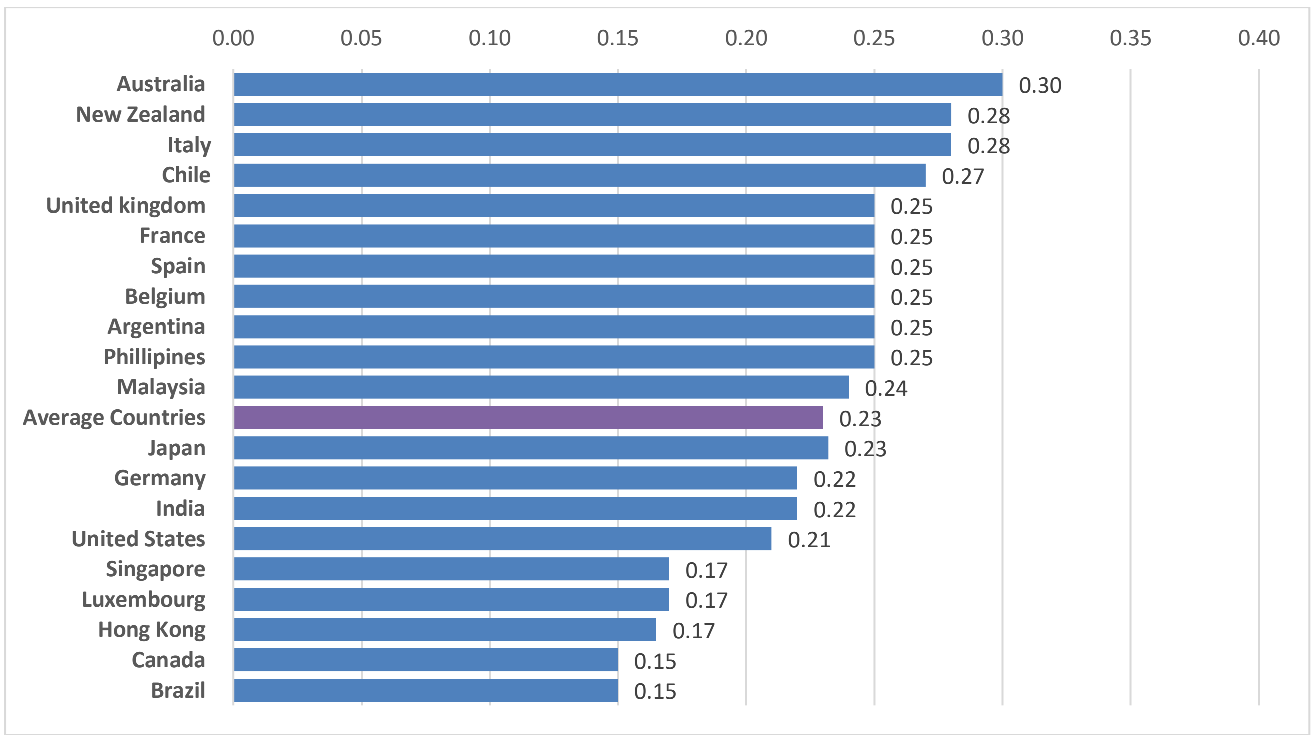


Figure 3: Corporate Taxation in Different Countries

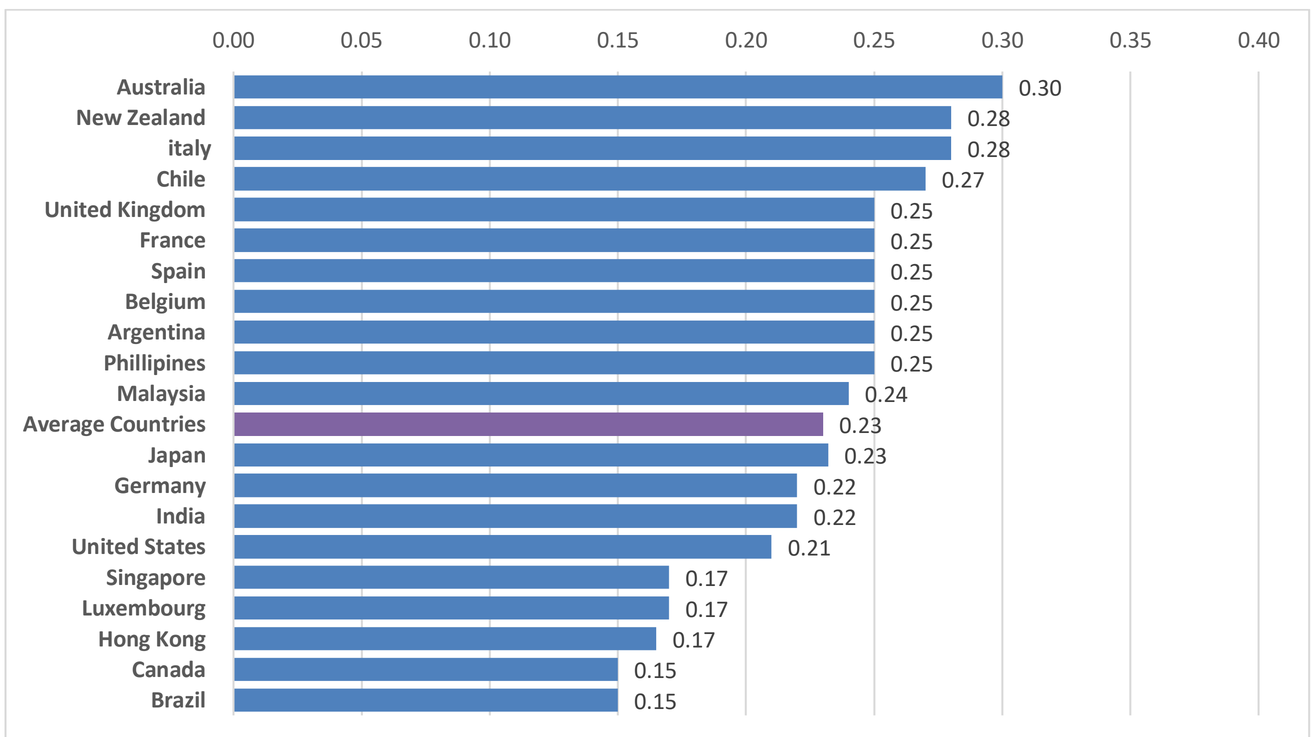


Figure 4: Capital Gain taxation in different Countries

Finally, before moving on to an analysis of the correlations and the regression model, we can ascertain (Fig.5), how Italy (26%) is also above the general average (19%) as far as the taxation of

dividends is concerned, characterised by being the second highest taxed European country in our sample (the record goes to Belgium with 30% taxation).

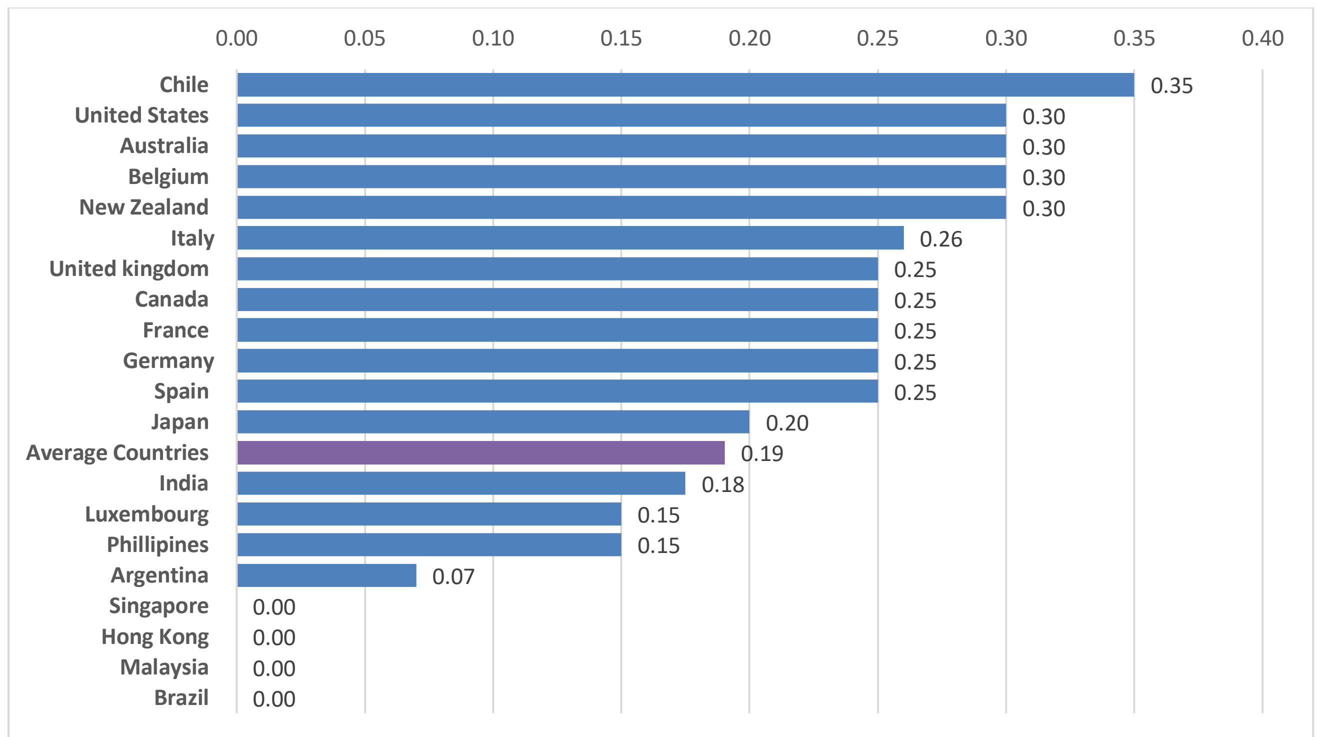


Figure 5: Dividend Taxation in different countries

Correlation analysis and estimation of the regression model

Before estimating linear regression models, it is appropriate to ascertain whether a number of necessary conditions are in place for a linear regression model to be valid. First of all, it must be ascertained that the level of correlation between our variables is present since, without this condition, it would not be possible to estimate any model (such as a regression model) that requires a dependency relationship between a dependent variable (called outcomes) and one or more independent variables that impact on it (defined as regressors of the model). As a result of this analysis, it will also be appropriate to ascertain that among several variables underlying the same

concept (e.g. our taxation or M&A variables), there is not a high correlation between all of them as this would lead to potential problems of bias due to multicollinearity[9].

The analysis of the correlation matrix shows a high association between the Target/Buyer variables (93%) and the three variables related to taxation of capital gains, companies and dividends (Table 2). Specifically, as can also be deduced from the analysis of the distributions shown in the previous paragraph, the variables capital gains and business taxation collide perfectly (100%), just as the variable relating to the taxation of dividends presents a high correlation with that of capital gains and business (57%).

Table 2: Correlation analysis

	pil_pr~e	tax_impr	tax_pl~v	tax_di~d	acquir~e	target
pil_procap~e	1.0000					
tax_impr	-0.2857	1.0000				
tax_plusv	-0.2858	1.0000	1.0000			
tax_divid	0.1533	0.5762	0.5763	1.0000		
acquirente	0.3197	-0.1620	-0.1621	0.3454	1.0000	
target	0.2589	0.0396	0.0381	0.4055	0.9368	1.0000

For these reasons, it is, therefore, appropriate to consider only one of the buyer and target variables (and in fact, as presented at the beginning of the chapter, we will focus on analysing whether and how certain factors impact on acquisition). The model thus hypothesized will have the following form:

$$\boldsymbol{acquiror} = \boldsymbol{\alpha} + \boldsymbol{\beta_1 GDP_percapita} + \boldsymbol{\beta_2 tax_imp} \quad (1)$$

Assuming the dependency relationship, we plot a scatter plot to highlight the presence of any outliers and the trend of the distribution (fi.6)

[9] Multicollinearity is a statistical phenomenon in which several independent variables show a high correlation with each other. In other words, the variables used to predict the model are too many interrelated and therefore need to be appropriately selected/eliminated so as not to generate bias in the parametric estimates of the model.

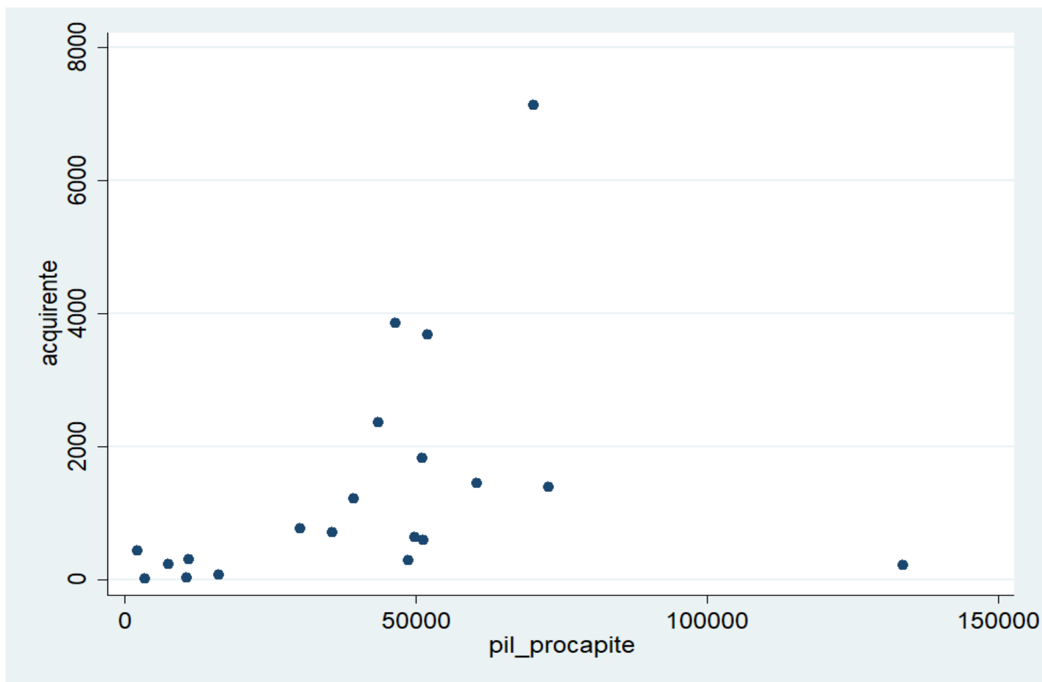


Figure 6: Scatter plot of the buyer variable and per capita GDP.

The scatterplot simultaneously shows a curvilinear relationship and the presence of two outliers (the country with a GDP per capita greater than 100,000 and a second with a buyer value greater than 6000).

As a first action, these two cases must therefore be removed from the analysis and, since the relationship is curvilinear, a quadratic term must be added within our regression to estimate the linear trend of the variables. To summarise, a quadratic variable pil_procapita must be inserted into the model, thus obtaining the final model set out below:

$$\boldsymbol{acquiror = \alpha + \beta_1 GPD_percapita + \beta_2 GDP_percacpita^2 + \beta_3 tax_imp} \quad (2)$$

Even when analysing the relationship between the other two variables, not shown here for reasons of space and redundancy, the model shown here appears to be the most suitable for analysing the relationship under study.

We can therefore now estimate our model with the support of the STATA software and analyse it in detail. (fig.7).

Source	SS	df	MS
Model	9177177.13	3	3059059.04
Residual	14019095.8	14	1001363.99
Total	23196272.9	17	1364486.64

Number of obs	=	18
F(3, 14)	=	3.05
Prob > F	=	0.0634
R-squared	=	0.3956
Adj R-squared	=	0.2661
Root MSE	=	1000.7

acquirente	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pil_procapite	.0774634	.0435624	1.78	0.097	-.0159686	.1708954
pil_procapite2	-7.31e-07	6.41e-07	-1.14	0.274	-2.11e-06	6.45e-07
tax_impr	-6560.859	5721.129	-1.15	0.271	-18831.46	5709.743
_cons	1126.145	1363.619	0.83	0.423	-1798.526	4050.817

Figure 7:Linear regression Model

As a first element of the goodness of the regression model, let us analyse its ability to adequately represent the relationship under study and hypothesised here. Since the R-sqared (i.e. R-squared) value is about 0.4, we can state that this model, containing only two regressors, manages to interpolate the relationship in question by as much as 40%, a value in line with the main studies in the sector.

Analysing the significance of the model's values, we see that GDP per capita has a significant impact on the relationship (p value < 0.1)[10] . The analysis thus shows how a 1 unit increase in GDP per capita has a positive impact of +.08 points on acquisitions. In other words, an increase of 100 points in the country's GDP per capita increases the number of companies acquired by 1 (net of the change in the other variables).

Considering corporate taxation, this is not significant (p-value>0.1) and this could be due to a small sample size (n=18). This means that, hypothetically, an increase in the empirical evidence (and therefore cases) on the analysed items could make the reduced significance, and therefore impact, of the regressors on our dependent variable significant. This could be due to the small sample size (equal to 18 cases) and, consequently, a possible increase (in a subsequent research project for example) could make this coefficient significant, which shows a negative impact on acquisitions.

[10] We will omit commenting on the GDP quadratic term as it is only included to make the relationship under study linearly analysable. Although it is not significant, it contributes to determining the real value/impact that the associated non-quadratic term has on acquisition.

In conclusion, our analysis shows the existence of a significant relationship between the number of companies acquired by a country abroad and GDP per capita, although this cannot be asserted for the relationship between taxation and acquisition (a factor probably due more to the small sample size than to the real impact of taxation on acquisitions).The regression model thus estimated manages to explain 40% of the relationship analysed (r-squared index) an interesting element to analyse considering that only two regressors were used, one of which was not significant.

Conclusion

The aim of this work was to explore the extent to which factors such as corporate taxation and per capita wealth of a territory could impact on the ability of individual countries to acquire/absorb new entrepreneurial assets in other countries.

The descriptive analysis of the sample showed (fig 1 to 5 and tab 1), how there is a clear differentiation between more western and industrialised countries (such as the USA, Canada etc.) and countries such as Italy, Spain and South East Asian countries which have more difficulties in acquiring new businesses (fig 2). This output is not simply due to elements such as the wealth of the individual countries, which partly diverge when comparing the acquisition capacity and economic potential of the individual territories (fig.1 vs.fig2), but to a broader number of factors that could not be analysed exhaustively here, except for a few econometric values such as the rate of taxation in the entrepreneurial environment of the individual countries. From this point of view, Italy in fact ranks among the most heavily taxed countries (fig. 3 to 5), always showing values above the average. An initial sign, this, of a general lack of potential to penetrate the market in our country, which nonetheless remains of interest to foreign buyers who increasingly decide to invest in the cultural heritage and know-how that characterises our national context.

