



Department of Business and Management

Course of Corporate Strategy

**Rivalry in Telecommunication: TIM's  
Competitive Position Across Italy and Brazil.  
Assessing Strategies for Sustainable  
Competitive Advantage**

Relatore

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# Introduction

The value chain of the telecommunications industry is the core infrastructure for modern-day connectivity, economic growth, and technological advancement. This industry is dynamically changing with the constant advancement in digitization and the adoption of emerging technologies such as the IoT, AI, and 5G, thus shaping none other than the habitual daily routines of every ordinary consumer as well as how businesses and governments function. Thus, competition in the sector is on the rise because main players tend to outcompete each other by trying to appear different through novel approaches, infrastructure investment, and even international market expansion. The winning strategy here applies to quality service, network coverage, sustainability of the operations, and speed with which it can adapt to new emerging market demands. The growing demand for services that are faster and at the same time more reliable, along with the pressure to reduce costs while improving the customer experience, continuously tests the ability of telecom operators. In this perspective, the present study intends to analyze the competitive position of Telecom Italia Mobile (TIM), one of the most relevant operators in the telecommunications landscape, both in the Italian domestic market and in the emerging Brazilian one. Comparing these two markets responds to the interest in how structural, economic, and cultural differences bring about variance in business strategy and, finally, in how TIM has adopted different approaches to consolidate its activity in these highly differing contexts.

Italy is the “mother” market for TIM, highly competitive with other operators such as Vodafone, Wind Tre, and Iliad, placing great efforts on issues like sustainability and next-generation technologies, first and foremost 5G. Innovation capability and technological leadership are decisive factors in a saturated, highly regulated market. On the other hand, the Brazilian market also offers TIM good growth opportunities, although the management has pointed out that this presents challenges mainly tied to the expansion of the network, price competition, and improving coverage in cases of rural areas. This market is dynamic and very competitive because of fast growth in demand for digital services combined with sensitive consumption by Brazilian consumers. The focus of the thesis has been to investigate how TIM adapted its competitive strategies to the needs of these two differentiated markets, considering the differing macroeconomic, regulatory, and social contexts and, in particular a research question has been elaborated:

*"What are the key differences in Telecom Italia Mobile's (TIM) competitive strategies in the telecommunications markets of Italy and Brazil, and how do these differences contribute to the company's sustainable competitive advantage and market positioning?"*

The ultimate objective of this thesis is to provide a complete identification of the challenges and opportunities that TIM faces within the two countries, with a key core of sustainability and technological innovation strategies in Italy and network expansion/price competition in Brazil, to do so the structure is the following.

The first chapter of the thesis provides an overview of the historical and structural setting of the Italian and Brazilian telecommunications industry, discussing the main players of the sector and the competitive dynamics. Then, in the second chapter, the use of Porter's Five Forces and of the PESTEL analysis thus the micro and macro environment in which TIM operates is thoroughly analyzed. Finally through a comparative case study between TIM Italy and TIM Brazil, the big differences in business strategies are put forward, and hypotheses are given about how such differences may impact the sustainability of TIM's competitive advantage in the two markets.

# Chapter 1: The Telecommunication Industry in Italy and Brazil

## *1.1 History of the Telecommunication Industry in Italy*

Italy's telecommunications sector history starts in the earliest days of telegraph and telephone services, there have been several technological advancements and regulatory changes throughout the years that have shaped the industry as we know it today. Italy began to construct telegraph networks in the nineteenth century, and telephones were introduced around four decades later<sup>1</sup>. Initially, these services were under state ownership and operation; however, with time the government began issuing licenses to entities for local telephone services.

In 1923 a decree law by the government marked a significant turning point as it decided to privatize Italy's national telephone system by dividing the country into five distinct sectors;

1. Piedmont and Lombardy overseen by STIPEL
2. The Three Venetias and Zara managed by TELVE
3. Emilia Romagna, Marche, Umbria under TIMOs control
4. Liguria, Tuscany, Lazio, Sardinia operated by TETI
5. Southern Italy and Sicily supervised by SET<sup>2</sup>

However, in 1964, a pivotal change occurred with the establishment of SIP (Società Italiana per l'Esercizio Telefonico) which took over as a state monopoly governing all telephone and telegraph networks in Italy. SIP maintained its monopoly status for over half a century.

In 1994 the Institute for Industrial Reconstruction (IRI) oversaw the merger of SIP with companies involved in international connections leading to the establishment of Telecom Italia<sup>3</sup>. The company underwent privatization in 1997 following another merger<sup>4</sup>. Over the years that followed several new operators, both local and international have joined the market. This influx has resulted in prices and better service quality for consumers. Currently, Italy's telecommunications sector and mobile networks feature a variety of major players including;

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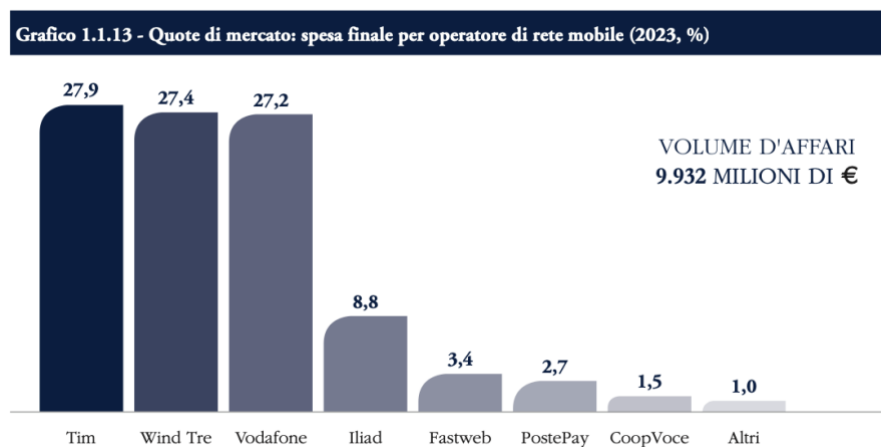
<sup>1</sup> Balbi, G. (2008). Dappertutto telefonini. Per una storia sociale della telefonia mobile in Italia. *Intersezioni*, 28(3).