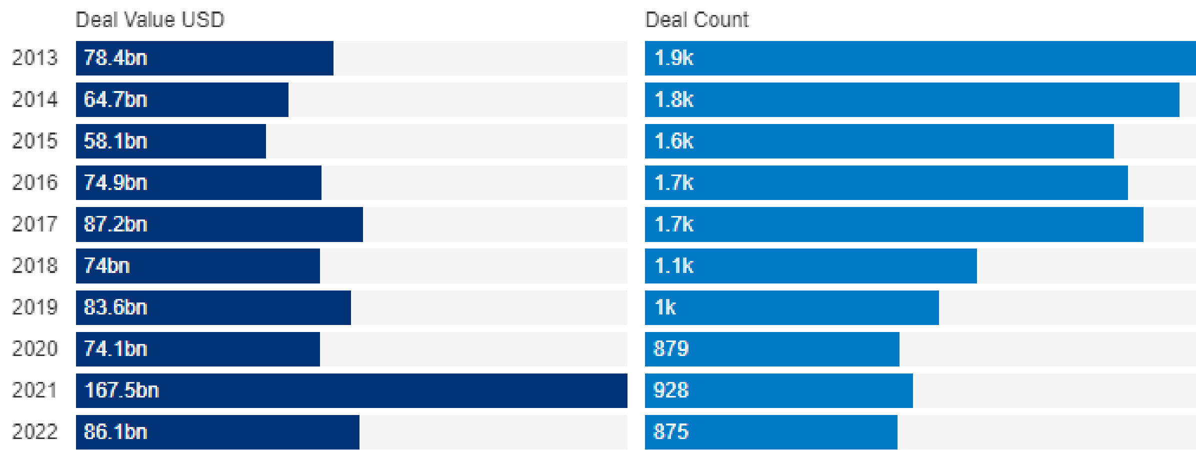
In fact, trying to analyse the relationship between the number of companies acquired and the country's wealth, together with the level of taxation, our regression model showed that a unit increase in GDP per capita positively influences acquisitions by +.08 points, while taxation seems to have a natural negative impact, although this coefficient is not significant. The goodness of the estimated model (equal to 0.4) suggests that possible future studies in this area, e.g. by expanding the number of regressors or increasing the sample size, could contribute both to broadening the depth of the analysis and a greater empirical basis from which to infer the evidence emerging from the hypothesised model to the entire population.

3.3 Overview of Cross-Border M&A in the South-East Asia Context

We will now continue our analysis by focusing on cross-border M&A in the Asian context, and then proceed more specifically with the case of Singapore.

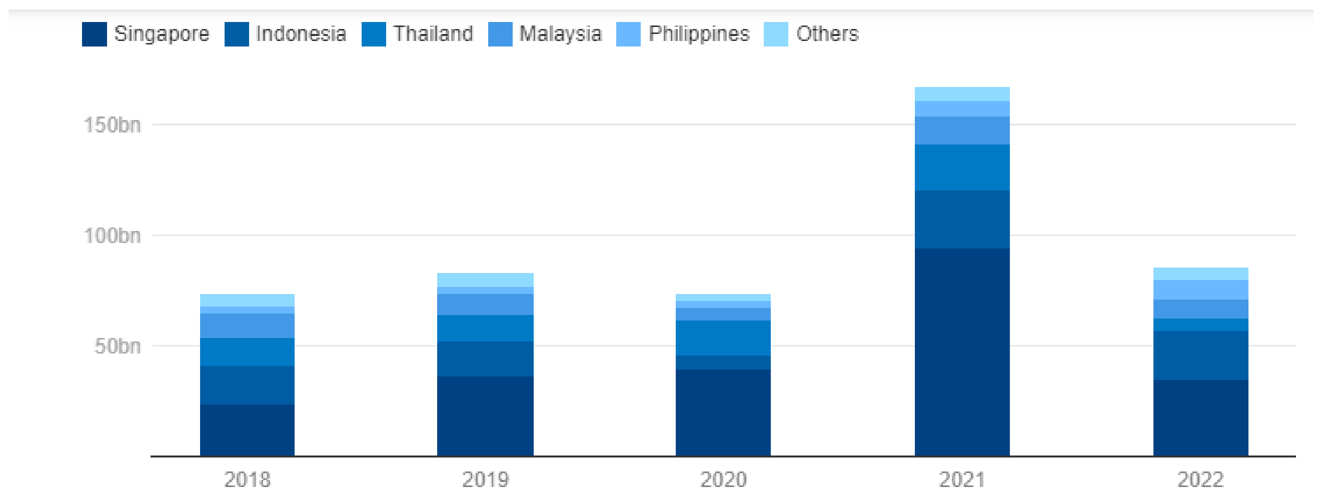
In order to give an overview of the South-East Asia Market, it is crucial to start from the 1990s to analyze better the market, opportunity, and growth of this area. Cross-Border M&A rose from 1996(3 billion USD) to 1999(22 billion USD), and then fall back in 2000 to 18 billion. This increase has been due to the largest investment in Korea and in Thailand. Moreover, compared with the other countries the transaction involved investment in Malaysia as well as Indonesia where an increase more than doubled between 1998 and 2000.

In recent years, Asia has been at the center of cross-border M&A operations, making the continent one of the most attractive in this field. There have been various reasons behind this trend such as the need to diversify business activities, access to new markets, and the search for advanced technology. In addition, many Asian governments have promoted the liberalization of foreign direct investment and market deregulation, creating a favorable environment in the M&A market, however in our analysis, we cannot overlook the events that have taken place over the years (Ukraine War and the Covid-19 pandemic), and how these have impacted the market. In 2022 The Asia M&A transaction in Asia took a step backward as the total value of the deal almost halved, falling 48,6% to USD 81,6 billion across 875 transactions in comparison with 2021 where we have had 928 deals for a total of USD 167,5 billion. One of the reasons is that the region has experienced several shocks during the last year such as Russia's invasion in Ukraine which impacted in the supply chain, then the fed's increasingly restrictive monetary policies which made the dollar more expensive hitting the cost of imports and also the slowdown of the Chinese economy due to the ZERO COVID policy, however to this decline, there are exceptions such as the Philippines and Myanmar. The former recorded a 5.7% increase in M&A transactions in 2022, from 7.4 billion to 8.4 billion. Myanmar also saw an increase in this sector with an overall increase of 39.5%. Singapore also emerged as an M&A hub with a total of 308 deals worth 34.7 billion, although rather down on the previous year with 341 deals.



Source:Dealogic

From the graph, one can see a gradual increase between 2013 and 2020 of cross-border M&As in Southeast Asia, however, one can see a decline between 2021 and 2022 there was a drop in M&a activity due to the multiple shocks I have discussed before.



Source:Dealogic

3.3.1 Singapore Overview

Now we will continue our analysis by delving deeper, describing the context in which Singapore's tax system operates, analyzing why it is important for businesses, and how it has contributed to making Singapore one of the world's most important financial centers.

Before beginning this research, it is important to provide an overview of Singapore's economic system as a smart city that is increasingly looking toward the future. After Malaysia's independence in 1963, Singapore experienced unprecedented growth and became a cosmopolitan, dynamic, and

open city for business. The city-state has become one of the world's most important financial centre, ranking third only to New York and London. It has also been defined many times as the "land of opportunities" due to its tax incentives, fast startup creation times, and financial deregulation, which have always attracted new capital from abroad, with the goal of becoming a global reference point for innovation and sustainability. Several financial factors have been crucial to Singapore's development as a global financial center. Singapore is a global and especially Asian hub for banking, with banks in Singapore holding assets worth $2 trillion in 2013 according to MAS[11]. Additionally, the city-state is home to five local banks, including the well-known DBS, UOB, and OCBC, and 121 foreign banks, including 37 offshore banks. The banking system in Singapore has played a crucial role in the development of trade activities, corporate finance, and infrastructure building. In terms of capital markets, Singapore is also one of the most influential financial hub centers, especially in the equity, bond, and forex markets. If we talk in terms of bonds, more than $174 billion worth of debt was issued in 2015, including SGD-denominated and non-denominated debt. The same can be said for the equity market, where the Singapore Exchange represents one of the most stable in Asia, with 800 listed companies and an average daily turnover of securities of $1.09 billion. Furthermore, the MAS has identified three main reasons why Singapore can be a global financial center, which are: a business-friendly environment, cost and infrastructure competitiveness, and a highly skilled workforce. However, intensifying competition, especially from nearby Hong Kong, has led the city-state to invest more and more in new technological trends. In this regard, there has been growth in the digital and data technology sectors, and the government itself has provided strong support to the fintech sector, to the point that observers are betting on Singapore becoming a global fintech hub within 10 years. In addition, Singapore aims to become a leader in Artificial Intelligence, competing with giants like China and the United States.

3.3.2 Singapore Tax System: An Introduction

One of the key factors of Singapore's success is its efficient and transparent tax system, which has helped to create a favorable environment for businesses. In this chapter I will examine in detail the tax system in Singapore, focusing on tax rates for individuals and companies, indirect taxes, and tax rules applicable to cross-border transactions. Additionally, we will also analyze the tax incentives available for businesses as well as the tax implications for businesses operating in Singapore.

[11] Monetary Authority of Singapore

Understanding Singapore's tax system is essential for businesses intending to operate in this country, Singapore's tax system is often praised for its simplicity, clarity, and low tax rates, which have helped to attract foreign investors and entrepreneurs to the city-state. The government has also taken steps to ensure that the tax system remains competitive and supportive of business growth, by introducing new tax incentives, simplifying tax rules, and enhancing tax administration. As a result, Singapore has become a preferred destination for businesses seeking to establish a regional or global presence, particularly in industries such as finance, technology, logistics, and manufacturing. The country's strategic location, well-developed infrastructure, and talented workforce have also contributed to its attractiveness as a business hub. However, despite its reputation as a low-tax jurisdiction, Singapore still maintains a robust tax regime that is enforced rigorously by the tax authorities. As such, businesses operating in Singapore must ensure that they comply with all relevant tax laws and regulations, or risk facing penalties and other legal consequences. Overall, understanding the nuances of Singapore's tax system is essential for businesses seeking to establish a presence in the country or expand their existing operations. This paragraph aims to provide a comprehensive overview of the tax system in Singapore, including key tax rates and regulations, as well as strategies for minimizing tax liabilities and taking advantage of available tax incentives.

3.3.3 Taxes In Singapore

When presenting Singapore's tax system, it is necessary to first provide an overview of the tax system and tax policy in order to understand the government's objectives, the types of taxes that exist, and how these taxes are utilized by the government. Singapore's fiscal policy represents the use of public spending and revenue collection to finance the economy. The most important tools that the government has at its disposal to implement fiscal policy are tax control and public spending. In this regard, as defined by the IRAS[12], medium to long-term objectives are established for fiscal policy, which is:

- Promoting non-inflationary growth.
- Maintaining a balanced budget so that current expenditures can be financed with current revenues during the year.
- Focusing public spending more on financing education, infrastructure, healthcare, and programs aimed at protecting the environment.

Of fiscal policy, the most important part is entrusted to tax policy, which is based on revenue collection and the promotion of economic and social objectives. The main objective of fiscal

[12] Inland Revenue Authority of Singapore is the Government Agency responsible for the administration of taxes and enterprise disbursement schemes.

policy is to make and maintain tax policies competitive for both individuals, to encourage them to work hard, and especially make risk-taking more convenient to encourage entrepreneurship, and for companies, to attract more foreign investments.

In this system that I have just explained, there are different types of taxation that affect individuals and businesses, as well as cross-border mergers and acquisitions that we are addressing in this research.

3.3.4 Income Tax

Singapore adopts a territorial system of taxation, meaning that companies and individuals are taxed on income generated within the city-state. As for income derived from foreign sources (branch profits, dividends, etc.), it is taxed upon remittance to Singapore unless it has already been subjected to taxes in a jurisdiction with headline tax rates of at least 15%.

As for personal income taxes, a first distinction must be made between individuals who are tax residents in Singapore and those who are not. In the former case, taxes start at 0% and are capped at 22%, while for non-residents there is a flat rate that can range from 15% to 22%.

Here is a summary table of the income tax rates in Singapore for the year 2022:

Rates			
Resident individual income tax rate	**Chargeable income**	**Rate**	**Cumulative tax payable**
	First SGD 20,000	0%	SGD 0
	Next SGD 10,000	2%	
	First SGD 30,000		SGD 200
	Next SGD 10,000	3.5%	
	First SGD 40,000		SGD 550
	Next SGD 40,000	7%	
	First SGD 80,000		SGD 3,350
	Next SGD 40,000	11.5%	
	First SGD 120,000		SGD 7,950
	Next SGD 40,000	15%	
	First SGD 160,000		SGD 13,950
	Next SGD 40,000	18%	
	First SGD 200,000		SGD 21,150
	Next SGD 40,000	19%	
	First SGD 240,000		SGD 28,750
	Next SGD 40,000	19.5%	
	First SGD 280,000		SGD 36,550
	Next SGD 40,000	20%	
	First SGD 320,000		SGD 44,550
	Over SGD 320,000	22%	
Nonresident individual income tax rate	Higher of (i) flat rate of 15% with no personal reliefs or (ii) progressive rates as for residents with reliefs (for employment income) and 22% (for other income)		

Source: Deloitte International Tax, Singapore Highlights 2022

3.3.5 Corporate Tax

Rates	
Corporate income tax rate	17%
Branch tax rate	17%
Capital gains tax rate	0%

Source: Deloitte International Tax, Singapore Highlights 2022

A company is taxed under Singapore's tax system if its Board of Directors and control of the business are exercised in Singapore. Even in terms of corporate taxation, Singapore imposes taxes on a territorial basis. Tax is levied on all income earned or derived from Singapore and on all foreign income remitted or deemed remitted to Singapore in the current year. However, unlike income tax, there is no difference in taxation between resident and non-resident companies, although resident companies may be eligible for certain tax exemptions.

The standard corporate tax rate is 17%, however, there is the opportunity of a partial tax exemption that exempts 75% of the first SGD 100,000 of normal taxable income and 50% of the next SGD 190,000 of normal taxable income. Additionally, for new qualifying private companies(Start Up), the first SGD 100,000 of normal taxable income is 75% tax-exempt and the next SGD 100,000 of normal taxable income is 50% tax-exempt for the first three consecutive years according to the SUTE[13](Start-Up Tax exemption). In addition to this, there is no surtax.[14]

3.3.6 Goods and Services Tax

	Until 2022	From 2022 to 2023	From 2024 onwards
Standard Rate	**7%**	**8%**	**9%**
Reduced Rate	**0%**	**0%**	**0%**

Singapore imposes a Goods and Services Tax (GST), which is very similar to the European VAT, on the supply of most goods and services, as well as on all goods imported into Singapore unless they are exempt. This tax is also imposed on certain services imported from overseas, where the recipient in Singapore is registered under the GST system. Additionally, starting from January 1st, 2023, the

[13] SUTE scheme was introduced by the government in 2005 to support entrepreneurship and to foster the growth of local enterprises.

[14] Surtax is an additional tax imposed on top of an already existing tax for companies or individual taxpayers and may have a fixed or progressive rate structure.

GST has been applied to low-value goods (valued at less than SGD 400) imported into Singapore and on certain non-digital services. Moreover, in the latest budget law for 2022, the Singapore government has increased the GST from 7% to 8% starting from January 1st, 2023, with another from 8% to 9% starting from January 1st, 2024. In addition, the Singaporean Government to manage the impact of the increase of GST for lower and middle-income families has introduced a GST voucher to offset part of their GST expenses.

3.3.6 Withholding Tax

Rates				
Type of payment	**Residents**		**Nonresidents**	
	Company	**Individual**	**Company**	**Individual**
Dividends	0%	0%	0%	0%
Interest	0%	0%	0%/15%	0%/15%/22%
Royalties	0%	0%	10%	10%/22%
Fees for technical services	0%	0%	17%	15%/22%

Source: Deloitte International Tax, Singapore Highlights 2022

There is no withholding tax imposed on dividends paid by companies, as we all the interest paid to a Singapore resident. The 15% withholding tax is generally imposed on interest paid to a nonresident, unless the rate is reduced under a tax treaty, or an exemption applies under certain domestic concessions. The 15% withholding tax is a final tax and applies to interest derived by the nonresident from a business carried outside Singapore. However, any other interest paid to a nonresident company that does not qualify for the final rate or an exemption is taxed at the corporate tax rate (17%).

3.3.7 Taxation on Capital Gains

Singapore is one of the few countries in the world that does not impose any tax on capital gains. One of the main reasons Singapore has become a financial hub in Southeast Asia is the introduction of a favorable capital gains tax for those who intend to invest in the country. In 2004, the government introduced measures aimed at reducing the tax burden on capital gains to create a favorable environment to promote innovation and development of technology companies, thus consolidating the country's position as a leader in the digital economy. With the abolition of the capital gains tax in Singapore, the country has become an attractive destination for Mergers and Acquisitions. This is because companies can now enjoy the benefits of increased capital gains without having to worry about paying taxes on them. The elimination of this tax has also encouraged companies to list on the Singapore Stock Exchange, leading to an increase in initial public offerings (IPOs). Moreover, the government's efforts to create a business-friendly environment and promote entrepreneurship have

made Singapore a hub for start-ups, venture capitalists, and other investors. All these factors have contributed to making Singapore a top destination for M&A. However, there are exceptions to the capital gains tax exemption. Although the Singaporean government has yet to come up with a formal capital gains guide, the IRAS has its own rules governing how capital gains are separated from other forms of business profit. Therefore, whether you end up paying taxes or not depends on how IRAS categorizes the profits. If they are found to be related to the capital account, then you will be exempted, but if the profits generated are part of your business income and fall under revenue, then you will be required to pay the corporate tax income of 17%.

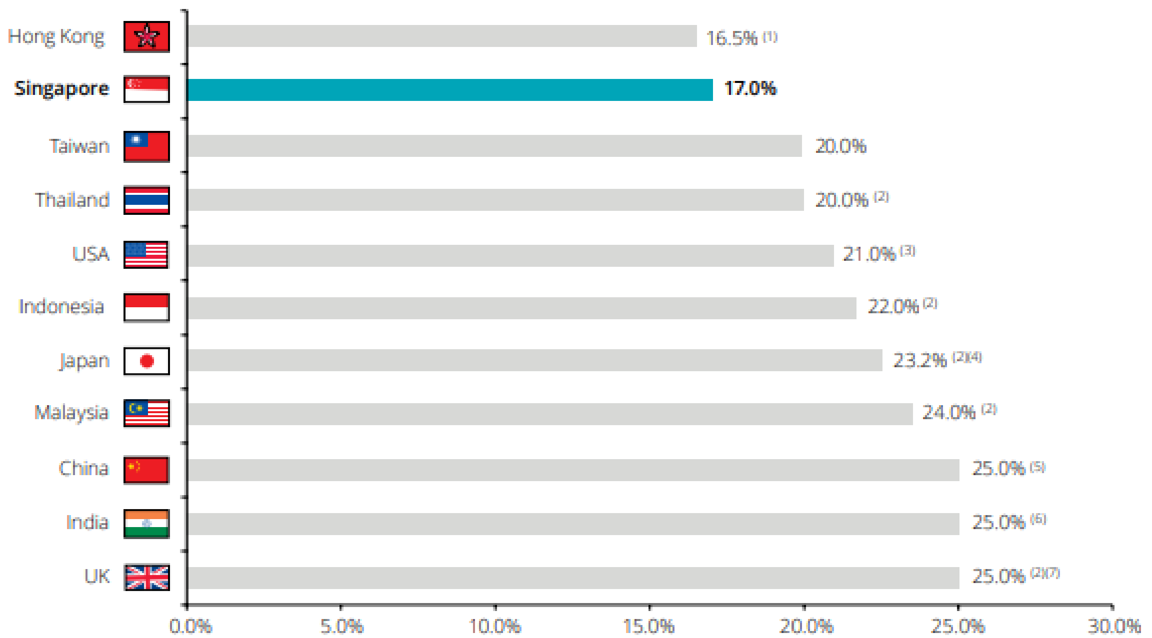
3.3.9 Dividend Tax

The absence of taxation on dividends is one of the main reasons why Singapore has become a preferred destination for investors, making the country highly attractive to foreign investors looking to maximize their profits. This advantageous fiscal policy is part of a broad Singaporean strategy aimed at promoting economic growth and attracting foreign investment to the country. Without taxation on dividends, foreign investors' shareholders can maintain greater control over their earnings and reinvest their profits without being burdened by heavy taxes. This fiscal policy has been a determining factor in the increase of foreign investments in Singapore, which has led to significant economic growth in the country in recent decades. Moreover, The absence of taxation on dividends in Singapore has incentivized Mergers and Acquisition (M&A) activities in the country because potential acquirers can enjoy higher profits following the acquisition of companies that generate dividends. Additionally, dividends received from a subsidiary are not subject to taxation in Singapore, which means that companies can retain more profits and reinvest them for further expansion. This has made Singapore an attractive hub for M&A activities, as companies can avoid being burdened by heavy taxes on dividends and other profits. The combination of this advantageous fiscal policy and a business-friendly environment has led to a significant increase in M&A activity in Singapore in recent years, attracting more foreign investors to the country.

3.3.10 Comparison of the tax system between countries

After analyzing Singapore's tax system and its strengths, it is now appropriate to make a comparison with other countries in order to better understand how efficient and competitive it is for companies and individuals who want to invest in Singapore.

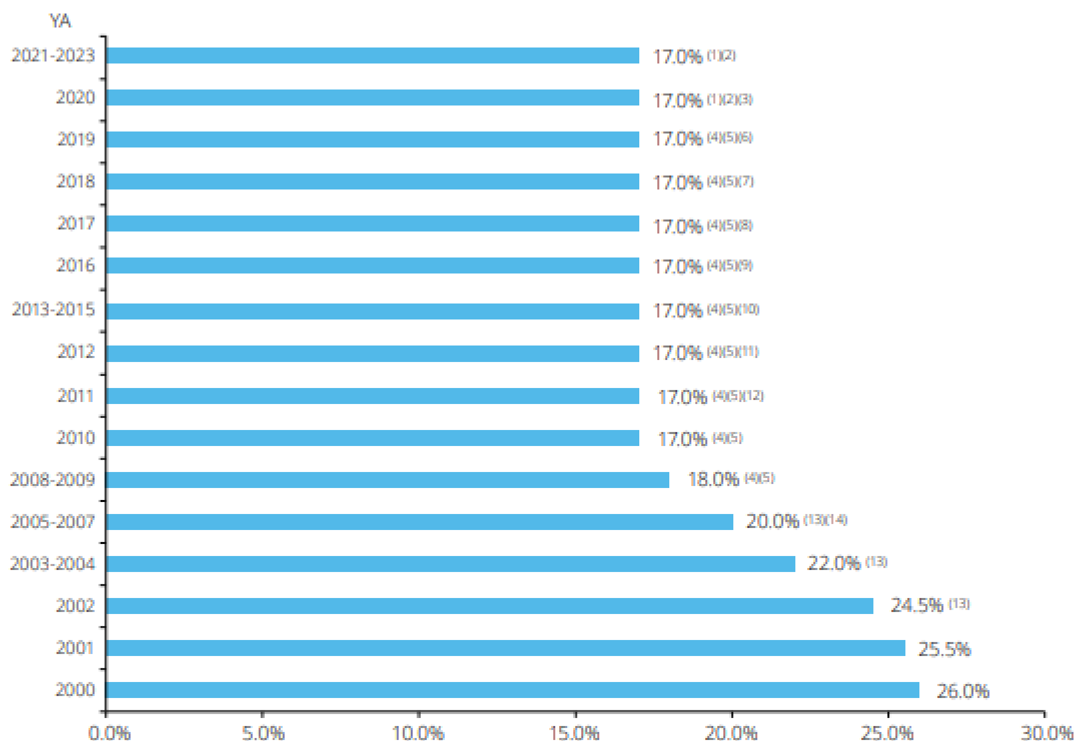
Comparison of current Corporate Income Tax rates in selected countries/locations



Source: Deloitte, Singapore Budget 2023 Commentary

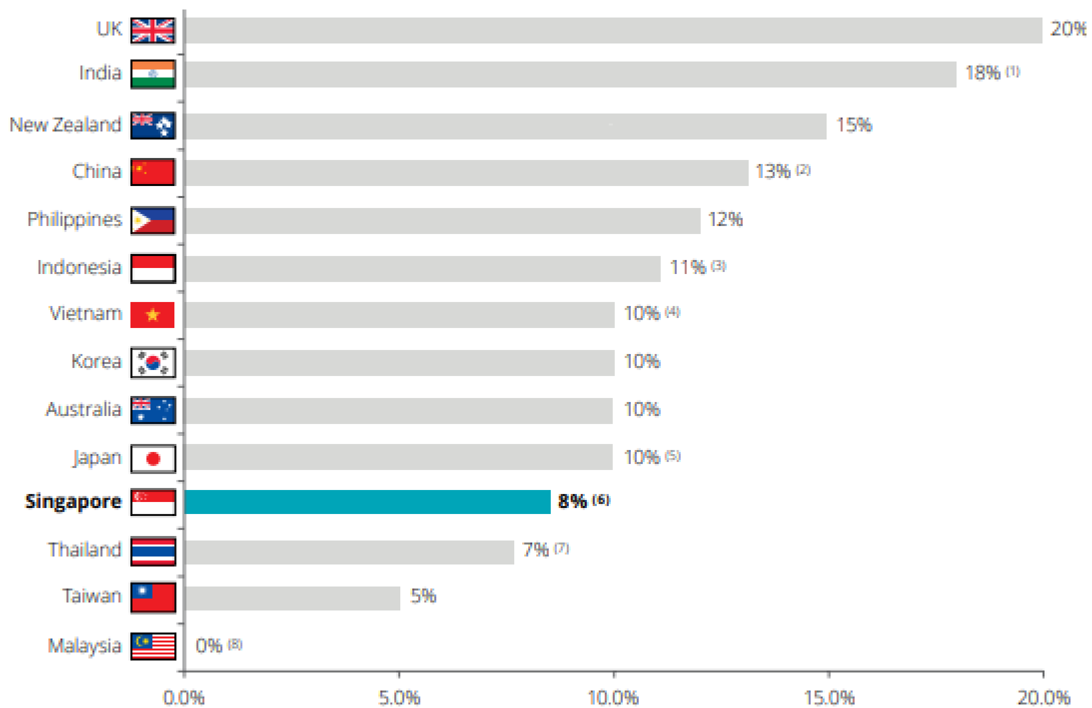
As we can see, Singapore has one of the lowest corporate tax rates, second only to Hong Kong which has a tax rate of 16.5%

Singapore Corporate Income Tax rates



Source: Deloitte, Singapore Budget 2023 Commentary

In this graph, we can see that Singapore has reduced its corporate tax rate over the years to remain competitive in the global market and attract foreign investments into the country. The reduction in the corporate tax rate was one of the measures taken to attract foreign investments and encourage the establishment of local businesses to drive economic growth and job creation. Additionally, the reduction in the corporate tax rate has also encouraged companies to invest more in research and development, promoting innovation and the global competitiveness of Singaporean businesses.



Source: Deloitte, Singapore Budget 2023 Commentary

As previously discussed, the Singaporean government has increased the Goods and Services Tax (GST) from 7% to 8% for the current year. This increase was mainly since, according to the Ministry of Finance, the GST increase supporting public spending that benefits Singaporeans, including better healthcare, education, and security. However, Singapore still maintains one of the lowest tax rates on goods and services compared to other countries.

FOURTH CHAPTER

4 Singapore as hub of Merger and Acquisition in the South-East Asia.

Mergers and acquisitions (M&A) have become a common strategy for companies seeking to expand their businesses, gain market share, or acquire new technologies and capabilities. In recent years, Singapore has emerged as a leading hub for M&A in Asia, attracting both domestic and foreign investors looking for opportunities to grow their businesses or enter new markets. The city-state's strategic location, stable political environment, business-friendly policies, and well-developed financial infrastructure have made it an attractive destination for M&A activities.

This chapter will explore the reasons behind Singapore's rise as a hub of M&A, the key factors driving M&A activities in the country, and the challenges and opportunities that companies face when pursuing M&A transactions in Singapore. By examining the current landscape of M&A in Singapore, this chapter aims to provide a comprehensive understanding of the role that the city-state plays in the broader context of M&A activities in Asia.

4.1 M&A Market in Singapore

Singapore is one of the most dynamic and attractive countries for investors in Asia, thanks to its strategic location, political and economic stability, tax incentives, well-developed infrastructure, collaborative attitude, and access to capital markets. These factors make it an excellent choice as a hub for merger and acquisition (M&A) operations.

4.1.1 Strategic location

Singapore's strategic location, within a six-hour radius of any Southeast Asian country, makes it an ideal gateway to the region and its growing consumer market. Singapore's location at the center of the ASEAN region, and its proximity to the emerging markets of India and China, make it an ideal place to for cross-border investments.

It is the second most globally connected country, with over 7,400 flights to and from Changi Airport every week. Often ranked as the world's best airport, it serves more than 100 airlines flying to about 100 countries and territories globally and hosts many leading logistics firms such as UPS and FedEx. Over 62 million passengers use the airport every year. Moreover, Singapore's sea-port infrastructure has been ranked the best in Asia for the past two decades. The city is connected to over 600 ports globally, with 200 shipping lines passing through Singapore. Every year, over 130,000 ships call at Singapore.

It is no surprise that in a global survey of freight forwarders and express carriers, the Logistics Performance Index – a benchmarking tool developed by the World Bank rated Singapore as the top in Asia for logistics performance.

4.1.2 Economical and Political Stability

Singapore's economy is widely recognized as one of the most stable and well-managed in the world. The country is renowned for its stable political climate and reputation as one of the least corrupt countries globally. The Singaporean government has proactively adopted economic policies and implemented prudent regulations to manage the impacts of global economic volatility. Additionally, the Monetary Authority of Singapore (MAS) is known for its prudent management of monetary policy, which has contributed to maintaining the country's monetary stability and reducing inflation.

Singapore's legal system is also well-developed and reliable, with an independent and impartial judicial structure. Laws are enforced strictly and uniformly, ensuring that investors can rely on a reliable legal system to resolve any disputes. Furthermore, the country has robust protection for intellectual property rights, which is crucial for investors who rely on the protection of their patents, trademarks, and other intangible assets. In summary, stable political and economic conditions and a reliable legal system are essential factors that make Singapore an attractive location for investments.

4.1.3 Infrastructure

Singapore's modern infrastructure is one of its strengths. The country has an efficient transportation system, including a vast network of roads, highways, railways, and a world-class airport. Moreover, Singapore is known for its advanced technologies, with a strong presence of technology companies and research and development centers. This makes the country an attractive place for businesses looking to innovate and keep up with the latest technological trends.

Furthermore, Singapore has high-speed internet connectivity, with one of the highest rates of internet penetration in the world. This is an important factor for businesses that rely on access to fast and reliable internet connections to conduct their activities. In summary, Singapore's well-developed infrastructure is an important factor that makes the country an attractive location for investments. Investors can rely on modern transportation infrastructure, advanced technologies, and high-speed internet connectivity to support their business activities.

4.1.4 Capital Markets and Collaborative Attitude

Singapore is well known for its collaborative attitude and access to capital markets, both of which are important factors in attracting foreign investment. These attributes have helped Singapore to become a hub for business and finance in the Asia-Pacific region.

The collaborative attitude of Singapore is fostered by the government, which has a proactive approach to engaging with businesses and investors. The government of Singapore has implemented policies and programs such as the Innovation and Enterprise Scheme and the Public-Private Scheme that promote collaboration between the public and private sectors. For example, the government has established research and development centers to encourage collaboration between businesses, universities, and research institutions. This has resulted in the creation of innovative products and technologies, which has helped to attract foreign investment to the country. In addition, Singapore's government has also created a business-friendly enterprises by implementing policies and regulations that support the growth of private enterprise. The country's regulatory framework is transparent and predictable, which is important for businesses that want to invest in Singapore. The government has also implemented tax incentives and other measures that make it easier for businesses to set up and operate in Singapore. Another factor that contributes to Singapore's attractiveness for foreign investment is its access to capital markets. Singapore has a well-developed financial sector that is supported by a robust regulatory framework. The country is home to a number of banks and financial institutions that provide a range of financial services, including banking, asset management, and insurance. Singapore's capital markets are also highly developed, with a diverse range of financial products and services available to investors. The Singapore Exchange (SGX) is one of the largest stock exchanges in Asia, and it offers a range of products including equities, bonds, and derivatives. The SGX is also home to a number of real estate investment trusts (REITs), which are popular with investors who want exposure to Singapore's real estate market. In conclusion, Singapore's collaborative attitude and access to capital markets are important factors in attracting foreign investment. These factors make Singapore an attractive destination for foreign investors who are looking to expand their businesses in the Asia-Pacific region.

4.2 Overview of M&A Activity

In this section, we will explore the volumes and transactions of M&A deals in recent years in Singapore, as well as the sectors that have been most concentrated in such deals. Finally, we will discuss the countries of origin of the investors who decide to carry out these M&A deals in Singapore.

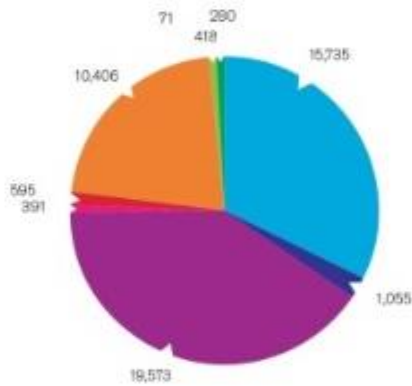
To analyze the M&A market in Singapore, one must start from 2017 where after a slow start, Singapore managed to register a volume of 698 deals for a value of $75.4 billion[15]. The trend followed that of previous years where outbound transactions continue to account for the bulk of the deals (approximately 72%), while inbound and domestic transactions represented 15% and 14% of the total value, respectively. Additionally, the number of private equity investments increased in 2017 with 125 deals totaling approximately $22.8 billion, along with an economic growth of 3.5%, exceeding the initial forecasts of 1-3%[16]. Despite global geopolitical uncertainties arising from the US-China trade war and Brexit, Singapore's M&A activity was up in 2019 compared to 2018. This was slightly surprising given the circumstances. Singapore's stock market had a volatile year, but this opened up several privatization opportunities.

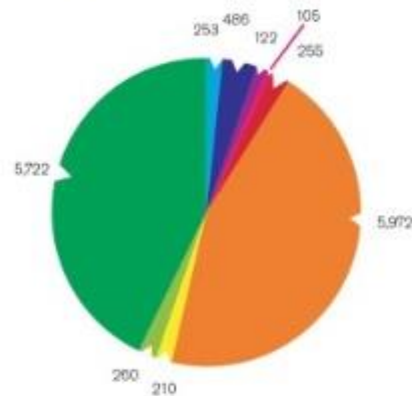
For outbound investments, many property developers sought yield properties outside Singapore in 2019, with major groups like GIC, Mapletree, and SPH acquiring portfolios of student accommodation in London and the US. Overall, Singapore's M&A activity was worth $35.3 billion in 2019, up 125.6% from 2018. This represented 134 deals, down 5% from 141 deals in 2018 (Mergermarket). Singapore bucked the downtrend in the Asian region's M&A. Some attribute this to Singapore being a safe haven for international investors. As of October 2019, Singapore recorded the highest number of deposits by persons outside Singapore since 2016.

[15] This information varies according to various publications. This information is based on the data provided by Mergermarket

[16] Source: Ministry of Trade and Industry, Singapore

OUTBOUND **INBOUND**





NB only deals with publicly disclosed values are represented in the charts and infographics

Source: Dealogic

Singapore is also making headway in building a startup ecosystem. It has initiated various schemes in this regard. For example, individuals running certain high potential startups and active investors in the startup space can apply for the Entrepreneur Pass. Separately, the Monetary Authority of Singapore (MAS) created a new category of license for venture capital (VC) fund managers which has a lower qualification threshold.

4.3 General Introduction to the legal framework for M&A

The legal system in Singapore is based on the common law system, where legislation, regulatory rules, and case law coexist. Regarding M&A transactions, the key structures are the Companies Act, which sets out general corporate legislation including provisions that allow for compulsory acquisitions, schemes of arrangement, and mergers for incorporated companies, and the Securities and Futures Act, which sets out legislation relating to, among others, regulations governing securities offerings, prohibitions against insider trading, notifications regarding acquisitions of substantial

interests, and penalties for misrepresentations to investors. Additionally, ownership in certain sectors, such as banking, financial services, telecommunications, and broadcasting, may be subject to ownership restrictions set out in specific legislation. The Singapore Code on Takeovers and Mergers (the Takeover Code) sets out the principles and rules governing the conduct of takeovers of public companies incorporated in Singapore or entities that have a primary listing on the Singapore Exchange Securities Trading Limited.

In the following section, we are going to analyze the most important Act that regulates M&A activity in Singapore.

4.3.1 The Companies Act

The Companies Act, Chapter 50 of Singapore (known as the "Companies Act") contains general corporate legislation that pertains to the incorporation, management, administration, and winding up of companies. This law also covers relevant issues for acquisitions, such as the fiduciary duties of directors and procedural requirements for the transfer of shares in a Singapore company, as well as the sale of a company's business that may arise as part of an acquisition.