<sup>2</sup> Caroppo, A., & Gamero, R. (2011). Le infrastrutture delle telecomunicazioni. *Le infrastrutture delle telecomunicazioni*, 705-733.

<sup>3</sup> Balbi, G. (2008). Dappertutto telefonini. Per una storia sociale della telefonia mobile in Italia. *Intersezioni*, 28(3).

<sup>4</sup> Ibid.

- TIM: Holds a market share of approximately 28% and it stands as Italy's largest mobile operator and offering fixed-line and broadband services as well<sup>5</sup>.
- WindTre: With around 27% of the market share WindTre is Italy's second-largest mobile, , it emerged after the merger of Wind and Three in 2018<sup>6</sup>.
- Vodafone: is the third-largest mobile operator in Italy with about 27% market share provides fixed-line and broadband services too<sup>7</sup>.
- Iliad: Originating from France, Iliad entered the Italian market in 2018 and it immediatly acquired a market share of around 9% due to its pricing strategies<sup>8</sup>.



*Figure 1. Market share in the Italian Mobile market<sup>9</sup>*

Players in the Italian telecommunications environment engage in a variety of ways. They compete for clients by providing a wide range of services at varying costs. They also work together to share infrastructure and create new technologies. The Italian government is heavily involved in regulating the telecommunications sector, for example, there is The Autorità per le Garanzie nelle Comunicazioni (AGCOM) that promotes competition and protects consumers, but it also ensures communication freedom and privacy<sup>10</sup>.

<sup>5</sup> AGCOM, Report Osservatorio delle comunicazioni. 01/2024. Available at [https://www.agcom.it/documentazione/documento?p\\_p\\_auth=fLw7zRht&p\\_p\\_id=101\\_INSTANCE\\_FnOw5IVOIxE&p\\_p\\_lifecycle=0&p\\_p\\_col\\_id=column-1&p\\_p\\_col\\_count=1&\\_101\\_INSTANCE\\_FnOw5IVOIxE\\_struts\\_action=%2Fasset\\_publisher%2Fview\\_content&\\_101\\_INSTANCE\\_FnOw5IVOIxE\\_assetEntryId=34142873&\\_101\\_INSTANCE\\_FnOw5IVOIxE\\_type=document](https://www.agcom.it/documentazione/documento?p_p_auth=fLw7zRht&p_p_id=101_INSTANCE_FnOw5IVOIxE&p_p_lifecycle=0&p_p_col_id=column-1&p_p_col_count=1&_101_INSTANCE_FnOw5IVOIxE_struts_action=%2Fasset_publisher%2Fview_content&_101_INSTANCE_FnOw5IVOIxE_assetEntryId=34142873&_101_INSTANCE_FnOw5IVOIxE_type=document)

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> Che cos'è l'Autorità, AGCOM. Available at <https://www.agcom.it/che-cos-e-l-autorita>



The Italian telecoms business confronts a variety of prospective difficulties, including increased demand for data. This, in fact, is expanding dramatically among both consumers and organizations thus operators will need to invest in infrastructure to accommodate this demand. Another difficulty for telephone companies is competition from over-the-top (OTT) providers like Netflix and Amazon, which have emerged as important competitors for traditional operators in video and voice services, in order to overcome this challenge operators will have to devise new strategies to compete with OTTs<sup>11</sup>. Finally, cyber dangers are growing more complex. Operators must invest in security measures to secure their customers' networks and data.

## ***1.2 The main players in the Italian Telecommunication Industry***

The telecommunications sector in Italy is vibrant and diverse shaped by industry players who have influenced its development over time. It is essential to understand these leading companies to grasp the industry's complexities, competitive landscape, and the strategies they employ to succeed in this market.

At the forefront, we have major mobile telecommunication giants that serve as conduits of information and connectivity for millions of Italians. Notable among them include TIM, Vodafone, WindTre, and Iliad each with market shares and well-defined business approaches. Telecom Italia, known as TIM stands out as a figure in Italy's telecom industry since its establishment in 1994. TIM swiftly rose to prominence by offering an array of services such as fixed-line telephony, mobile services, internet connectivity, and digital TV<sup>12</sup>. With its infrastructure and innovative offerings reaching across the nation TIM has become a household name in Italy with an extensive customer base spanning various sectors. Similarly noteworthy is Vodafone Italy – a branch of the multinational telecommunications giant Vodafone Group – making a significant impact, on the Italian telecommunications landscape. Vodafone Italy made its debut in the market back in 1995 and has since become a prominent player offering mobile phone services, high-speed internet, and digital TV packages<sup>13</sup>. Known for its focus on innovation and customer satisfaction Vodafone Italy has held its ground in the telecom sector

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<sup>11</sup> Mulla, T. (2022). Assessing the factors influencing the adoption of over-the-top streaming platforms: A literature review from 2007 to 2021. *Telematics and Informatics*, 69, 101797.