On March 31, 2017, several key amendments to the Companies Act came into effect, aimed at improving the transparency of corporate entities registered in Singapore and in line with the recommendations of the Financial Action Task Force. Unless exempted, these amendments require Singapore-registered companies and partnerships to take measures to determine the identity of persons who have significant interest, control, or both, over such entities, and to maintain a register indicating their information. Additionally, there is a corresponding duty for such persons to notify the relevant Singapore registered entities and provide their own information. Nominee directors of Singapore-registered companies and partnerships will also be required to provide details of their nominators. The register will not be accessible to the public but must be provided, upon request, to the relevant authorities or law enforcement agencies.As of May 23, 2017, Singapore has introduced new measures under the Companies Act to enhance the existing corporate rescue and debt restructuring framework. Drawing elements from Chapter 11 of the US Bankruptcy Code, the enhanced regime includes:

- the power for the court to grant super-priority status to rescue financing made to assist with the restructuring of distressed companies.
- the power for the court to approve a creditor scheme even if there are objections from a class of creditors.

- improved judicial management provisions to extend the power to make a judicial management order in respect of foreign companies and to introduce specific criteria setting out when the courts exercise discretion over foreign debtors.

The enhanced regime is expected to create new opportunities for investment in distressed companies. Additionally, on October 11, 2017, Singapore introduced an inward re-domiciliation regime that allows foreign companies to transfer their place of registration to Singapore without needing to establish a new legal entity. This regime is expected to facilitate the restructuring and transfer of foreign companies to Singapore as their domicile.

4.3.2 Takeover Code for M&A

The Takeover Code was last amended in March 2016.

The modified auction procedure allows for a maximum of five rounds of bids over five consecutive days. Competing offerors can now introduce new forms of consideration during the auction process. Additionally, the SIC will no longer impose the requirement that the last bid to be made by each competing offeror on the last day of the auction must be an odd or even price. This fundamental change means that there may now not be a clear higher bid at the end of the auction. This is in line with the assumption that the goal of the auction process is simply to provide an orderly mechanism through which both offerors can reach their final price and prevent the offer period from continuing indefinitely.

As in the previous procedure, until the conclusion of the auction procedure:

- neither the target nor the offerors, nor any of their respective concert parties, may, without the prior consent of the SIC, make any public statement in relation to, or which might reasonably be expected to influence, the orderly conduct of the auction procedure or in relation to the terms of either offer.
- neither the offeror nor any of their respective concert parties may deal in the relevant securities of the company or take any action to procure, modify or renew any irrevocable commitment or letter of intent in relation to their respective offers.
- after the auction procedure, neither the offeror nor any of their respective concert parties may acquire any interest in the relevant securities of the company on terms better than those of their own offer during the offer period.

The other changes to the takeover code relate mainly to the administrative aspects of an offer or to codifying existing practice, including codifying provisions to align the timetables of offerors in competitive situations and modifying the timetable for the payment of shares tendered in acceptance of an offer to seven business days, to be announced promptly.

As of 1 May 2018, the SIC has implemented a new exemption regime that exempts fund managers and principal traders operating within large multi-service financial institutions who may act as financial advisers on a takeover offer from certain restrictions and obligations under the takeover code. The new regime will grant qualifying fund managers and principal traders standing exempt status, renewable annually, thereby removing the need for a ruling to be sought for each specific transaction.

4.3.3 The M&A Scheme

One of the most important Act made by the Singaporean Government in order to incentive the activity of M&A transactions is the M&A Scheme, introduced in 2010.

The M&A scheme encourages companies, especially Small and Medium Enterprises (SMEs) in Singapore to internationalize and grow. The provision is applicable to Singapore-registered companies that decide to acquire the ordinary shares of the target company directly or through a subsidiary.

The M&A Scheme in based on:

- M&A Allowance: that is calculated on the total cost of the acquisitions of the shares in the target company.
- Stamp duty relief.
- Double tax Deduction on the transaction cost.

The M&A allowance in Singapore refers to a tax incentive that is provided to acquiring companies for each year of assessment (YA). The allowance is a specific amount calculated by the government, which the acquiring company can claim as a tax deduction. This tax incentive aims to encourage more M&A activities in Singapore and to support companies in their growth and expansion plans. By providing tax relief to acquiring companies, the Singaporean government aims to make the country a

more attractive destination for foreign investment and to promote economic growth. The calculation of the M&A Allowance is summed up as follows:

The allowance granted is 25% of the total acquisition value for the current year, with a consideration cap fixed at $40 million, which implies that the company can ask a maximum deduction of $10 million each year, and according to IRAS the M&A Allowance is granted over a five-year period on a straight-line basis. Another important tool is the stamp duty relief for the acquiring company, which is capped at $80,000 per financial year. This relief is applicable to any contract, agreement, or transfer document related to the acquisition of ordinary shares in the target company.

Under the M&A Scheme, it is granted for companies a double tax deduction on transaction costs incurred during the qualifying share acquisitions period between 17 February 2012 and 31 December 2025. The deduction is capped at $100,000 and applies to all transaction costs incurred for qualifying acquisitions of ordinary shares in all target companies. This cap applies regardless of when the transaction costs were incurred. For transaction cost we refer to professional fees that are necessarily incurred for a qualifying share acquisition, including legal fees, accounting or tax advisory fees, and valuation fees. However, they do not include professional and incidental fees related to a loan arrangement. The amount of transaction costs is taken net of grants or subsidies from the government or any statutory board. The deduction of transaction costs can be claimed in two ways. Firstly, in the Year of Assessment in which the M&A allowance on the qualifying share acquisition is first claimed, or secondly, in the YA relating to the basis period in which the transaction costs are incurred, whichever is the later. This provision allows acquiring companies to claim a double tax deduction on transaction costs, which in turn reduces their tax liability and makes M&A deals more attractive.

To be eligible for the M&A scheme, a company has to fulfill certain conditions as stated in the IRAS:

The acquiring company must meet certain shareholding requirements. If the acquiring company owned less than 20% of the ordinary shares of the target company prior to the share acquisition, it must acquire at least 20% of the ordinary shares to qualify for the allowance. However, companies that wish to claim the allowance based on the 20% shareholding threshold must also meet additional eligibility conditions. On the other hand, if the acquiring company owned less than or equal to 50% of the ordinary shares of the target company prior to the share acquisition, it must acquire more than 50% of the ordinary shares to qualify for the allowance. This is known as the 50% shareholding threshold. Overall, meeting the shareholding requirements is crucial for companies looking to claim

the M&A allowance in Singapore. It is important to carefully consider these requirements when planning and executing a share acquisition, in order to maximize the tax benefits available.

The acquiring company, moreover, must be a tax resident in Singapore, carry on trade or business in Singapore on the date of the share acquisition ad have at least three local employees before the date of the acquisition, and not be connected to the target company for at least two years before the date of the share acquisition.

FIFTH CHAPTER

5.Overview of the Case Study

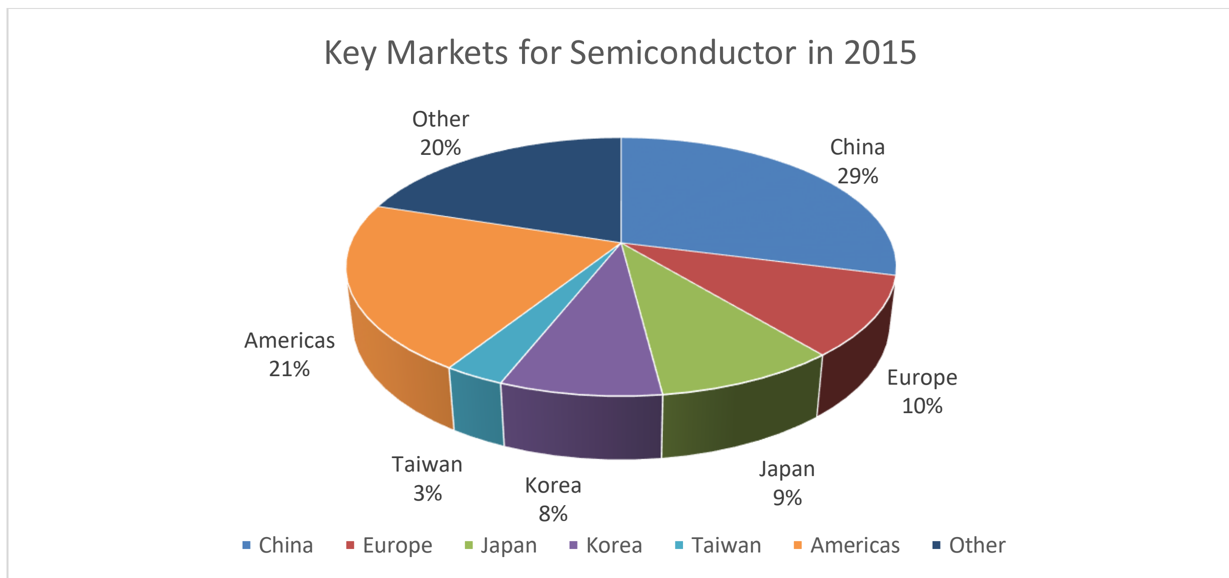
The chosen case study, referring to the subject of this work, is the merger between Broadcom and Avago, resulting in the formation of Broadcom.com creating an impressive blend of expertise, resources, and growth opportunities in the semiconductor industry. This case study offers an in-depth analysis of the reasons that drove the two companies to pursue this merger and how they effectively leveraged operational and financial synergies to achieve competitive advantages. Moreover it offers numerous insights based on publicly available information, including the analysis of the semiconductor industry, evaluation of both companies, and analysis of operational and financial synergies, considering that both companies operate in the same sector. The chapter will begin with an analysis of the semiconductor industry to thoroughly understand the motivations behind this transaction. After analyzing the industry, the work will proceed with a description of the two companies and their business models. In addition to evaluating operational synergies and benefits, a crucial aspect to consider in M&A transactions is taxation. The tax structure of a transaction can significantly impact the overall value of the deal and the income tax management strategies of the involved companies. In this case, we will explore the taxation considerations made within the Avago-Broadcom merger, despite the limited availability of public information. Analyzing the tax implications of this transaction will provide a comprehensive understanding of the importance of tax planning in M&A operations and the pivotal role it plays in achieving desired outcomes.

Through the study of the Avago-Broadcom case, we will highlight the potential of M&A transactions in fostering company growth and expansion, as well as their strategic significance from a taxation standpoint despite the limited public information available on this matter.

5.2 Sector Analysis: Semiconductor Industry

The semiconductor industry in 2015 was worth approximately $338.90 billion, the highest ever recorded, with a growing trend in the coming years. Analyzing the semiconductor sector, it encompasses various segments that can be summarized as components, nodes, and applications, which, in turn, include memory devices, logic devices, analog integrated circuits (ICs), microprocessors (MPUs), microcontrollers (MCUs), sensors, and discrete power devices. The demand for semiconductors in recent years has been strong, leading to an imbalance between supply and demand.

The semiconductor sector is particularly strategic for each country, so strategic that geopolitical choices are also based on them and their availability. Many countries are investing billions of dollars to obtain technology for internal development. The semiconductor industry is strategic for several reasons. It involves miniaturized electronic circuits that are essential for any electrical component, particularly crucial to produce automobiles, smartphones, industrial robots, home appliances, and automobiles.



The Asia-Pacific region holds the largest share of electronics production, leading to its continuous growth as a U.S. export market at a faster pace compared to Europe and Latin America. However, the European Union remains a significant market for semiconductors. The country's case studies feature five out of the top six semiconductor markets, namely China, the European Union, Japan, South Korea, and Taiwan. Singapore ranks fifth among the top U.S. export markets for semiconductors. Semiconductors are associated with three distinct categories of microchips: discrete semiconductors, which consist of one diode and transistor; integrated circuits (ICs), which can contain up to several billion transistors on a single microchip; and system-level products, typically comprising multiple ICs enclosed in a single package or IC.

North America

The North America Market is mostly the U.S market. The United States is the second largest in the world, while Mexico is a destination for U.S exports, however the demands is mostly for assembly of electronic equipment.

Europe and the Middle East

The UE market represents 9 percent of the world market, and the majority of the 10 percent share represents Europe and Middle East.

Southeast Asia

The Southeast Asian market accounts for just over half of the "other" category. The Southeast Asian markets among the top 10 (considering the EU as a single market) are Singapore, Malaysia, Thailand, and Vietnam. While Singapore includes Taiwan as a market, the majority of electronic equipment production in Singapore is carried out by an Electronics Manufacturing Services (EMS) company or non-Singaporean electronic equipment manufacturers with assembly facilities in Singapore. In the latter case, the decision to purchase semiconductors is often made at the headquarters of the electronic equipment manufacturing company, not at the production facility. Among the EMS companies based in Singapore, Flextronics was the fifth largest EMS company in the world. Singapore is also a significant shipping hub in Southeast Asia. All products entering Singapore, including those containing semiconductors, are duty-free. A large percentage of Malaysia's electronics production involves Outsourced Semiconductor Assembly and Testing (OSAT)[17], and in the case of OSAT, imports pertain to the assembly of semiconductors into packages and their testing before being exported to end markets. The same applies, on a smaller scale, to Thailand and Singapore, which also have an OSAT industry. Malaysia and Thailand participate in the World Trade Organization Information Technology Agreement (ITA) and the recently negotiated expansion of the WTO ITA. Vietnam participates in the original WTO ITA, under which most semiconductors are duty-free.

5.3 Sector Player

The semiconductor industry is an industry that deals with the design, manufacturing, and marketing of semiconductor components and devices.

Semiconductor companies are involved in various activities:

- **Design**: Semiconductor companies engage in the design of integrated circuits, which includes defining the architecture, component layout, and interconnection of elements. Design can be done internally or in collaboration with other companies.

[17] The Outsourced Semiconductor Assembly and Testing (OSAT) industry is responsible for the assembly and testing of semiconductors. Instead of being produced internally by semiconductor companies, the chips are sent to specialized OSAT companies that handle the physical assembly of components and functional testing. This process includes encapsulating the chips in protective packages and verifying their performance.

- **Manufacturing**: Once the integrated circuit is designed, it goes through the manufacturing phase, where the semiconductor is produced in large quantities. This process involves the deposition of thin layers of materials, lithography, etching, metal deposition, and many other techniques.

- **Testing**: After manufacturing, semiconductors undergo rigorous testing to ensure they meet the operating specifications. This includes functional testing, reliability testing, stress testing, and many other testing procedures. Once the chips pass the testing phase, they are packaged, which involves encapsulating the semiconductor die in protective materials and creating the final package for easy integration into electronic devices.

- **Packaging**: After testing, semiconductors are encapsulated in protective packages, which shield them from external elements and facilitate their integration onto circuit boards or other devices. Packaging can be done using various technologies, such as chip-on-board packaging, surface mount packaging, and hybrid mount packaging.

- **Sales and distribution**: Once the semiconductors are manufactured and tested, they are sold to electronics device manufacturers or distributors. These companies integrate the semiconductors into their final products, which are then marketed and sold to consumers.

Below, we will analyze the main market players in the semiconductor industry:

Taiwan Semiconductor Manufacturing Co. Ltd: In 2015, TSMC achieved revenues of $354 billion, with little change compared to the previous year. The foundry sector outperformed other segments in the semiconductor industry, generating total revenues of $44 billion, representing a 4% growth from the previous year. TSMC maintained its global position in the semiconductor industry with an estimated market share of 55%.

Qualcomm Inc: In 2015, Qualcomm achieved revenues of $ 25 billion with a decrease of 5% compared to 2014. Its strategy is based on the marketing of wireless communication products and services because telecommunications companies worldwide use its patented CDMA (code division multiple access) technologies, which plays a fundamental role in the development of wireless communications.

Intel Corp: In 2015, Intel achieved revenues of $ 50 billion with an increase of 3% compared to 2014. Intel primarily focuses on developing processors for the personal computer (PC) and enterprise server markets. Its Client Computing Group segment supplies PC processors, while the Data Center Group segment serves enterprise customers, including cloud services providers, and is the company's largest division. Beyond these segments, Intel also offers solutions for the Internet of Things (IoT) targeting the retail, industrial, and healthcare markets, as well as memory and storage products, autonomous driving technology, and programmable semiconductors.

Micron Technology Inc: Micron achieved revenues of $ 18 billion. Micron Technology is a supplier of memory chips, including NAND flash products and rewritable disk storage solutions. Its products are used in computers, consumer electronics, automobiles, communications, and servers.

Nvidia Corp: Invidia achieved revenues of $ 5 billion. It is primarily known for its production of graphics cards, both in the GeForce line (for consumer use) and the Quadro line (for professional use). Additionally, the company manufactures motherboard chipsets in the nForce line and System-on-a-Chip (SoC) for portable devices (such as mobile phones, GPS, UMPC) in the Tegra family. In 2007, the optimized Tesla line for GPGPU processing through the CUDA platform was introduced. Furthermore, the company operates in the field of wireless communications and software for digital video players.

5.4 Avago Technologies and its business model

Avago Technologies was a Singapore-based company, a leader in the design, development, and global supply of a wide range of semiconductor devices, with a particular focus on analog III-V based products and complex digital and mixed-signal complementary metal-oxide-semiconductor (CMOS) based devices. Avago's product portfolio consisted of discrete devices and mechanical components, with a strong emphasis on markets that required high quality and integrated performance characteristics.

The table below presents the major product families and major applications in Avago Technologies business:

Segment	Major Applicants	Major Product Families
Wireless Communications	Smartphone and Base Stations	RF powers, RF filters, FEMs
Enterprise Storage	HDD, SSD and Storage Systems	Fiber Chanel, Preamplifiers, Read Channel based system on chip
Wired Infrastructure	Data Communications	Fiber optic transceivers
Industrial & Other	Factory Automation, Motor Controls	Industrial fiber optics

Source: Author Elaboration

As follows, the financial data of Avago Technologies will be presented. The focus will be on the last fiscal year of Avago's operations before the merger with Broadcom, analyzing the economic and financial results, highlighting the contributions of different business segments and their impact on revenue.

Fiscal Year 2015 Non-GAAP Results (Dollars in millions, except EPS)	2015	2014	Change Y/Y
Net Revenue	$6,905	$4,307	+60%
Gross Margin	61%	56%	+5ppt
Operating Expenses	$1,258	$ 900	+$ 358
Net Income	$2,613	$1,343	+$1,270
Earnings Per Share - Diluted	$ 8.98	$ 4.90	+$ 4.08

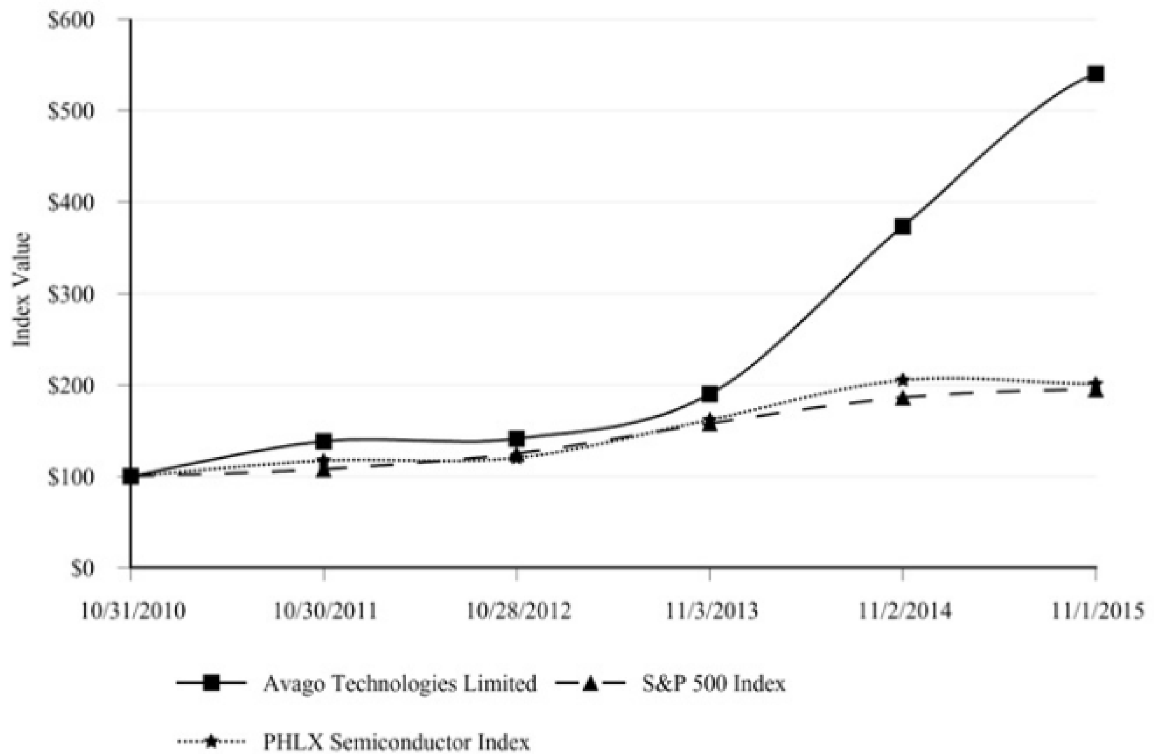
Source: 2015 Annual Report, Avago Technologies Limited

As we can see over the years, there has been an increment of the net revenues of 60% with an increase of the net income of 94%.

Net Revenue by Segment	Percentage of Net Revenue*			Growth Rates	
	Q4 15	Q3 15	Q4 14	Q/Q	Y/Y
Wireless Communications	37	35	39	10%	8%
Enterprise Storage	35	34	29	9%	38%
Wired Infrastructure	20	21	22	2%	7%
Industrial & Other	8	10	10	-10%	-7%

Source: 2015 Annual Report, Avago Technologies Limited

In fiscal year 2015, the wireless communications segment contributed 37% of net revenue, the enterprise storage segment contributed 32%, and the wired infrastructure and industrial segments contributed 22% and 9% of net revenue, respectively.



Source: 2015 Annual Report, Avago Technologies Limited

The inclusion of this graph provides valuable insight into the performance of Avago Technologies' ordinary shares. This graph depicts the cumulative total return during the period from October 29, 2010, to October 30, 2015. Through the analysis of this graph, it can be observed that Avago Technologies' stock outperformed both the S&P 500 Index and the PHLX Semiconductor Index, which represents the performance of the semiconductor sector. The incorporation of this graph offers a visual and tangible representation of Avago Technologies' financial performance. Additionally, it provides an additional perspective on the rationale behind the merger and acquisition transaction between Avago Technologies and Broadcom. This transaction was driven by Avago's desire to expand its presence in the semiconductor industry and leverage operational and financial synergies.

5.5 Broadcom Corporation

Broadcom Corporation, based in Irvine, California, was a leading innovator and manufacturer of semiconductor solutions for wired and wireless communications. Its product line spanned computer networking, smartphone networks, and telecommunications, with a particular focus on high-speed networks for enterprises. Among its key customers were Samsung, Cisco, Huawei, and Apple, where

its chips were used in iPhones. Founded in 1991, the company employed approximately 11,750 people across more than 15 countries.

Broadcom's business model encompassed a wide range of communication products structured around three core platforms: Broadband Communications (Home Solutions), Mobile and Wireless (Hand Solutions), and Infrastructure and Networking (Infrastructure Solutions). The product portfolio included:

Home Solutions: Highly integrated and comprehensive solutions for set-top boxes and broadband access.

Hand Solutions: Platforms primarily designed for mobile devices, offering low-power, high-performance, and highly integrated wireless connectivity solutions, cellular SoCs, and other technologies.

Infrastructure Solutions: Highly integrated platforms for infrastructure deployments, including Ethernet switches and PHYs, automotive Ethernet, communication processors, wireless infrastructure solutions, and Ethernet controllers.

Over the years, Broadcom has established strategic relationships with multiservice operators that provide wired and wireless communications services to consumers and businesses. Some of the customers included Apple, Cisco, Huawei, ZTE, Thomson, and Samsung, to name a few.

In 2015, Broadcom Corporation reported net revenues of 6.212 billion euros with a gross profit of 3.329 billion euros. The net income for 2015 amounted to 804 million dollars.

5.6 Analysis of the merger between Avago Technologies and Broadcom Corporation

The acquisition of Broadcom Corporation by Avago Technologies represented a unique case in those years, making the merger transaction one of the largest in the semiconductor industry. The combined revenue of the two companies in 2014 exceeded $14 billion, making the new semiconductor company the sixth-largest globally, based on annual semiconductor market shares. Furthermore, this merger created the third-largest semiconductor supplier, trailing only Intel and Qualcomm, excluding revenues from integrated circuits. This was made possible because the two companies had

complementary products, leading to a strategic positioning in both the communication integrated circuit market and the storage integrated circuit market. The merger between Avago and Broadcom has increased their market share, holding approximately 40% of the wired communication integrated circuit market over the years. Additionally, the merger has expanded their market share in wireless integrated circuits to nearly 8%, placing them fourth after Qualcomm, Samsung, and MediaTek. Furthermore, the merger allows the company to benefit from a rapidly growing market with an annual CAGR of 7%. In this case, as previously discussed in Chapter 1 of this thesis, the merger between Avago and Broadcom is referred to as a vertical merger.

The merger agreement, known as the Scheme of Arrangement or Avago Scheme, was implemented in accordance with the laws of the Republic of Singapore. Under this agreement, all issued ordinary shares of Avago were exchanged on a one-to-one basis for newly issued ordinary shares of a limited liability company incorporated under the laws of the Republic of Singapore, called Holdco. As a result of the merger, both Avago and Broadcom became indirect subsidiaries of Holdco, and the trading of their respective securities ceased. Holdco was renamed Broadcom Limited(the new entity)

5.6.1 Deal Structure

Avago Technologies Ltd has agreed to acquire Broadcom Corp for $37 billion, turning two lesser-known companies into major player in the semiconductor industry. The deal was structured as follows: Avago acquired Broadcom with $17 billion in cash consideration and the economic equivalent of approximately 140 million Avago ordinary shares, valued at approximately $20 billion, resulting in Broadcom shareholders owning approximately 32% of the combined company. Moreover Furthermore, shareholders of Broadcom were given the option to receive, for each share of Broadcom held:

1) $54.50 in cash;

2) 0.4378 ordinary shares in a newly-formed Singapore holding company ("HoldCo");

3) A restricted equity security that is the economic equivalent of 0.4378 ordinary shares of HoldCo, which will not be transferable or saleable for a period of one to two years after closing.

The offer resulted in a 19% acquisition premium, in line with comparable transactions. Furthermore, the buyer funded the cash portion with its own reserves and $9 billion in financing from a consortium of banks. The new entity the combined company will be the world’s sixth largest chipmaker by

revenues, approximately $ 15 billion, and will be valued at $77 billion enterprise value (EV). The NewCo will have the most diversified communications platform in the semiconductor industry. In the table below a comparison between the transaction and the other precedent deals:

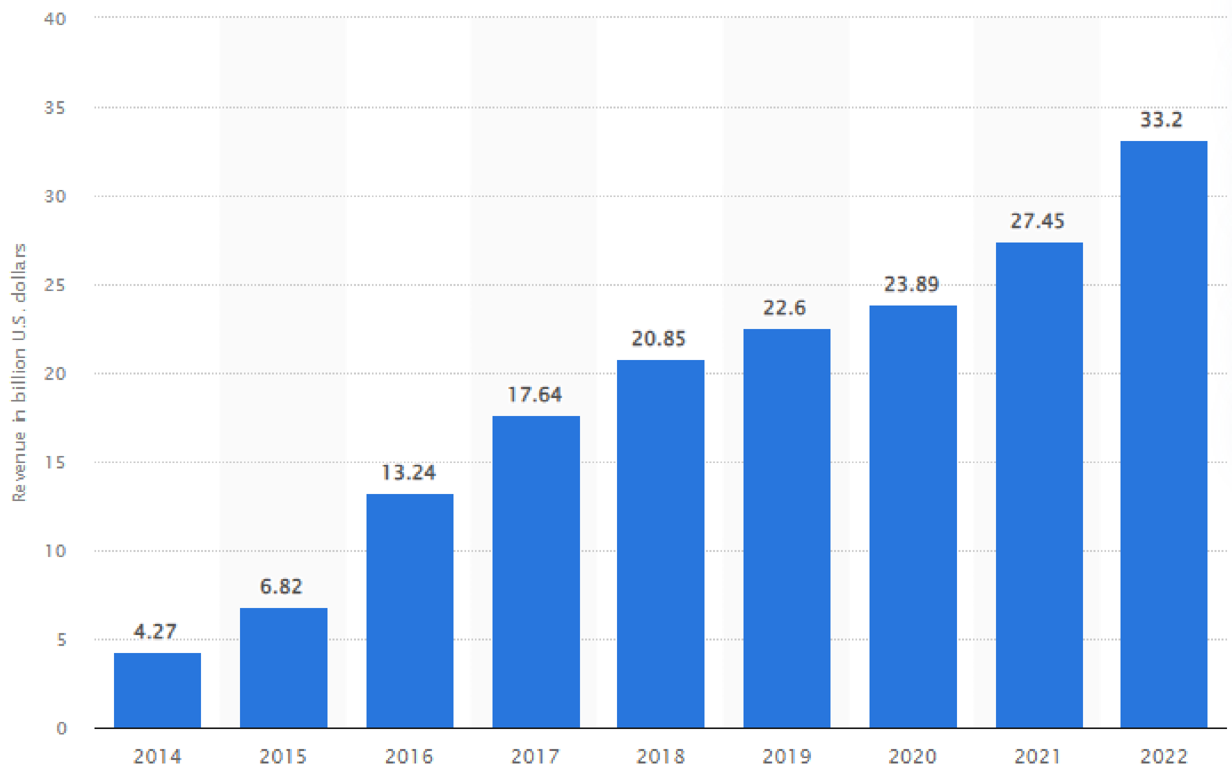
DEAL	EV/LTM revenues	EV/LTM EBITDA
Broadcom-Avago	**4**	**18,8**
Altera- Intel	7,5	24,9
Freescale-NXP Semiconductors	3,4	15,8
Spansion-Cypress	1,3	21,3
International Rectifier-Infineon	2,1	13,6
Average	**3,66**	**18,88**

Source: Market Realist

5.6.2 Synergies from the Merger

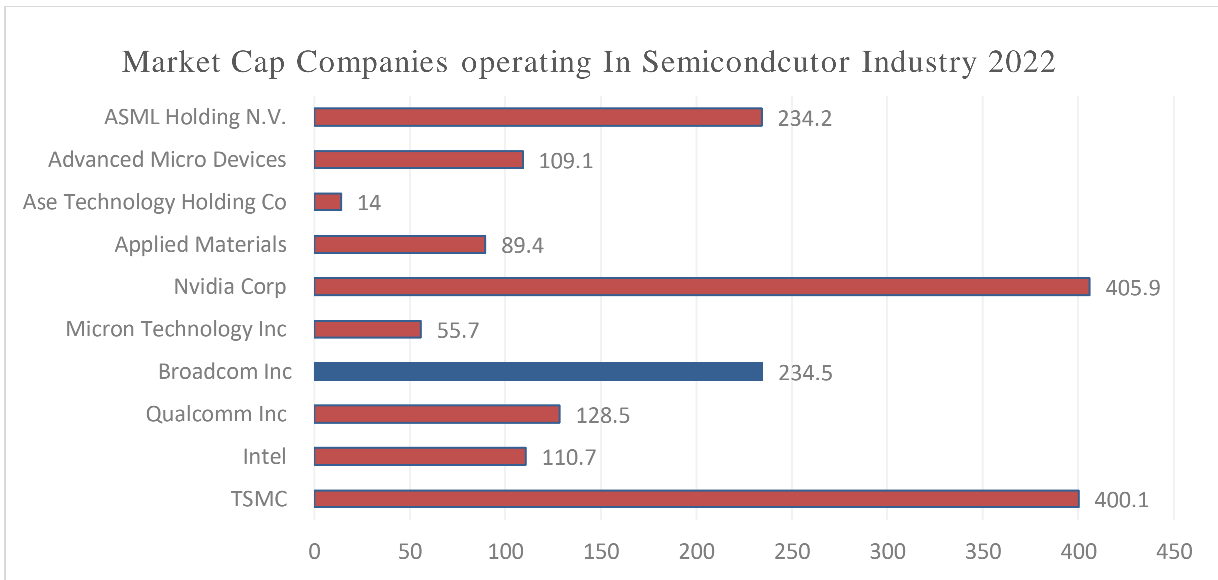
The merger between Avago and Broadcom has achieved several synergies. Firstly, the new company (Broadcom Inc) has restructured its product line and market focus, creating a stronger presence and pursuing synergies in creating solution-oriented offerings. Additionally, the complementary portfolios of Broadcom and Avago Technologies have allowed both companies to deliver system solutions to customers, offering different products that do not compete but likely appeal to the same customers. Furthermore, the combined company Broadcom Inc. has generated synergies of approximately $750 million within about 18 months of completing the agreement. These synergies were 100% cost synergies, resulting from the elimination of overlapping administrative responsibilities. Although the companies do not explicitly specify revenue synergies, it can be inferred from their combined customer portfolio that there will be new sales opportunities to capture increasingly significant market shares.

After the merger, Broadcom Inc. has positioned itself as a leader in the industry with a presence of manufacturing facilities in various parts of the world, enabling it to compete with the industry's biggest giants.



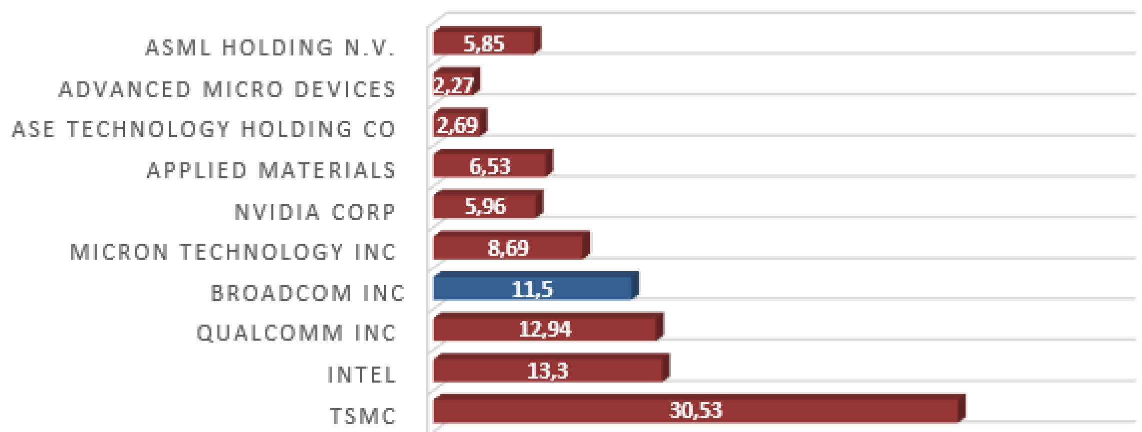
Source: Statista- Broadcom's revenues

As we can see from the graph, there has been a net increase of revenues between the 2015 and 2016 merger and synergies. After 2016, the revenues increased till the 2022 in which it reached $ 33.20 billion of dollars, gaining over the years significant market shares.



Source: Own Production, number expresses In Billion

Analyzing the data, Broadcom has a market capitalization of $234.50 billion, ranking fourth among companies in the semiconductor industry. It is noteworthy that Broadcom has a higher market capitalization than Intel and Qualcomm, leading companies in the industry that have been in the semiconductor industry for many more years.



Source: Own Production, number express in billion

Broadcom ranks fourth in the semiconductor industry in terms of net income. It is noteworthy that Broadcom's net income surpasses that of other companies that have been operating in the industry for

several years. Over the years, Broadcom has demonstrated strong economic and financial performance, establishing itself as a key player in the semiconductor sector.

5.6.3 Tax Considerations

There are several tax considerations that need to be analyzed, as it requires taking into account the federal law of the United States of America and the tax provisions of Singapore. Since Holdco is a Singapore entity, it would generally be classified as a foreign corporation (not a U.S. tax resident). Everything hinges on Section 7874[18] of the U.S. federal code, where if former Broadcom shareholders hold 80% of the votes or value of the combined company, Holdco would be considered a U.S. corporation for U.S. federal tax purposes. If the percentage applied by Section 7874 is determined to be at least 60% but less than 80%, Holdco would be treated as a surrogate foreign corporation and taxed according to the prevailing rules in Singapore. Prior to the merger, Avago sought an opinion from the IRS(Inland revenue Authority of Singapore) confirming that the agreement qualified as a tax-free reorganization, including a safeguard clause that would allow Broadcom investors to defer any tax impact if the deal were to be taxed.

The tax issue revolved around the relative size of the two companies. If Avago were larger at the time of the deal's closing, the transaction would be tax-free under the rules that apply to foreign takeovers of U.S. companies. If Avago were smaller, shareholders would have to pay taxes on the cash portion. Prior to the merger, the market capitalized Avago at $33 billion compared to Broadcom's $31 billion, obtaining a tax advantage under Singapore law.