<sup>12</sup> Carta dei servizi. *Tim*. Available on [https://www.tim.it/content/dam/flytoco-areapubblica-aemfe/tim\\_it/pdf/info-consumatori/fisso/carta-dei-servizi/carta-dei-servizi.pdf](https://www.tim.it/content/dam/flytoco-areapubblica-aemfe/tim_it/pdf/info-consumatori/fisso/carta-dei-servizi/carta-dei-servizi.pdf)

<sup>13</sup> Carta del cliente. Vodafone. Available on [https://www.vodafone.it/nw/content/dam/webaem/privati-supporto/supporto-consumer/contratti-e-aggiornamenti/carta-del-cliente/Carta\\_del\\_Cliente\\_2024\\_def.pdf](https://www.vodafone.it/nw/content/dam/webaem/privati-supporto/supporto-consumer/contratti-e-aggiornamenti/carta-del-cliente/Carta_del_Cliente_2024_def.pdf)

with a strong global presence and top-notch roaming services. WindTre, on the other hand, emerged as a significant player following the merger of Wind Telecomunicazioni and Three Italy (H3G) in 2016<sup>14</sup>. This collaboration merged Wind's market foothold with Three's tech-savvy approach offering a wide range of services such as mobile phones, landline telephony, and internet for both individuals and businesses. Lastly, there's Iliad Italia under the umbrella of the company Iliad Group which shook up the Italian market upon its arrival in 2017, with attractive pricing strategies that challenged traditional norms<sup>15</sup>.

Beyond these players, Italy's telecom industry also includes other notable entities involved in fixed-line services, internet access provision, and cable-based voice communications.

TIM and Vodafone continue to play roles in the telecom industry accompanied by Fastweb, known for its expertise in high-speed fiber optics, and Open Fiber, a key player in expanding ultra broadband services nationwide. In addition to these companies, there are infrastructure providers for building and managing essential telecom components like cellular towers, fiber optic lines, and data centers. Among them, Open Fiber is notable while TIM's subsidiary Infracom and firms like Whalebone contribute significantly to network maintenance and growth. The Italian telecom landscape also includes a wave of players alongside traditional ones. Mobile virtual network operators (MVNOs) lease network capacity from entities to offer tailored services to specific market segments such, as youth or businesses<sup>16</sup>. Furthermore, the integration of telecommunications and IT has led to the emergence of communications service providers offering comprehensive solutions that blend telephony, messaging, video conferencing, and other communication tools to enhance collaboration and business efficiency. Lastly, the pivotal role played by IT and digital companies within the industry should not be underestimated. These companies provide solutions and services to support transformation and manage complex networks, which help drive innovation and efficiency in Italy's telematics sector. In summary, key players in the telecommunication industry contribute to a dynamic and competitive market environment by fostering innovation expanding connectivity and improving the digital experience for both consumers and businesses. Understanding their strategies, market positions, and contributions is crucial, for analyzing industry dynamics and predicting growth opportunities.

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<sup>14</sup> Di Turi N. (2016). Fusione Wind-Tre Italia, quale futuro per I lavoratori?. *Corriere della sera*.

<https://nuvola.corriere.it/2016/10/22/fusione-wind-3-italia-quale-futuro-per-i-lavoratori/>

<sup>15</sup> Iliad lancia la sfida a Tim, Vodafone e Wind-3: "Puntiamo al 10% del mercato". La Repubblica.

[https://www.repubblica.it/economia/finanza/2017/03/07/news/iliad\\_lancia\\_la\\_sfida\\_a\\_tim\\_vodafone\\_e\\_wind-3\\_puntiamo\\_al\\_10\\_del\\_mercato\\_-159947630/](https://www.repubblica.it/economia/finanza/2017/03/07/news/iliad_lancia_la_sfida_a_tim_vodafone_e_wind-3_puntiamo_al_10_del_mercato_-159947630/)

<sup>16</sup> Cosa sono i MVNO. *Fastweb Italia*. <https://www.fastweb.it/fastweb-plus/digital-magazine/mvno-cos-e-e-come-funziona/>

### ***1.3 Development of TIM Italia***

As previously stated, the primary telecommunications operator in Italy is TIM, which stands for Telecom Italia Mobile. Its history, which began in 1997, has been marked by success, challenges, and innovations that have propelled it to the forefront of the Italian and European telecommunications sectors. To better comprehend its relevance, it is fundamental to dig down its different developmental phases, analyzing the determinant factors and strategies adopted.

#### ***1.3.1 The origins and the rapid growth (1997 - 2006)***

TIM was created in 1997 as an autonomous society, divided from Telecom Italia, the company that had the monopoly of telecommunication in Italy at the time. Since its origins, the company has positioned itself as a leader in the mobile market which was growing exponentially by catching the opportunities offered from the diffusion of mobile phones. During this period, TIM focuses on three main pillars:

- 1) Investments in infrastructures: the company allocates substantial resources in building a nationwide mobile network, ensuring widespread coverage and quality service to its customers.
- 2) Development of new products and services: TIM constantly introduces innovative solutions and new offers such as convenient tariffs, customized packages and value-added services like multimedia messages and the first WAP services.
- 3) Marketing and communication: the company starts aggressive advertising campaigns by creating a solid image and an identifiable brand making TIM stand out in the Italian landscape.

This strategy appears to be the winning one, letting TIM rapidly conquer a significative share of the Italian mobile market<sup>17</sup>. By 2000, the company is successfully chosen by 10 million clients, consolidating its leadership in the sector.

#### ***1.3.2 Consolidation and challenges of the 21<sup>st</sup> century (2007 - 2020)***

The New Millennium brings new challenges for TIM. The telecommunications industry begins to show indications of saturation, rivalry increases with the introduction of new firms,

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<sup>17</sup> Merryll Lynch TMT Conference, presentation slides (2006). Available at [https://www.gruppotim.it/en/investors/reports-presentations/presentations-webcasts/2006/merrill\\_lynch\\_tmtconference2006.html](https://www.gruppotim.it/en/investors/reports-presentations/presentations-webcasts/2006/merrill_lynch_tmtconference2006.html)

and the 2008 global economic crisis creates an unpredictable environment. To address these difficulties, TIM has begun to implement a consolidation and innovation strategy, which may also be divided into three pillars:

- 1) Strategic acquisition: TIM begins acquiring several companies, such as Matrix<sup>18</sup>, to reinforce its presence in the broadband and fixed-line market and broaden the range of services offered.
- 2) International expansion: the company starts operations in other European countries and Brazil, diversifying its portfolio and seizing growth opportunities in emerging markets.
- 3) Investments in innovative technologies: TIM invests in Research and Development to introduce new technologies, like the 3G and the 4G, that enable faster, higher-performance services.

TIM, despite its best efforts and new strategy, is not immune to the consequences of the economic crisis. Revenues and profit margins fell, causing the corporation to reconsider its policies, focusing more on efficiency and cost reduction<sup>19</sup>.

### *1.3.3 Future perspectives: innovation and sustainability (2021 - today)*

TIM has been on a transformational path in recent years to respond to market changes and new client expectations. During this time, the firm prioritizes innovation and sustainability in its strategy. The three primary foundations of this strategy are:

- 1) Focus on the digital: TIM is massively investing in the development of innovative digital services, such as cloud computing, Internet of Things (IoT), and smart home solution, targeting the convergence between telecommunications, media, and technology.
- 2) 5G networks: TIM has been among one of the first operators in Europe to launch 5G commercial services, ensuring its customers ultra-fast connections and paving the way to new applications and services in diverse sectors such as the automotive industry or the public administration.
- 3) Sustainability: TIM is actively committed to protecting the environment and promoting sustainability, by the adoption of measures meant to reduce its environmental impact and promote the efficient use of resources. In particular they “offer diversified solutions that meet the needs of stakeholders while also integrating climate strategy, circular economy and digital growth targets”<sup>20</sup>.

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<sup>18</sup> Atto di scissione parziale di Matrix S.p.A. in favore di Telecom Italia S.p.A.

<sup>19</sup> Telecom Italia. (2024). *Free to Run - TIM Capital Market Day 2024*.

<sup>20</sup> Gruppo TIM, About Us. Available at <https://www.gruppotim.it/en/group/about-us.html>



Figure 2. TIM's new strategy<sup>21</sup>

#### 1.3.4 Challenges and opportunities for TIM's future

Despite its leadership position in the market, TIM will have to face several challenges in the always-changing telecommunication market. The first and strongest challenge is the intense competition. It is becoming extremely fierce from both national and international operators, this is driving prices to decrease leading to a strain on the company's profitability. Another important challenge is technological evolution. Since new technologies are developed in a more fastly than in the past, this requires constant investments from the company in the Research and Development department in order to keep up with the latest trends and to offer cutting-edge services to the customers. In addition to this, customers' expectations and habits keep changing during the time thus TIM is supposed to adapt and offer customized and flexible services to satisfy their clients' requests: this is another aspect requiring further investments impacting on the company's profitability. However, TIM has several opportunities as well in order to consolidate its positioning and be affirmed as a leader in the digital future. The development of the 5G networks is opening new possibilities to offer innovative services on one hand in the mobile sector, on the other hand in other sectors too, such as consumer finance, health, and education; these are shown as potential sectors for TIM to explore in the further years, as shown in TIM's 2024 - 2026 business plan. In addition, TIM has always been focused on its clients and in this way, by putting the customers first and offering them a high quality, complete and customized experience can be a key factor of differentiation for TIM in today's

<sup>21</sup> Tim's Business plan. Available at <https://www.gruppotim.it/en/group/TIM-Business-Plan-The-Journey.html>

competitive market. Lastly, TIM owns deep and rich customers data that can be used to create value because these data have the opportunity to furnish important information about the customers in order to develop newer and more efficient marketing strategies<sup>22</sup>. To seize these opportunities, TIM will have to continue investing in modernization, infrastructures, and R&D, but, at the same time, keeping customer satisfaction and sustainability as the main pillars of its strategy. The company looks forward to the future with faith, being confident of the challenges and the opportunities that will be presented. Its main objective is to reinforce its leadership in the Italian market by affirming itself as a key player in the European digital landscape and to contribute to the development of an increasingly connected society.

### ***1.4 History of the Telecommunication Industry in Brazil***

It was not until the first half of the 20th century that telephone service began to gain relevance and reach, and the industry spread. In the 1950s, telephone communication was mostly established with the help of an operator and a manual connection between two subscribers through a wire pair. This service was provided by telecommunications operators, who were licensees and distributed indiscriminately in the three spheres of government. Given the lack of industry guidelines and regulations, the system was not very comprehensive, the quality of service was precarious, and it was carried out in a disorganized and costly manner. As a result, companies stagnated in constrained segments without effective growth strategies. In the 1960s, the market saw the formalization of the first public policy for the sector, which created a new tariff system, a plan for integrating companies into a national system, and established the Brazilian Telecommunications Code, which for the first time regulated service provision and placed it under the control of the National Telecommunications Council (Contel), a body directly subordinate to the Presidency of the Republic. The 1960s also saw the creation of the Ministry of Communications, which would oversee the service concessionaires and the Constitution 1967 definitively established State control over the sector<sup>23</sup>. In the 1970s, city telephone services left much to be desired, both because of unresolved technological problems and the lack of integration among the nearly 1,000 companies operating in the sector. To remedy these problems, the Ministry of Communications sought to restructure the sector with a law creating a joint stock company with the task of planning, implementing and managing

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<sup>22</sup> Pietro Rossini, Free to Run - TIM Capital Market Day 2024 - Presentation slides, p. 16

<sup>23</sup> Santos, A. M., & Burity, P. (2002). BNDES 50 anos– Histórias setoriais: o complexo automotivo. *Rio de Janeiro: BNDES*.