In conclusion, the merger between Broadcom and Avago has had significant importance both from a tax perspective and in the context of cross-border mergers and acquisitions (M&A). From a tax standpoint, a key issue revolved around determining the tax residency of Holdco and its qualification as a U.S. or foreign company for tax purposes. Section 7874 of the U.S. federal tax code played a crucial role in evaluating this qualification and the applicability of taxes.Furthermore, the deal involved a complex assessment of the relative sizes of the two companies and the associated tax implications. If Avago was deemed larger at the time of the deal's closing, the transaction would have been tax-free under the rules governing foreign takeovers of U.S. companies. Conversely, if Broadcom was larger, shareholders would have been subject to taxes on the newly issued stock. This made obtaining a ruling from the IRS to confirm the deal's qualification as a tax-free reorganization crucial. From a cross-border M&A perspective, this transaction highlighted the importance of

[18] Section 7874 of the United States Code is a legislative provision aimed at preventing corporate tax inversions. A tax inversion occurs when a U.S. company reincorporates in a foreign country with a more favorable tax environment in order to reduce the income tax paid in the United States.

carefully considering the tax and regulatory aspects of multiple jurisdictions involved. Analyzing the tax provisions of both the United States and Singapore was essential in understanding the tax implications of the operation and structuring the deal optimally.

To sum up the merger between Broadcom and Avago represented a significant case study in the context of cross-border transactions, where the tax aspect was a key factor to consider. Determining tax residency, applying Section 7874 of the U.S. tax code, and evaluating the relative sizes of the two companies directly impacted the structure and tax implications of the deal.

Conclusion

In conclusion, this thesis aimed to examine the role of tax evaluation in mergers and acquisitions, with a specific focus on Singapore. Through a detailed analysis of Singapore's tax system and its policies to attract foreign investments, important considerations for companies conducting such operations have emerged. The research has demonstrated that tax evaluation is a crucial element in determining the structure of the involved parties. Furthermore, through the statistical regression model, it has been shown how variables influencing these operations include taxation on dividends, capital gains, and corporate income, as well as per capita GDP and the country's economy. This analysis opens up possibilities for exploring new related topics and alternative research methods that can be adopted in studying this subject further. The study concluded with a case study of two companies, Avago and Broadcom, which merged to create the world's fourth-largest semiconductor company. This operation highlighted the importance of considering tax implications and how they can influence the outcome of the transaction.

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SUMMARY OF THE THESIS

Merger and Acquisitions, or M&A, involve the consolidation of companies or their major business assets through the financial transaction between two companies. A company could purchase another company to merge with it or acquire some or all of its assets, make a tender offer, or stage a hostile takeover. Each process is an M&A activity to try to achieve synergy. Usually, the terms Merger and Acquisitions are used interchangeably, however, they have different meanings. *Merger* describes two firms that force to move into one new entity instead of remaining separately owned, the firms that agree to merge are equal in terms of size, customers, and scale of operations. Usually, a merger can be carried out by: Absorption: where the absorbed company transfers its asset to the absorbing company. The latter continues to exist while the absorbed company ceases to exist. Creation of a new company: when the company involved agrees to lose its identity and create a Newco in which they operate. If the transaction is financed by cash, acquiring shareholders take on the entire risk that the expected synergy[19] value in the acquisition premium will not realize. If the transaction is made by stock the synergy risk is shared in proportion to the percentage of the combined company the acquiring and selling shareholder will own. M&A has potential benefits which are mainly focused on increasing profits and the value for the shareholder through the economies of scale produced by increasing of the market share, the diversification of the business, the extension of a strong production capability into a new market and the use of an existing distribution network by the acquisition of new products[20]. The M&A transaction has become an essential tool for companies development in today's market which is characterized by talent, competition, and technology.There are many reasons why a company decides to pursue an M&A deal. The first reason is the determination to grow. There are two types of growth internal or organic growth(hiring new salesmen, expanding consumption etc.); and inorganic growth(acquisition or mergers with other firms). In response to good growth, M&A, like investments, tends to increase the capital base, as concluded by Andrade, and Stafford(2004). A second reason for M&A is *synergy*. As Gaughan(2007) stated, the term synergy refers to the results or reaction after two substances or factors combine to produce a greater effect together than the sum of the two operating independently could account for. The phenomenon of synergy can be summed up as 2+2=5. According to DePamphilis(2003), we have two types of synergy, *the operating synergy* which consist of economies of scale and economies of

[19] Synergy means when two companies are going to combine their operations and performance wherein the value of the two entities combined is greater than the sum of the value of the entities individually.
[20] "The importance of Merger and Acquisitions in today's Economy", Rima Tamosiuniene, Egle Duksaite

scope; and *the financial synergy* which refers to the impact of Merger And Acquisitions on the cost of capital of the acquiring firms. A Third reason is the access to intangible assets. Today the value of knowledge-based intangible resources has grown exponentially in companies. According to Saint-Onge and Chatzkel(2009), the intangible assets include: *Human capital*, which is the sum of the capabilities of who is working in the company (experience, competencies, managers etc) and *Customer Capital*, which consists of strategies, processes, leadership and. It can include innovation, company organization, and processes. Another reason to pursue an M&A is also for tax benefits since certain studies have claimed that acquisition could be an effective tool to secure tax benefits (Ghosh, Jain200) and for cost reduction, changes in technology and industry. The process of evaluating a company's capital requires recognizing that: It is a part of the logic of investment appraisal with which it must be consistent. The evaluation is carried out on data collected within the company, and as its first objective, it has an estimation of the company's performance in the medium-long term. The calculated capital value is referred to as **economic capital**[21](W); Shares are listed on regulated markets, expressing the market value(W) of the capital to which other market valuations can be added. The valuation of capital is carried out from within the company using data available to management, employing **direct analytical methods** of various kinds; or from outside the company using information received from the company as well as market data used through so-called **indirect methods.**The capital value is the first objective of the valuation. Any investor interested in acquiring a stake in a company, or a company interested in acquiring another, should pay no more than the price that expresses this value. Starting from the assumption that capital value can be determined through discounting of expected cash flows from the investments, whether cash flows or income. The starting point is always the valuation of the economic capital (W).***W*** is a complex value, referring to a company intended to last, to which the expected cash flow may be irregular(cyclical business, with alternating performance, unexploited patent holders, etc.).The verification of capital valuation processes is carried out using several valuation methods, the first has a **main function**, and the others have a **control function.** The dynamics of cross-border M&A are similar to those of domestic M&As, but due to their international nature, they have different challenges since countries have different economic, regulatory, and cultural structures (Hofstede,1980; House, 2002). Cross-Border Mergers and Acquisitions can be utilized to gain new and lucrative markets and expand the market for a firm's current goods, in fact, many scholars have pointed out that suppliers often follow the international expansion of the related buyers. The pursuit of Cross-Border M&A is not without challenges. Firms that want to engage in these transactions, face risks such as "liability of foreignness" (Zaheer, 1995) and "double-layered acculturation" (Barkema. 1996). Uncertainty and

[21] " Principi di Valutazione di Impresa", Mario Cattaneo, chapter 17, pag 441-453

information asymmetry in foreign markets can make it difficult for firms to adjust and learn from both the local market and target firm, thus the liability of foreignness and double-layered acculturation serve as barriers to learning new knowledge and capabilities. Companies must consider various conditions in pursuing cross-border M&As, including country-industry- and firms levels factors that are related both to the acquiring and to the target firms. At national and industry levers, it is necessary to consider factors such as capital, labor, and natural resources in addition to the country level such as the legal, political, and cultural environment. A company may decide to pursue a cross-border M&A to gain market share and the mode of entry in a foreign market is various. Entry mode can vary among equity-based (greenfield, acquisitions, and joint ventures) and non-equity based(export and alliance); *Equity-Based Entry*

- *Greenfield Ventures:* establishing owned subsidiaries in new geographic market. This operation provides the best and highest form of control over internal resources but are also likely to have v the highest costs(Hennart and Park, 1994)
- *Acquisitions:* Acquiring a foreign business can allow the acquiring firm to obtain its resources such as technology, human resources, and know-how and gain access to the market- This option provides high control over assets however, the control is less than greenfield ventures.

Non Equity-Based Entry

- *International Alliances:* they can provide access to important resources and obtain new opportunities to share the costs and risks of entering new foreign markets. When an alliance is formed, the cost and risks for the firms are moderate relative to the other equity-based modes of entry. Regarding control, alliances offer lower control to participating firms and require substantial transaction costs to realize benefits.

External Research suggests that the choice of a company to undertake a cross-border M&A as the mode of entry into a foreign market is influenced by: Firm levels factors: these can include multinational experience, local experience, product diversity, and international strategy. At the firm level, the types of resources most valued to undertake the Cross-Border M&A by investing firms are intangible assets and mainly knowledge-based resources[22]. Industry Level factors: these can include technological intensity, advertising intensity and sales force intensity. In their studies, Anand and Delios (2002) identified technological capabilities that are fungible across countries, and brand sales more specific to each market. Both argued that firms are used to distinguish between capability-seeking and capability-exploiting. Country levels factors: it can include market growth in the host

[22] However, identifying and managing intangible assets can be extremely difficult for investing firms.

country and cultural idiosyncrasies between the host and home country. The cultural issue is very crucial for a cross-border M&A. An important aspect that can influence the mode of entry is the ability to integrate resources. The problem of integrating different cultures has been examined, and the majority of scholars claim that high levels of cultural distance can prevent the success of Cross-Border M&A. (Brouthers and Brouthers,2000; Hennart and Reddy, 1997; Kogut and Singh, 1988). As we have discussed thus far, Mergers and Acquisitions are an expansion strategy for companies looking to expand into new markets. However, one cannot ignore the significant impact that taxation can have, influencing the choice of the operation structure and the outcome.the role of taxation on M&A operations, the tax implications, the impact on the shareholders of both the acquirer and the target, and the advantages and disadvantages from a tax perspective are important to consider in the decision to undertake a Cross-Border M&A. Understanding these will be essential for companies looking to conduct M&A operations in Asia, with a specific focus on Singapore, as the choice of the country can have a significant impact on the value and success of the operation itself. There are different ways in which companies may reduce taxation through a M&A activity, and it can achieve tax benefits at corporate level and shareholder levels .When the Target company is acquired, the Shareholders can receive different forms of payment when they decide to sell the share because of a Merger and Acquisitions. All these different forms can be taxable and non-taxable. If we consider the taxable solution, then the shareholders have to pay capital gains taxes on their gains obtained from the sale of the target company. If we consider not taxable solution, shareholders do not pay taxes until they sell the shares in the acquiring company that they receive from the acquiring company. Of course, this second treatment is preferable to the first from the perspective of the acquired firm's shareholders. This case can also represent a net gain to shareholders relative to a no-takeover situation since they could be likely to sell their shares in the new company and incur capital gain taxes than they would have been had no acquisition occurred. In exchange for these benefits through the avoidance of capital gain taxes, there are certain costs to bear. To avoid taxes at the individual level, the corporate combination has to qualify as *reorganization* that can bring certain restrictions on the transaction. The most crucial is the consideration that has to be paid to the shareholders of the acquired company since the stock must have voting rights and that the tax positions of the acquired company since the stock must have voting rights and that the tax positions of the company are taken over by the acquiring company. Another aspect to be considered in shareholder taxation is the use of cash that can be attractive to the acquiring firm. In the use of the cash, there is a nontax advantage since it is easy to use in an hostile tender offer, but cash might be attractive for tax purposes as well. The acquiring corporation with cash for the transaction has the funds available for distribution to its shareholder instead if it does not use the cash for the acquisitions. The cash can be used in two ways:

Dividends and Share Repurchases, and each of these ways can lead to a different taxation for the shareholders. Dividends lead to taxes that would be higher for shareholders of the parent firm compared to the capital gains taxes paid by the acquired firm's shareholders in a taxable transaction. So, a taxable cash transaction would result in lower considered the personal taxes on the two firms' shareholders than a nontaxable stock transaction combined with an increase in dividends. But a company can also use Share Repurchase but in this case the tax advantage of using cash disappears. A nontaxable transaction could produce tax benefit by allowing shareholders in the acquired company to attain a more diversified portfolio. Taxable cash transactions instead offer a tax advantage to shareholders only to the extent that they facilitate the transmission of cash out of the acquiring corporation at capital gain rates. Other many studies conducted by scholars suggest that in the taxable transaction the premium demand is higher than non-taxable transactions (Sullivan 1993). At the same time, the probability of a cash takeover transaction is a decreased function of the dividend payout ratio and M/B ratio. (Carleton,1983). The tax treatment of mergers and acquisitions at the corporate level depends on whether the acquiring company treats the acquired company as being incorporated into the parent company with its tax characteristics, or as a sub-asset received after liquidation. As noted above, tax-exempt transactions must follow the first route, as this will result in a reorganization. If the acquiring company adopts the tax characteristics of the acquired company, it has no opportunity to increase the asset base but will benefit from unused tax credits and tax losses carried forward by the target company and accumulated in the tax losses the company will incur in the future. Another incentive at the corporate level for the acquiring company is the deducibility of the interest on corporate borrowing and this can be one of the reasons why an M&A transaction ensures its attractiveness. The deductibility of interest can lead to an increase in mergers and acquisitions, as the acquiring company may have more debt capacity due to this tax advantage. In addition, the two merging companies may reduce the business risk and make it possible for the created entity to borrow more than the two companies can borrow separately. Given the set of factors that contribute to determining the elements that make a country more attractive from an entrepreneurial standpoint and, at the same time, capable of engaging in M&A actions in geographically different territories from its own national one, this report aims to analyze whether and to what extent the number of companies acquired by a country depends on more strictly econometric (e.g. per capita GDP) and/or financial factors (corporate taxation, capital gains, dividends, etc.). In the first section of this chapter, secondary sources from which the data used in the analysis were acquired will be introduced, along with a description of the dataset employed and the variables under study. A descriptive study of the variables under investigation will then be conducted, followed by a correlation analysis among the selected variables based on our primary hypothesis in order to

estimate an appropriate linear regression model. The analysis of the data was carried out using Excel and STATA in parallel, with which the dataset produced by merging the different data sources was properly prepared. Overall, our dataset consists of 7 variables and a total of 20 countries, and the data refer to the year 2015-2022. The selected variables are listed below:

- *country*: Identifier showing the name of the 20 analyzed countries;
- *tax_impr:* quantitative variable reporting the taxation in force for enterprises within the country;
- *tax_plus*: a quantitative variable reporting the taxation of capital gains, i.e. the taxation of gains realized on the sale or disposal of an asset or asset that has increased in value relative to its original cost. Capital gains may arise from the sale of shares, securities, real estate, investment goods or other types of assets.
- *tax_divid:* the taxation of dividends, i.e., the taxation of periodic payments made by companies to their shareholders as a distribution of corporate profits. Dividends represent the share of earnings that is distributed to shareholders based on their shareholding.
- *GDP_per capita*: represents the countries' GDP per capita.
- *Acquiror*: number of companies acquired by individual country in other territories.
- *Target:* number of companies acquired in the individual country by foreign players.

In the next section, the monovariate analyses necessary to describe the distribution of the sample will be carried out. The hypothesis underlying our research is that the number of firms acquired by a country is influenced by factors such as GDP per capita and taxation levels. In short, we want to investigate whether and to what extent the acquisition of companies by a country is influenced by greater or lesser market liberalisation and per capita wealth.

Single-variate sample analysis

Before proceeding to the analysis of the correlation between our variables of interest, and estimating our predictive model, it is appropriate to give an accurate description of the descriptive statistics of our sample.

Table 3: Descriptive Sample Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
tax_impr	20	.22754	.0448985	.15	.3
tax_plusv	20	.22764	.0449065	.15	.3
tax_divid	20	.19025	.1168048	0	.35
pil_procap~e	20	41828.68	30709.36	2256.6	133590.1
acquirente	20	1363.3	1762.16	15	7135
target	20	1363.3	1560.757	117	6546

Analysing Table 1 we can see that corporate taxation and capital gains taxation tend to overlap almost completely (23%), while dividend taxation is on average lower than the former (19%). We find a similar trend between flows of corporate acquisitions within a country by foreign players and vice versa (on average 1363). The country's per capita wealth, however, is not the only element that could influence the purchasing power or attractiveness of a country in the case of M&A transactions. There are in fact many concomitant factors that determine an economic actor's greater or lesser ability to be fluidly active within market contexts (i.e. taxation, logistical interests, local labour costs, etc.). In fact, From the analysis of the trend of the individual distributions for the 20 countries under study, a clear distinction emerges between countries with a greater capacity to acquire companies in other global contexts (such as the USA, Great Britain, Canada and France) compared to others that are more oriental and less economically developed such as Chile, Argentina and the Philippines, which are nonetheless targeted by the other countries even in the face of potentially lower labour costs and liberalisation of the entrepreneurial market. Again, Italy is below the sample average, together with other European countries such as Spain, Belgium and Luxembourg, characterised not so much by its ability to acquire new companies abroad, but by being the target of acquisitions by foreign partners (in fact, the number of target companies in Italy is almost double its ability to penetrate foreign markets). Finally, an analysis of the distribution of corporate taxation, capital gains and dividends shows that our country is always at the top end of the distribution, well above the general average. Italy ranks second in terms of the level of corporate taxation and capital gains, only 2 percentage points behind Australia, which leads all countries (30%) and a good +7 percentage points above the USA, a country which, as seen, leads in M&A transactions.Finally, before moving on to an analysis of the correlations and the regression model, we can ascertain,how Italy (26%) is also above the general average ,as far as the taxation of dividends is concerned, characterised by being the second highest taxed European country in our sample (the record goes to Belgium with 30% taxation).

Correlation analysis and estimation of the regression model

Before estimating linear regression models, it is appropriate to ascertain whether a number of necessary conditions are in place for a linear regression model to be valid. First of all, it must be ascertained that the level of correlation between our variables is present since, without this condition, it would not be possible to estimate any model (such as a regression model) that requires a dependency relationship between a dependent variable (called outcomes) and one or more independent variables that impact on it (defined as regressors of the model). As a result of this analysis, it will also be appropriate to ascertain that among several variables underlying the same concept (e.g. our taxation or M&A variables), there is not a high correlation between all of them as this would lead to potential problems of bias due to multicollinearity[23].

The analysis of the correlation matrix shows a high association between the Target/Buyer variables (93%) and the three variables related to taxation of capital gains, companies and dividends (Table 2). Specifically, as can also be deduced from the analysis of the distributions shown in the previous paragraph, the variables capital gains and business taxation collide perfectly (100%), just as the variable relating to the taxation of dividends presents a high correlation with that of capital gains and business (57%).