the National Telecommunications System. Thus was created Telecomunicações Brasileiras S/A, Telebrás, which would be the main telecommunications service provider in the state and whose mission would be to contribute to the economic and social development of the country by improving the quality of service delivery and meeting the needs and demands of society. The new state corporation then created a pole company in each state of the federation, incorporating the existing telephone companies and their holdings and shares<sup>24</sup>. Telebrás, created as a holding company, had among its tasks to manage the participation of the union in the operators and to raise funds in foreign and domestic capital markets to be transferred to the subsidiaries for the implementation of projects approved by the Ministry of Telecommunications<sup>25</sup>. The period up to the 1980s saw significant growth in Brazil's telephone base and telecommunications industry, mainly due to the industrial and development policy adopted by Telebrás. In 1987, the implementation of a mobile phone service began to be studied, and in 1989 the first analog technology system was inaugurated<sup>26</sup>. By the late 1980s and early 1990s, Telebrás had consolidated as the holding company for a system of 27 state operators, a national operator (Embratel), two training centers, and a telecommunications research and development center and had become responsible for 95 percent of all telecommunications services in Brazil. However, it was during this same period that the system collapsed and its exhaustion became evident<sup>27</sup>. At the time, the telecommunications industry was already undergoing rapid technological changes that required operators to be agile to meet the growing demand for increasingly specialized services. However, companies ran up against legislation that subjected operators to extensive regulation by the Ministries of Communications, Finance, and Planning, making them unable to meet the high demand for investment. Telebrás was not free to define its own level of investment<sup>28</sup>.

As with other state-owned enterprises, operational inefficiency, poor service quality, financial shortfall, increasing physical deterioration of assets, and an imbalance between supply and demand, caused by a preferential orientation toward new investments at the expense of optimizing existing resources, largely due to political interference, was diagnosed<sup>29</sup>. Thus, the need to revise the structure of the model arose. Because of the Ministry of Communications'

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<sup>24</sup> Ibid.

<sup>25</sup> Novaes, A. (2000). Privatização do setor de telecomunicações no Brasil. *A privatização no Brasil: o caso dos serviços de utilidade pública. OCDE/BNDES*.

<sup>26</sup> Santos, A. M., & Burity, P. (2002). BNDES 50 anos— Histórias setoriais: o complexo automotivo. *Rio de Janeiro: BNDES*.

<sup>27</sup> Novaes, A. (2000). Privatização do setor de telecomunicações no Brasil. *A privatização no Brasil: o caso dos serviços de utilidade pública. OCDE/BNDES*.

<sup>28</sup> Ibid.

<sup>29</sup> Gremaud, A. P., Vasconcellos, M. A. S. D., & Toneto Júnior, R. (2004). *Economia brasileira contemporânea*.

perception that the need to pass a new Telecommunications Code in Congress would delay the opening to the private sector too long, the government sent a specific law to liberalize mobile phone service. The main points of the so-called Minimum Cellular Law and its regulations were:

- a. the division of the country into 10 regions for mobile phone service;
- b. the proposal to sell the so-called Band B concessions (the frequency on which Brazil's mobile phone system operates has been divided into two: Band A, operated by Telebrás system companies, and Band B, operated by competing private companies);
- c. the proposed total separation of the fixed and mobile telephone companies within two years;
- d. the definition that only after 2000 would the government begin bidding for bands corresponding to personal communication systems (PCS)<sup>30</sup>.

The law led to Telebrás's local subsidiaries dividing up the mobile phone business, and at the time of privatization, there were two Telebrás subsidiaries in each state, one fixed and the other mobile. Telebrás was divided into three major local fixed-line telephone companies (Tele Norte-Leste, Telesp, and Tele Centro-Sul), eight mobile telephone companies corresponding to the concession areas for this service defined by the July 1996 Minimum Cellular Service Law, and Embratel as the long-distance operator. The model adopted by the government was to divide Telebrás into 12 holding companies<sup>31</sup>.

### ***1.5 The Main Players in the Brazilian Telecommunication Industry***

The Brazilian telecommunications business is a dynamic and competitive market that plays an important role in linking the country's large and diversified population. As we observed, the business is always changing, but a few significant players have persistently dominated the field.

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<sup>30</sup> Novaes, A. (2000). Privatização do setor de telecomunicações no Brasil. *A privatização no Brasil: o caso dos serviços de utilidade pública*. OCDE/BNDES.

<sup>31</sup> Ibid.



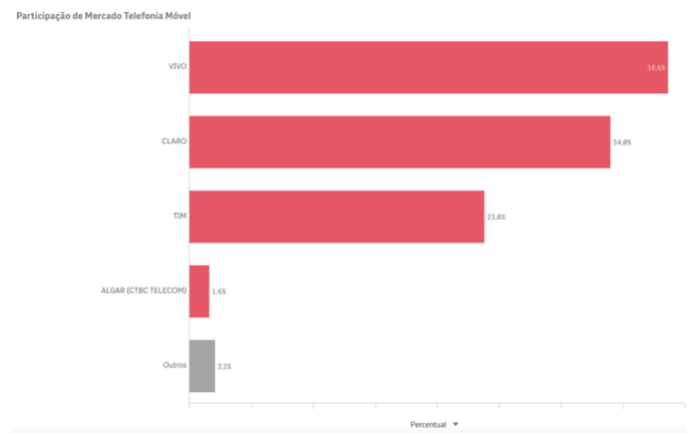


Figure 3. Percentages of the mobile market (march 2024) <sup>32</sup>

Without a doubt, the most prominent companies in Brazilian telecom are Vivo, Claro, and TIM: these three corporations control almost 96% of the mobile phone industry, with Vivo leading ahead of the rest<sup>33</sup>. Several factors contribute to their supremacy, including substantial network coverage, established brand awareness, and numerous service packages that appeal to a wide range of customer demands.

Vivo is the dominating player and thus the one with the largest market share, exceeding 38% in recent quarters. It is a subsidiary of Telefónica, the Spanish telecommunications company, and offers diversified services, going from mobile and fixed-line to Internet services. Vivo has been particularly dedicated to innovation and customer satisfaction, in particular it is well-known for the constant network coverage, particularly in major cities and it has also invested much in infrastructure and technology, including the expansion of 4G and 5G networks<sup>34</sup>.

Claro, a phone provider owned by América Móvil, a Mexican telecom powerhouse, is close behind with a 34.0% market share; it has created a good reputation via aggressive marketing, reasonable price plans, and a diverse variety of services. It has also been one of the first to bring new technologies and services ranging from digital TV and broadband internet, to supplement its mobile offerings, and this approach of bundling services has created a big user base, boosting its competitive advantage<sup>35</sup>.

TIM is an Italian-owned corporation and it is the third-largest competitor in mobile telecommunications, with 23.8% of the market share. The focus of the company is to provide

<sup>32</sup> Anatel (2024). *Data on Participation in the Mobile Market*. Available at: <https://informacoes.anatel.gov.br/paineis/aceessos>

<sup>33</sup> Ibid

<sup>34</sup> Tude, E. (n.d.). *O que muda com a ida da Vivo para o GSM*. Teleco. <https://www.teleco.com.br/comentario/com165.asp>

<sup>35</sup> Claro - *Você merece o novo*. (n.d.). <https://www.claro.com.br/institucional>

affordable plans and reliable services, this seems particularly attractive to young and budget-conscious consumers. Its emphasis on transparency and customer-oriented initiatives has earned it a loyal customer base<sup>36</sup>. TIM has also been active in expanding network coverage and improving service quality to compete more effectively with Vivo and Claro.

Lastly, ALGAR (CTBC TELECOM), although smaller with a market share of 1.6%, plays a crucial role in the industry, particularly in regional markets. ALGAR's focus on personalized customer service and its strong presence in specific areas, such as the inland regions of Brazil, give it a unique position. Despite its small size, ALGAR has demonstrated resilience and adaptability, exploiting its niche markets to sustain its business.

For what concerns the fixed-line landscape, the situation is quite similar, however, there is one major change: one of the companies with the highest percentages is a new player while TIM is not in the dominating part of the market share anymore.

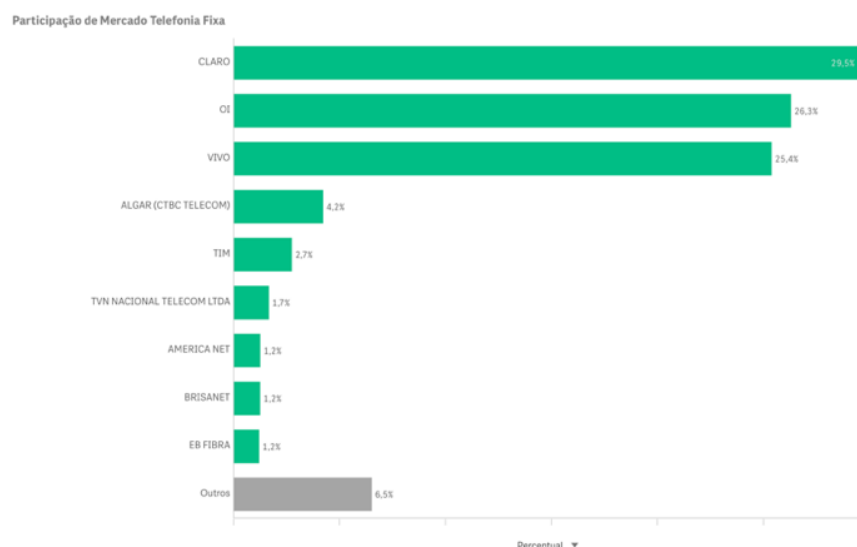


Figure 4. Percentages of the fixed-line market (march 2024)<sup>37</sup>

As can be seen, Claro, Oi, and Vivo account for the largest portion of the market share (more than 80%). Claro leads the market in this situation, accounting for almost 30% of the total. Its success can be attributed to the company's extensive range of services and strong national presence, which permit it to attract a diverse customer base; indeed, the company has invested

<sup>36</sup> *Institucional / Sobre a TIM*. (n.d.). [https://tim.com.br/sobre-a-tim?\\_ga=2.224722140.737100570.1716899990-1665567222.1714054980&\\_gl=1\\*1ae050q\\*\\_ga\\*MTY2NTU2NzIyMi4xNzE0MDU0OTgw\\*\\_ga\\_0SZQLHM90J\\*MTcxNjg5OTk4OS40LjAuMTcxNjg5OTk4OS42MC4wLjA](https://tim.com.br/sobre-a-tim?_ga=2.224722140.737100570.1716899990-1665567222.1714054980&_gl=1*1ae050q*_ga*MTY2NTU2NzIyMi4xNzE0MDU0OTgw*_ga_0SZQLHM90J*MTcxNjg5OTk4OS40LjAuMTcxNjg5OTk4OS42MC4wLjA).

<sup>37</sup> Anatel (2024). *Data on Participation in the Fixed-line Market*. Available at: <https://informacoes.anatel.gov.br/paineis/acessos>

heavily in advanced technologies and in the fiber optic network therefore leading to an improvement in the user experience by providing stable and fast connectivity.

Oi, with a market share of 26.3%, is the second largest fixed-line operator. Its long history in the telecommunications industry has enabled it to develop a strong network infrastructure: the company offers a variety of services, such as traditional fixed-line telephony and broadband Internet, seeking to maintain competitiveness through packages and promotions. Despite financial difficulties in recent years, Oi still is an important pillar in the Brazilian telecommunications market.

Vivo, with a 25.4% share, is another major player in the industry. The company's strong reputation for service quality and network reliability has attracted many customers, as it is possible to see from being the leader in the mobile industry. By way of being a subsidiary of Telefónica, Vivo benefits from the advanced technologies and global strategies of its parent company, offering fast services comprehending mobile and fixed-line telephony as well as high-speed Internet. Vivo continues to expand its fiber optic network, improving access to the internet throughout the whole country.