Table 4: Correlation analysis

	pil_pr~e	tax_impr	tax_pl~v	tax_di~d	acquir~e	target
pil_procap~e	1.0000					
tax_impr	-0.2857	1.0000				
tax_plusv	-0.2858	1.0000	1.0000			
tax_divid	0.1533	0.5762	0.5763	1.0000		
acquirente	0.3197	-0.1620	-0.1621	0.3454	1.0000	
target	0.2589	0.0396	0.0381	0.4055	0.9368	1.0000

For these reasons, it is, therefore, appropriate to consider only one of the buyer and target variables (and in fact, as presented at the beginning of the chapter, we will focus on analysing whether and how certain factors impact on acquisition). The model thus hypothesized will have the following form:

$$\boldsymbol{acquiror} = \boldsymbol{\alpha} + \boldsymbol{\beta_1 GDP_percapita} + \boldsymbol{\beta_2 tax_imp} \quad (1)$$

[23] Multicollinearity is a statistical phenomenon in which several independent variables show a high correlation with each other. In other words, the variables used to predict the model are too many interrelated and therefore need to be appropriately selected/eliminated so as not to generate bias in the parametric estimates of the model.

Assuming the dependency relationship, we plot a scatter plot to highlight the presence of any outliers and the trend of the distribution (fi.6)

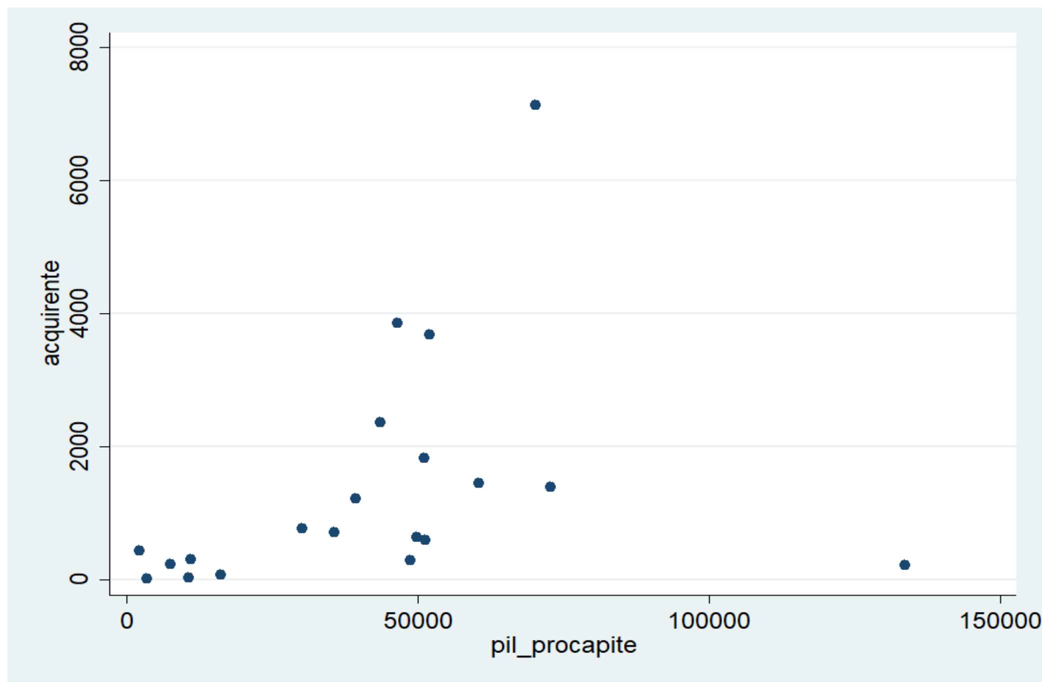

Figure 8: Scatter plot of the buyer variable and per capita GDP.

The scatterplot simultaneously shows a curvilinear relationship and the presence of two outliers (the country with a GDP per capita greater than 100,000 and a second with a buyer value greater than 6000).

As a first action, these two cases must therefore be removed from the analysis and, since the relationship is curvilinear, a quadratic term must be added within our regression to estimate the linear trend of the variables. To summarise, a quadratic variable pil_procapita must be inserted into the model, thus obtaining the final model set out below:

$$\boldsymbol{acquiror = \alpha + \beta_1 GPD_percapita + \beta_2 GDP_percacpita^2 + \beta_3 tax_imp} \quad (2)$$

Even when analysing the relationship between the other two variables, not shown here for reasons of space and redundancy, the model shown here appears to be the most suitable for analysing the relationship under study.

We can therefore now estimate our model with the support of the STATA software and analyse it in detail. (fig.7).

Source	SS	df	MS
Model	9177177.13	3	3059059.04
Residual	14019095.8	14	1001363.99
Total	23196272.9	17	1364486.64

Number of obs	=	18
F(3, 14)	=	3.05
Prob > F	=	0.0634
R-squared	=	0.3956
Adj R-squared	=	0.2661
Root MSE	=	1000.7

acquirente	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pil_procapite	.0774634	.0435624	1.78	0.097	-.0159686	.1708954
pil_procapite2	-7.31e-07	6.41e-07	-1.14	0.274	-2.11e-06	6.45e-07
tax_impr	-6560.859	5721.129	-1.15	0.271	-18831.46	5709.743
_cons	1126.145	1363.619	0.83	0.423	-1798.526	4050.817

Figure 9:Linear regression Model

As a first element of the goodness of the regression model, let us analyse its ability to adequately represent the relationship under study and hypothesised here. Since the R-sqared (i.e. R-squared) value is about 0.4, we can state that this model, containing only two regressors, manages to interpolate the relationship in question by as much as 40%, a value in line with the main studies in the sector.Analysing the significance of the model's values, we see that GDP per capita has a significant impact on the relationship (p value < 0.1)[24] . The analysis thus shows how a 1 unit increase in GDP per capita has a positive impact of +.08 points on acquisitions. In other words, an increase of 100 points in the country's GDP per capita increases the number of companies acquired by 1 (net of the change in the other variables). Considering corporate taxation, this is not significant (p-value>0.1) and this could be due to a small sample size (n=18). This means that, hypothetically, an increase in the empirical evidence (and therefore cases) on the analysed items could make the reduced significance, and therefore impact, of the regressors on our dependent variable significant. This could be due to the small sample size (equal to 18 cases) and, consequently, a possible increase (in a subsequent research project for example) could make this coefficient significant, which shows a negative impact on acquisitions.In conclusion, our analysis shows the existence of a significant relationship between the number of companies acquired by a country abroad and GDP per capita, although this cannot be asserted for the relationship between taxation and acquisition (a factor probably due more to the small sample size than to the real impact of taxation on acquisitions).The

[24] We will omit commenting on the GDP quadratic term as it is only included to make the relationship under study linearly analysable. Although it is not significant, it contributes to determining the real value/impact that the associated non-quadratic term has on acquisition.

regression model thus estimated manages to explain 40% of the relationship analysed (r-squared index) an interesting element to analyse considering that only two regressors were used, one of which was not significant. When presenting Singapore's tax system, it is necessary to first provide an overview of the tax system and tax policy in order to understand the government's objectives, the types of taxes that exist, and how these taxes are utilized by the government. Singapore's fiscal policy represents the use of public spending and revenue collection to finance the economy. The most important tools that the government has at its disposal to implement fiscal policy are tax control and public spending. In this regard, as defined by the IRAS[25], medium to long-term objectives are established for fiscal policy, which is: Promoting non-inflationary growth, Maintaining a balanced budget so that current expenditures can be financed with current revenues during the year. Focusing public spending more on financing education, infrastructure, healthcare, and programs aimed at protecting the environment.Of fiscal policy, the most important part is entrusted to tax policy, which is based on revenue collection and the promotion of economic and social objectives. The main objective of fiscal policy is to make and maintain tax policies competitive for both individuals, to encourage them to work hard, and especially make risk-taking more convenient to encourage entrepreneurship, and for companies, to attract more foreign investments. In this system that I have just explained, there are different types of taxation that affect individuals and businesses, as well as cross-border mergers and acquisitions that we are addressing in this research.Singapore adopts a territorial system of taxation, meaning that companies and individuals are taxed on income generated within the city-state. As for income derived from foreign sources (branch profits, dividends, etc.), it is taxed upon remittance to Singapore unless it has already been subjected to taxes in a jurisdiction with headline tax rates of at least 15%.As for personal income taxes, a first distinction must be made between individuals who are tax residents in Singapore and those who are not. In the former case, taxes start at 0% and are capped at 22%, while for non-residents there is a flat rate that can range from 15% to 22%. A company is taxed under Singapore's tax system if its Board of Directors and control of the business are exercised in Singapore. Even in terms of corporate taxation, Singapore imposes taxes on a territorial basis. Tax is levied on all income earned or derived from Singapore and on all foreign income remitted or deemed remitted to Singapore in the current year. However, unlike income tax, there is no difference in taxation between resident and non-resident companies, although resident companies may be eligible for certain tax exemptions. The standard corporate tax rate is 17%, however, there is the opportunity of a partial tax exemption that exempts 75% of the first SGD 100,000 of normal taxable income and 50% of the next SGD 190,000 of normal taxable income.

[25] Inland Revenue Authority of Singapore is the Government Agency responsible for the administration of taxes and enterprise disbursement schemes.

Additionally, for new qualifying private companies(Start Up), the first SGD 100,000 of normal taxable income is 75% tax-exempt and the next SGD 100,000 of normal taxable income is 50% tax-exempt for the first three consecutive years according to the SUTE[26](Start-Up Tax exemption). In addition to this, there is no surtax.[27] Singapore imposes a Goods and Services Tax (GST), which is very similar to the European VAT, on the supply of most goods and services, as well as on all goods imported into Singapore unless they are exempt. This tax is also imposed on certain services imported from overseas, where the recipient in Singapore is registered under the GST system. Additionally, starting from January 1st, 2023, the GST has been applied to low-value goods (valued at less than SGD 400) imported into Singapore and on certain non-digital services. Moreover, in the latest budget law for 2022, the Singapore government has increased the GST from 7% to 8% starting from January 1st, 2023, with another from 8% to 9% starting from January 1st, 2024. In addition, the Singaporean Government to manage the impact of the increase of GST for lower and middle-income families has introduced a GST voucher to offset part of their GST expenses. There is no withholding tax imposed on dividends paid by companies, as we all the interest paid to a Singapore resident. The 15% withholding tax is generally imposed on interest paid to a nonresident, unless the rate is reduced under a tax treaty, or an exemption applies under certain domestic concessions. The 15% withholding tax is a final tax and applies to interest derived by the nonresident from a business carried outside Singapore. However, any other interest paid to a nonresident company that does not qualify for the final rate or an exemption is taxed at the corporate tax rate (17%). Singapore is one of the few countries in the world that does not impose any tax on capital gains. One of the main reasons Singapore has become a financial hub in Southeast Asia is the introduction of a favorable capital gains tax for those who intend to invest in the country. In 2004, the government introduced measures aimed at reducing the tax burden on capital gains to create a favorable environment to promote innovation and development of technology companies, thus consolidating the country's position as a leader in the digital economy. With the abolition of the capital gains tax in Singapore, the country has become an attractive destination for Mergers and Acquisitions. This is because companies can now enjoy the benefits of increased capital gains without having to worry about paying taxes on them. The elimination of this tax has also encouraged companies to list on the Singapore Stock Exchange, leading to an increase in initial public offerings (IPOs). Moreover, the government's efforts to create a business-friendly environment and promote entrepreneurship have made Singapore a hub for start-ups, venture capitalists, and other investors. All these factors have contributed to making Singapore a

[26] SUTE scheme was introduced by the government in 2005 to support entrepreneurship and to foster the growth of local enterprises.

[27] Surtax is an additional tax imposed on top of an already existing tax for companies or individual taxpayers and may have a fixed or progressive rate structure.

top destination for M&A. However, there are exceptions to the capital gains tax exemption. Although the Singaporean government has yet to come up with a formal capital gains guide, the IRAS has its own rules governing how capital gains are separated from other forms of business profit. Therefore, whether you end up paying taxes or not depends on how IRAS categorizes the profits. If they are found to be related to the capital account, then you will be exempted, but if the profits generated are part of your business income and fall under revenue, then you will be required to pay the corporate tax income of 17%. The absence of taxation on dividends is one of the main reasons why Singapore has become a preferred destination for investors, making the country highly attractive to foreign investors looking to maximize their profits. This advantageous fiscal policy is part of a broad Singaporean strategy aimed at promoting economic growth and attracting foreign investment to the country. Without taxation on dividends, foreign investors' shareholders can maintain greater control over their earnings and reinvest their profits without being burdened by heavy taxes. This fiscal policy has been a determining factor in the increase of foreign investments in Singapore, which has led to significant economic growth in the country in recent decades. Moreover, The absence of taxation on dividends in Singapore has incentivized Mergers and Acquisition (M&A) activities in the country because potential acquirers can enjoy higher profits following the acquisition of companies that generate dividends. Additionally, dividends received from a subsidiary are not subject to taxation in Singapore, which means that companies can retain more profits and reinvest them for further expansion. This has made Singapore an attractive hub for M&A activities, as companies can avoid being burdened by heavy taxes on dividends and other profits. The combination of this advantageous fiscal policy and a business-friendly environment has led to a significant increase in M&A activity in Singapore in recent years, attracting more foreign investors to the country. The legal system in Singapore is based on the common law system, where legislation, regulatory rules, and case law coexist. Regarding M&A transactions, the key structures are the Companies Act, which sets out general corporate legislation including provisions that allow for compulsory acquisitions, schemes of arrangement, and mergers for incorporated companies, and the Securities and Futures Act, which sets out legislation relating to, among others, regulations governing securities offerings, prohibitions against insider trading, notifications regarding acquisitions of substantial interests, and penalties for misrepresentations to investors. Additionally, ownership in certain sectors, such as banking, financial services, telecommunications, and broadcasting, may be subject to ownership restrictions set out in specific legislation. The Singapore Code on Takeovers and Mergers (the Takeover Code) sets out the principles and rules governing the conduct of takeovers of public companies incorporated in Singapore or entities that have a primary listing on the Singapore Exchange Securities Trading Limited.

In the following section, we are going to analyze the most important Act that regulates M&A activity in Singapore. The Companies Act, Chapter 50 of Singapore (known as the "Companies Act") contains general corporate legislation that pertains to the incorporation, management, administration, and winding up of companies. This law also covers relevant issues for acquisitions, such as the fiduciary duties of directors and procedural requirements for the transfer of shares in a Singapore company, as well as the sale of a company's business that may arise as part of an acquisition. On March 31, 2017, several key amendments to the Companies Act came into effect, aimed at improving the transparency of corporate entities registered in Singapore and in line with the recommendations of the Financial Action Task Force. Unless exempted, these amendments require Singapore-registered companies and partnerships to take measures to determine the identity of persons who have significant interest, control, or both, over such entities, and to maintain a register indicating their information. Additionally, there is a corresponding duty for such persons to notify the relevant Singapore registered entities and provide their own information. Nominee directors of Singapore-registered companies and partnerships will also be required to provide details of their nominators. The register will not be accessible to the public but must be provided, upon request, to the relevant authorities or law enforcement agencies.As of May 23, 2017, Singapore has introduced new measures under the Companies Act to enhance the existing corporate rescue and debt restructuring framework. Drawing elements from Chapter 11 of the US Bankruptcy Code, the enhanced regime includes:the power for the court to grant super-priority status to rescue financing made to assist with the restructuring of distressed companies; the power for the court to approve a creditor scheme even if there are objections from a class of creditors improved judicial management provisions to extend the power to make a judicial management order in respect of foreign companies and to introduce specific criteria setting out when the courts exercise discretion over foreign debtors. The enhanced regime is expected to create new opportunities for investment in distressed companies. Additionally, on October 11, 2017, Singapore introduced an inward re-domiciliation regime that allows foreign companies to transfer their place of registration to Singapore without needing to establish a new legal entity. This regime is expected to facilitate the restructuring and transfer of foreign companies to Singapore as their domicile. The Takeover Code was last amended in March 2016. The modified auction procedure allows for a maximum of five rounds of bids over five consecutive days. Competing offerors can now introduce new forms of consideration during the auction process. Additionally, the SIC will no longer impose the requirement that the last bid to be made by each competing offeror on the last day of the auction must be an odd or even price. This fundamental change means that there may now not be a clear higher bid at the end of the auction. This is in line with the assumption that the goal of the auction process is simply to provide an orderly mechanism

through which both offerors can reach their final price and prevent the offer period from continuing indefinitely. As in the previous procedure, until the conclusion of the auction procedure: neither the target nor the offerors, nor any of their respective concert parties, may, without the prior consent of the SIC, make any public statement in relation to, or which might reasonably be expected to influence, the orderly conduct of the auction procedure or in relation to the terms of either offer; neither the offeror nor any of their respective concert parties may deal in the relevant securities of the company or take any action to procure, modify or renew any irrevocable commitment or letter of intent in relation to their respective offers; after the auction procedure, neither the offeror nor any of their respective concert parties may acquire any interest in the relevant securities of the company on terms better than those of their own offer during the offer period.The other changes to the takeover code relate mainly to the administrative aspects of an offer or to codifying existing practice, including codifying provisions to align the timetables of offerors in competitive situations and modifying the timetable for the payment of shares tendered in acceptance of an offer to seven business days, to be announced promptly.As of 1 May 2018, the SIC has implemented a new exemption regime that exempts fund managers and principal traders operating within large multi-service financial institutions who may act as financial advisers on a takeover offer from certain restrictions and obligations under the takeover code. The new regime will grant qualifying fund managers and principal traders standing exempt status, renewable annually, thereby removing the need for a ruling to be sought for each specific transaction.One of the most important Act made by the Singaporean Government in order to incentive the activity of M&A transactions is the M&A Scheme, introduced in 2010. The M&A scheme encourages companies, especially Small and Medium Enterprises (SMEs) in Singapore to internationalize and grow. The provision is applicable to Singapore-registered companies that decide to acquire the ordinary shares of the target company directly or through a subsidiary.

The M&A Scheme in based on:

- M&A Allowance: that is calculated on the total cost of the acquisitions of the shares in the target company.
- Stamp duty relief.
- Double tax Deduction on the transaction cost.