Lastly, TIM has a very small share of the market (2.7%). From this, it is possible to notice that, even if TIM provides fixed-line services, it is not as developed as it is in Italy thus its main focus in the Brazilian strategy is the mobile market.

## ***1.6 Development of Tim Brazil***

TIM Brasil is a subsidiary of Telecom Italia that has built itself a significant presence in the Brazilian telecommunications business. Its journey is told via smart acquisitions, an unwavering pursuit of technology improvements, and a deep dedication to innovation.

TIM Brasil began its journey in 1995, after the split of Telecom Italia's mobile and fixed-line businesses. It entered the Brazilian market three years later, acquiring Telepar Celular, Telesc Celular, and CTMR Celular and in the early 2000s witnessed continued expansion with the acquisition of Maxitel and substantial investments aimed at bolstering network infrastructure<sup>38</sup>. By 2003, TIM Brasil had a devoted client base of 4 million, and the years 2004 to 2006

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<sup>38</sup> Tim (2010). "TIM Participações Relatório Anual 2010. TIM: <https://api.mziq.com/mzfilemanager/v2/d/4c4aa51f-1235-4aa1-8b83-adc92e8dacc3/b6a20b7b-83d7-469d-b5ca-fa642b93c65b?origin=1>

witnessed a big consolidation attempt, with TIM Nordeste, TIM Sul, and Tele Nordeste Celular uniting into a single holding company: TIM Participações<sup>39</sup>.

Then there is a period, that lasted from 2007 to 2012 that was characterized by rapid expansion: TIM Brasil's acquisition of Intelig Telecomunicações in 2009 strengthened its position in the fixed-line sector and, in addition to this, the firm obtained a fixed-line telephone service (STFC) license, consolidating its position as a full telecommunications operator<sup>40</sup>. This period also saw TIM Brasil surpass Claro to become the second-largest mobile operator in Brazil even if, as we saw, TIM is currently the third. Their commitment to staying ahead of the curve was evident in the acquisition of AES Atimus, which bolstered their fiber-optic network, and their bid for 4G frequencies<sup>41</sup>.

While 2013 brought challenges in the form of a SIM card fraud scandal and suspension of sales in some states, TIM Brasil demonstrated resilience: under the leadership of Rodrigo Abreu, who took over from Andrea Mangoni as CEO, the company shifted its focus to innovation: it invested heavily in expanding its 4G and 5G networks, positioning itself as a leader in next-generation technologies<sup>42</sup>. Additionally, its active participation in developing smart city projects showcased its commitment to shaping Brazil's digital future for example with the partnership with Huawei in order to make Curitiba the first 5G city<sup>43</sup>.

The last main steps of TIM's strategy to consolidate even further its position are many but the most important are the acquisition of Oi in accordance with Claro and Vivo: the top-three companies, in 2020, acquired 32% of the telecommunication company whose main focus is in the fixed-line services<sup>44</sup>.

TIM Brasil's strong foundation built on strategic acquisitions, unwavering dedication to innovation, and focus on customer satisfaction positions them well for continued success in the ever-evolving Brazilian telecommunications landscape. As they embrace next-generation

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<sup>39</sup> Ibid.

<sup>40</sup> *TIM anuncia compra da rival em telefonia Intelig*. (2009). Folha de S.Paulo. <https://www1.folha.uol.com.br/mercado/2009/04/551976-tim-anuncia-compra-da-rival-em-telefonia-intelig.shtml>

<sup>41</sup> Reuters E Valor Online, D. G. C. I. (2011, July 8). *TIM compra empresa de telecom da AES por R\$ 1,6 bilhão*. Tecnologia e Games. <https://g1.globo.com/tecnologia/noticia/2011/07/tim-fecha-acordo-para-comprar-aes-atimus-por-us-1-bilhao.html>

<sup>42</sup> *Dona da TIM fará investimento recorde*. (2015, March 5). Época Negócios. <https://epocanegocios.globo.com/Informacao/Visao/noticia/2015/02/dona-da-tim-fara-investimento-recorde.html>

<sup>43</sup> *TIM Brasil and Huawei Sign MoU to Transform Curitiba into the Country's First "5G City."* (2022). huawei. <https://www.huawei.com/en/news/2022/3/mou-tim-5g-city-2022#:~:text=As%20the%20leader%20in%204G,major%20operators%20in%20the%20world.>

<sup>44</sup> *Oi vende rede móvel para consórcio formado por Tim, Vivo e Claro por R\$ 16,5 bilhões*. (2020, December 14). G1. <https://g1.globo.com/economia/noticia/2020/12/14/oi-vende-rende-movel-para-consorcio-formado-por-tim-vivo-e-claro-por-r-165-bilhoes.ghtml>

technologies and expand their digital offerings, TIM Brasil is poised to remain a driving force in connecting Brazilians and shaping the country's digital landscape and its success is pretty tangible: in 2023, TIM Brasil's generated 27,1% of the total of Gruppo TIM's revenues<sup>45</sup>.

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<sup>45</sup> Barbosa, F. (2024, February 14). *Receita do Grupo TIM cresce 3,2% em 2023, para 16,3 bi de euros*. TELETIME News. <https://teletime.com.br/14/02/2024/receita-do-grupo-tim-cresce-32-em-2023-para-163-bi-de-euros/>



# Chapter 2: Theoric elements to analyze the Telecommunication Industry

## 2.1 *How to approach a competitive analysis*

In today's changing environment of businesses, completing a thorough competition analysis is a necessary foundation for making educated strategic decisions. However, to do so, it is essential to dive into the complex network of elements that impact an organization's success, allowing it to navigate the ever-changing competitive landscape more effectively. In addition to this, recognizing the competitive environment's duality, which includes both the micro and macro spheres, is an important part of this process because each of these domains has a distinct and important impact, needing a methodical investigation.