The M&A allowance in Singapore refers to a tax incentive that is provided to acquiring companies for each year of assessment (YA). The allowance is a specific amount calculated by the government, which the acquiring company can claim as a tax deduction. This tax incentive aims to encourage

more M&A activities in Singapore and to support companies in their growth and expansion plans. By providing tax relief to acquiring companies, the Singaporean government aims to make the country a more attractive destination for foreign investment and to promote economic growth. The calculation of the M&A Allowance is summed up as follows: The allowance granted is 25% of the total acquisition value for the current year, with a consideration cap fixed at $40 million, which implies that the company can ask a maximum deduction of $10 million each year, and according to IRAS the M&A Allowance is granted over a five-year period on a straight-line basis. Another important tool is the stamp duty relief for the acquiring company, which is capped at $80,000 per financial year. This relief is applicable to any contract, agreement, or transfer document related to the acquisition of ordinary shares in the target company. Under the M&A Scheme, it is granted for companies a double tax deduction on transaction costs incurred during the qualifying share acquisitions period between 17 February 2012 and 31 December 2025. The deduction is capped at $100,000 and applies to all transaction costs incurred for qualifying acquisitions of ordinary shares in all target companies. This cap applies regardless of when the transaction costs were incurred. For transaction cost we refer to professional fees that are necessarily incurred for a qualifying share acquisition, including legal fees, accounting or tax advisory fees, and valuation fees. However, they do not include professional and incidental fees related to a loan arrangement. The amount of transaction costs is taken net of grants or subsidies from the government or any statutory board. The deduction of transaction costs can be claimed in two ways. Firstly, in the Year of Assessment in which the M&A allowance on the qualifying share acquisition is first claimed, or secondly, in the YA relating to the basis period in which the transaction costs are incurred, whichever is the later. This provision allows acquiring companies to claim a double tax deduction on transaction costs, which in turn reduces their tax liability and makes M&A deals more attractive.To be eligible for the M&A scheme, a company has to fulfill certain conditions as stated in the IRAS: The acquiring company must meet certain shareholding requirements. If the acquiring company owned less than 20% of the ordinary shares of the target company prior to the share acquisition, it must acquire at least 20% of the ordinary shares to qualify for the allowance. However, companies that wish to claim the allowance based on the 20% shareholding threshold must also meet additional eligibility conditions. On the other hand, if the acquiring company owned less than or equal to 50% of the ordinary shares of the target company prior to the share acquisition, it must acquire more than 50% of the ordinary shares to qualify for the allowance. This is known as the 50% shareholding threshold. Overall, meeting the shareholding requirements is crucial for companies looking to claim the M&A allowance in Singapore. It is important to carefully consider these requirements when planning and executing a share acquisition, in order to maximize the tax benefits available. The acquiring company, moreover, must be a tax

resident in Singapore, carry on trade or business in Singapore on the date of the share acquisition ad have at least three local employees before the date of the acquisition, and not be connected to the target company for at least two years before the date of the share acquisition.

The chosen case study, referring to the subject of this work, is the merger between Broadcom and Avago, resulting in the formation of Broadcom.com creating an impressive blend of expertise, resources, and growth opportunities in the semiconductor industry. This case study offers an in-depth analysis of the reasons that drove the two companies to pursue this merger and how they effectively leveraged operational and financial synergies to achieve competitive advantages. Moreover it offers numerous insights based on publicly available information, including the analysis of the semiconductor industry, evaluation of both companies, and analysis of operational and financial synergies, considering that both companies operate in the same sector. The chapter will begin with an analysis of the semiconductor industry to thoroughly understand the motivations behind this transaction. After analyzing the industry, the work will proceed with a description of the two companies and their business models. In addition to evaluating operational synergies and benefits, a crucial aspect to consider in M&A transactions is taxation. The tax structure of a transaction can significantly impact the overall value of the deal and the income tax management strategies of the involved companies. In this case, we will explore the taxation considerations made within the Avago-Broadcom merger, despite the limited availability of public information. Analyzing the tax implications of this transaction will provide a comprehensive understanding of the importance of tax planning in M&A operations and the pivotal role it plays in achieving desired outcomes.Through the study of the Avago-Broadcom case, we will highlight the potential of M&A transactions in fostering company growth and expansion, as well as their strategic significance from a taxation standpoint despite the limited public information available on this matter. The semiconductor industry in 2015 was worth approximately $338.90 billion, the highest ever recorded, with a growing trend in the coming years. Analyzing the semiconductor sector, it encompasses various segments that can be summarized as components, nodes, and applications, which, in turn, include memory devices, logic devices, analog integrated circuits (ICs), microprocessors (MPUs), microcontrollers (MCUs), sensors, and discrete power devices. The demand for semiconductors in recent years has been strong, leading to an imbalance between supply and demand.The semiconductor sector is particularly strategic for each country, so strategic that geopolitical choices are also based on them and their availability. Many countries are investing billions of dollars to obtain technology for internal development. The semiconductor industry is strategic for several reasons. It involves miniaturized electronic circuits that are essential for any electrical component, particularly crucial to produce automobiles, smartphones, industrial robots, home appliances, and automobiles. The Asia-Pacific

region holds the largest share of electronics production, leading to its continuous growth as a U.S. export market at a faster pace compared to Europe and Latin America. However, the European Union remains a significant market for semiconductors. The country's case studies feature five out of the top six semiconductor markets, namely China, the European Union, Japan, South Korea, and Taiwan. Singapore ranks fifth among the top U.S. export markets for semiconductors. Semiconductors are associated with three distinct categories of microchips: discrete semiconductors, which consist of one diode and transistor; integrated circuits (ICs), which can contain up to several billion transistors on a single microchip; and system-level products, typically comprising multiple ICs enclosed in a single package or IC.

North America

The North America Market is mostly the U.S market. The United States is the second largest in the world, while Mexico is a destination for U.S exports, however the demands is mostly for assembly of electronic equipment.

Europe and the Middle East

The UE market represents 9 percent of the world market, and the majority of the 10 percent share represents Europe and Middle East.

Southeast Asia

The Southeast Asian market accounts for just over half of the "other" category. The Southeast Asian markets among the top 10 (considering the EU as a single market) are Singapore, Malaysia, Thailand, and Vietnam. While Singapore includes Taiwan as a market, the majority of electronic equipment production in Singapore is carried out by an Electronics Manufacturing Services (EMS) company or non-Singaporean electronic equipment manufacturers with assembly facilities in Singapore. In the latter case, the decision to purchase semiconductors is often made at the headquarters of the electronic equipment manufacturing company, not at the production facility. Among the EMS companies based in Singapore, Flextronics was the fifth largest EMS company in the world. Singapore is also a significant shipping hub in Southeast Asia. All products entering Singapore, including those containing semiconductors, are duty-free. A large percentage of Malaysia's electronics production involves Outsourced Semiconductor Assembly and Testing (OSAT)[28], and in

[28] The Outsourced Semiconductor Assembly and Testing (OSAT) industry is responsible for the assembly and testing of semiconductors. Instead of being produced internally by semiconductor companies, the chips are sent to specialized

the case of OSAT, imports pertain to the assembly of semiconductors into packages and their testing before being exported to end markets. The same applies, on a smaller scale, to Thailand and Singapore, which also have an OSAT industry. Malaysia and Thailand participate in the World Trade Organization Information Technology Agreement (ITA) and the recently negotiated expansion of the WTO ITA. Vietnam participates in the original WTO ITA, under which most semiconductors are duty-free.The semiconductor industry is an industry that deals with the design, manufacturing, and marketing of semiconductor components and devices.

Semiconductor companies are involved in various activities:

- **Design**: Semiconductor companies engage in the design of integrated circuits, which includes defining the architecture, component layout, and interconnection of elements. Design can be done internally or in collaboration with other companies.

- **Manufacturing**: Once the integrated circuit is designed, it goes through the manufacturing phase, where the semiconductor is produced in large quantities. This process involves the deposition of thin layers of materials, lithography, etching, metal deposition, and many other techniques.

- **Testing**: After manufacturing, semiconductors undergo rigorous testing to ensure they meet the operating specifications. This includes functional testing, reliability testing, stress testing, and many other testing procedures. Once the chips pass the testing phase, they are packaged, which involves encapsulating the semiconductor die in protective materials and creating the final package for easy integration into electronic devices.

- **Packaging**: After testing, semiconductors are encapsulated in protective packages, which shield them from external elements and facilitate their integration onto circuit boards or other devices. Packaging can be done using various technologies, such as chip-on-board packaging, surface mount packaging, and hybrid mount packaging.

OSAT companies that handle the physical assembly of components and functional testing. This process includes encapsulating the chips in protective packages and verifying their performance.

- **Sales and distribution**: Once the semiconductors are manufactured and tested, they are sold to electronics device manufacturers or distributors. These companies integrate the semiconductors into their final products, which are then marketed and sold to consumers.

Below, we will analyze the main market players in the semiconductor industry:

Taiwan Semiconductor Manufacturing Co. Ltd: In 2015, TSMC achieved revenues of $354 billion, with little change compared to the previous year. The foundry sector outperformed other segments in the semiconductor industry, generating total revenues of $44 billion, representing a 4% growth from the previous year. TSMC maintained its global position in the semiconductor industry with an estimated market share of 55%.

Qualcomm Inc: In 2015, Qualcomm achieved revenues of $ 25 billion with a decrease of 5% compared to 2014. Its strategy is based on the marketing of wireless communication products and services because telecommunications companies worldwide use its patented CDMA (code division multiple access) technologies, which plays a fundamental role in the development of wireless communications.

Intel Corp: In 2015, Intel achieved revenues of $ 50 billion with an increase of 3% compared to 2014. Intel primarily focuses on developing processors for the personal computer (PC) and enterprise server markets. Its Client Computing Group segment supplies PC processors, while the Data Center Group segment serves enterprise customers, including cloud services providers, and is the company's largest division. Beyond these segments, Intel also offers solutions for the Internet of Things (IoT) targeting the retail, industrial, and healthcare markets, as well as memory and storage products, autonomous driving technology, and programmable semiconductors.

Micron Technology Inc: Micron achieved revenues of $ 18 billion. Micron Technology is a supplier of memory chips, including NAND flash products and rewritable disk storage solutions. Its products are used in computers, consumer electronics, automobiles, communications, and servers.

Nvidia Corp: Invidia achieved revenues of $ 5 billion. It is primarily known for its production of graphics cards, both in the GeForce line (for consumer use) and the Quadro line (for professional use). Additionally, the company manufactures motherboard chipsets in the nForce line and System-on-a-Chip (SoC) for portable devices (such as mobile phones, GPS, UMPC) in the Tegra family. In 2007, the optimized Tesla line for GPGPU processing through the CUDA platform was introduced. Furthermore, the company operates in the field of wireless communications and software for digital video players. Avago Technologies was a Singapore-based company, a leader in the design, development, and global supply of a wide range of semiconductor devices, with a particular focus on analog III-V based products and complex digital and mixed-signal complementary metal-oxide-semiconductor (CMOS) based devices. Avago's product portfolio consisted of discrete devices and mechanical components, with a strong emphasis on markets that required high quality and integrated performance characteristics. As follows, the financial data of Avago Technologies will be presented. The focus will be on the last fiscal year of Avago's operations before the merger with Broadcom, analyzing the economic and financial results, highlighting the contributions of different business segments and their impact on revenue.

Fiscal Year 2015 Non-GAAP Results			Change
(Dollars in millions, except EPS)	2015	2014	Y/Y
Net Revenue	$6,905	$4,307	+60%
Gross Margin	61%	56%	+5ppt
Operating Expenses	$1,258	$ 900	+$ 358
Net Income	$2,613	$1,343	+$1,270
Earnings Per Share - Diluted	$ 8.98	$ 4.90	+$ 4.08

Broadcom Corporation, based in Irvine, California, was a leading innovator and manufacturer of semiconductor solutions for wired and wireless communications. Its product line spanned computer networking, smartphone networks, and telecommunications, with a particular focus on high-speed networks for enterprises. Among its key customers were Samsung, Cisco, Huawei, and Apple, where

its chips were used in iPhones. Founded in 1991, the company employed approximately 11,750 people across more than 15 countries.

Broadcom's business model encompassed a wide range of communication products structured around three core platforms: Broadband Communications (Home Solutions), Mobile and Wireless (Hand Solutions), and Infrastructure and Networking (Infrastructure Solutions). The product portfolio included:

Home Solutions: Highly integrated and comprehensive solutions for set-top boxes and broadband access.

Hand Solutions: Platforms primarily designed for mobile devices, offering low-power, high-performance, and highly integrated wireless connectivity solutions, cellular SoCs, and other technologies.

Infrastructure Solutions: Highly integrated platforms for infrastructure deployments, including Ethernet switches and PHYs, automotive Ethernet, communication processors, wireless infrastructure solutions, and Ethernet controllers.

Over the years, Broadcom has established strategic relationships with multiservice operators that provide wired and wireless communications services to consumers and businesses. Some of the customers included Apple, Cisco, Huawei, ZTE, Thomson, and Samsung, to name a few.

In 2015, Broadcom Corporation reported net revenues of 6.212 billion euros with a gross profit of 3.329 billion euros. The net income for 2015 amounted to 804 million dollars. The acquisition of Broadcom Corporation by Avago Technologies represented a unique case in those years, making the merger transaction one of the largest in the semiconductor industry. The combined revenue of the two companies in 2014 exceeded $14 billion, making the new semiconductor company the sixth-largest globally, based on annual semiconductor market shares. Furthermore, this merger created the third-largest semiconductor supplier, trailing only Intel and Qualcomm, excluding revenues from integrated circuits. This was made possible because the two companies had complementary products, leading to a strategic positioning in both the communication integrated circuit market and the storage integrated circuit market. The merger between Avago and Broadcom has increased their market share, holding approximately 40% of the wired communication integrated circuit market over the years. Additionally, the merger has expanded their market share in wireless integrated circuits to nearly 8%,

placing them fourth after Qualcomm, Samsung, and MediaTek. Furthermore, the merger allows the company to benefit from a rapidly growing market with an annual CAGR of 7%. In this case, as previously discussed in Chapter 1 of this thesis, the merger between Avago and Broadcom is referred to as a vertical merger. The merger agreement, known as the Scheme of Arrangement or Avago Scheme, was implemented in accordance with the laws of the Republic of Singapore. Under this agreement, all issued ordinary shares of Avago were exchanged on a one-to-one basis for newly issued ordinary shares of a limited liability company incorporated under the laws of the Republic of Singapore, called Holdco. As a result of the merger, both Avago and Broadcom became indirect subsidiaries of Holdco, and the trading of their respective securities ceased. Holdco was renamed Broadcom Limited(the new entity) Avago Technologies Ltd has agreed to acquire Broadcom Corp for $37 billion, turning two lesser-known companies into major player in the semiconductor industry. The deal was structured as follows: Avago acquired Broadcom with $17 billion in cash consideration and the economic equivalent of approximately 140 million Avago ordinary shares, valued at approximately $20 billion, resulting in Broadcom shareholders owning approximately 32% of the combined company. Moreover Furthermore, shareholders of Broadcom were given the option to receive, for each share of Broadcom held:

1) $54.50 in cash;

2) 0.4378 ordinary shares in a newly-formed Singapore holding company ("HoldCo");

3) A restricted equity security that is the economic equivalent of 0.4378 ordinary shares of HoldCo, which will not be transferable or saleable for a period of one to two years after closing. The offer resulted in a 19% acquisition premium, in line with comparable transactions. Furthermore, the buyer funded the cash portion with its own reserves and $9 billion in financing from a consortium of banks. The new entity the combined company will be the world’s sixth largest chipmaker by revenues, approximately $ 15 billion, and will be valued at $77 billion enterprise value (EV). The NewCo will have the most diversified communications platform in the semiconductor industry.The merger between Avago and Broadcom has achieved several synergies. Firstly, the new company (Broadcom Inc) has restructured its product line and market focus, creating a stronger presence and pursuing synergies in creating solution-oriented offerings. Additionally, the complementary portfolios of Broadcom and Avago Technologies have allowed both companies to deliver system solutions to customers, offering different products that do not compete but likely appeal to the same customers. Furthermore, the combined company Broadcom Inc. has generated synergies of approximately $750 million within about 18 months of completing the agreement. These synergies were 100% cost synergies, resulting from the elimination of overlapping administrative responsibilities. Although the

companies do not explicitly specify revenue synergies, it can be inferred from their combined customer portfolio that there will be new sales opportunities to capture increasingly significant market shares.After the merger, Broadcom Inc. has positioned itself as a leader in the industry with a presence of manufacturing facilities in various parts of the world, enabling it to compete with the industry's biggest giants.Analyzing the data, Broadcom has a market capitalization of $234.50 billion, ranking fourth among companies in the semiconductor industry. It is noteworthy that Broadcom has a higher market capitalization than Intel and Qualcomm, leading companies in the industry that have been in the semiconductor industry for many more years.Broadcom ranks fourth in the semiconductor industry in terms of net income. It is noteworthy that Broadcom's net income surpasses that of other companies that have been operating in the industry for several years. Over the years, Broadcom has demonstrated strong economic and financial performance, establishing itself as a key player in the semiconductor sector. There are several tax considerations that need to be analyzed, as it requires taking into account the federal law of the United States of America and the tax provisions of Singapore. Since Holdco is a Singapore entity, it would generally be classified as a foreign corporation (not a U.S. tax resident). Everything hinges on Section 7874[29] of the U.S. federal code, where if former Broadcom shareholders hold 80% of the votes or value of the combined company, Holdco would be considered a U.S. corporation for U.S. federal tax purposes. If the percentage applied by Section 7874 is determined to be at least 60% but less than 80%, Holdco would be treated as a surrogate foreign corporation and taxed according to the prevailing rules in Singapore. Prior to the merger, Avago sought an opinion from the IRS(Inland revenue Authority of Singapore) confirming that the agreement qualified as a tax-free reorganization, including a safeguard clause that would allow Broadcom investors to defer any tax impact if the deal were to be taxed.The tax issue revolved around the relative size of the two companies. If Avago were larger at the time of the deal's closing, the transaction would be tax-free under the rules that apply to foreign takeovers of U.S. companies. If Avago were smaller, shareholders would have to pay taxes on the cash portion. Prior to the merger, the market capitalized Avago at $33 billion compared to Broadcom's $31 billion, obtaining a tax advantage under Singapore law. In conclusion, the merger between Broadcom and Avago has had significant importance both from a tax perspective and in the context of cross-border mergers and acquisitions (M&A). From a tax standpoint, a key issue revolved around determining the tax residency of Holdco and its qualification as a U.S. or foreign company for tax purposes. Section 7874 of the U.S. federal tax code played a crucial role in evaluating this

[29] Section 7874 of the United States Code is a legislative provision aimed at preventing corporate tax inversions. A tax inversion occurs when a U.S. company reincorporates in a foreign country with a more favorable tax environment in order to reduce the income tax paid in the United States.

qualification and the applicability of taxes.Furthermore, the deal involved a complex assessment of the relative sizes of the two companies and the associated tax implications. If Avago was deemed larger at the time of the deal's closing, the transaction would have been tax-free under the rules governing foreign takeovers of U.S. companies. Conversely, if Broadcom was larger, shareholders would have been subject to taxes on the newly issued stock. This made obtaining a ruling from the IRS to confirm the deal's qualification as a tax-free reorganization crucial. From a cross-border M&A perspective, this transaction highlighted the importance of carefully considering the tax and regulatory aspects of multiple jurisdictions involved. Analyzing the tax provisions of both the United States and Singapore was essential in understanding the tax implications of the operation and structuring the deal optimally. To sum up the merger between Broadcom and Avago represented a significant case study in the context of cross-border transactions, where the tax aspect was a key factor to consider. Determining tax residency, applying Section 7874 of the U.S. tax code, and evaluating the relative sizes of the two companies directly impacted the structure and tax implications of the deal