The microenvironment refers to a company's immediate surroundings, including the actors and the factors that have a direct influence on its operations and competitive standing<sup>46</sup>. Indeed, the emphasis is on knowing the specific entities that impact the company's day-to-day operations and market position so customers are crucial in this context because a thorough grasp of their requirements, interests, and purchasing habits is essential for creating focused marketing tactics and products or services that appeal to their aspirations<sup>47</sup>. Also, suppliers have an important role in the microenvironment: the dependability, affordability, and quality of suppliers have a direct impact on a company's production capability and pricing strategy thus maintaining solid supplier connections and knowing their negotiating strength is crucial to guaranteeing effective resource-management and a long-term cost structure. Beyond consumers and suppliers, the microenvironment includes competitors as these are the firms that compete for the same customers and resources in the same environment, thus analyzing their strengths, limitations, pricing patterns, and marketing techniques is crucial for establishing a competitive advantage and bypassing them in the marketplace. Furthermore, middlemen such as distributors, wholesalers, and retailers play an important role in connecting the company's

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<sup>46</sup> Mavondo, F. T. (1999). Environment and strategy as antecedents for marketing effectiveness and organizational performance. *Journal of strategic marketing*, 7(4), 237-250.

<sup>47</sup> Worthington, I., & Britton, C. (2006). *The business environment*. Pearson Education.

products to its target audience so understanding their capabilities and margins is critical for effective product distribution and maximum market reach<sup>48</sup>.

While the microenvironment gives a thorough picture of the company's personal competitive situation, a micro-only study offers a restricted perspective. The macro-environment, which includes the larger external variables that impact the overall market landscape, deserves equal consideration<sup>49</sup>. These complex and linked variables may have a substantial influence on the development of a sector and the performance of individual enterprises within it, understanding economic elements like inflation, interest rates, and economic growth patterns enables firms to adjust their strategy and preserve financial viability in the face of changing market conditions. Similarly, being informed about social trends and cultural developments enables businesses to anticipate changing client preferences and modify their services appropriately, for example, an increasing emphasis on environmental consciousness may entail the creation of eco-friendly products or the use of sustainable manufacturing techniques<sup>50</sup>. However, the macroeconomic environment has an impact on more than just social and economic aspects: technological breakthroughs may disrupt whole sectors, needing ongoing innovation and adaptation to stay competitive; furthermore, environmental concerns and legal constraints can significantly influence how firms function. Companies that ignore the macroeconomic climate risk losing out on critical possibilities or possible dangers that might jeopardize their long-term prosperity.

When doing a competitive analysis, it is critical to differentiate between these contexts in order to use the right analytical frameworks. Porter's Five Forces model can be used to undertake a thorough investigation of the microenvironment as this model aids in assessing competitive pressures within an industry by considering the threat of new entrants, the bargaining power of suppliers and buyers, the danger of replacement products or services, and the intensity of competitive rivalry<sup>51</sup>. In contrast, the macro environment needs a larger lens to capture the diverse external influences that affect the sector and the PESTEL analysis is the most adaptable and effective tool for this research since it carefully examines the political,

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<sup>48</sup> Bergen, M., & Peteraf, M. A. (2002). Competitor identification and competitor analysis: a broad-based managerial approach. *Managerial and decision economics*, 23(4-5), 157-169.

<sup>49</sup> Vlado, C., & Chatziniolaou, D. (2019). Methodological redirections for an evolutionary approach of the external business environment. *J. Mgmt. & Sustainability*, 9, 25.

<sup>50</sup> Gimbert, X. (2011). Macro Environment. *Think Strategically*, 46-60.

<sup>51</sup> Gerard, H., & Bruijl, T. (2019). *The relevance of Porter's five forces in today's innovative and changing business environment*. SSRN.



economic, social, technical, environmental, and legal components and each of these components has the potential to impact market circumstances and strategic prospects significantly<sup>52</sup>. By clearly distinguishing between the micro and macro environments, businesses can ensure that their competitive analysis is comprehensive and insightful. This dual strategy enables firms to efficiently manage the current competitive landscape while also anticipating and adapting to bigger trends and movements in the external environment: understanding the microenvironment using Porter's Five Forces model allows organizations to recognize and respond to direct competition challenges, maximize their strategic posture, and improve operational efficiency and, simultaneously, studying the macroenvironment using the PESTEL framework enables organizations to notice and prepare for larger external impacts, identify new opportunities and risks, and align long-term strategy with changing market circumstances.

Finally, combining insights from micro and macro assessments allows organizations to establish strong, informed plans that improve their market competitiveness and resilience. This holistic strategy guarantees that firms are prepared to face immediate competitive difficulties while being nimble and sensitive to wider external developments. Businesses that regularly monitor and analyze both environments may remain ahead of the competition, capitalize on new possibilities, and reduce possible risks, resulting in long-term development and success in a dynamic and ever-changing market landscape.

## **2.2    *The microenvironment: Porter's Five forces***

As we saw, the microenvironment is composed of three major players: competitors which can be firms, buyers which can be customers and suppliers. From the analysis of such forces, a company can estimate the long-term profitability of an industry. The starting point of the analysis is suppliers, that provide raw materials and different types of machinery needed to make companies perform their activities. In the microenvironment, the firms are competing in order to attract a greater number of customers over the other competitors, and in order to understand why some companies are more profitable than others, Michael Porter developed a framework that was based on two main features of the environment to define profitability: the attractiveness of the sector and the intensity of the competition. This framework is composed

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<sup>52</sup> Issa, T., Chang, V., & Issa, T. (2010). Sustainable business strategies and PESTEL framework. *GSTF International Journal on Computing*, 1(1), 73-80.

of five forces that are rivalry among existing firms, the threat of new entrants, the threat of substitutes, the bargaining power of buyers, and the bargaining power of suppliers; out of these five forces, the first three are horizontal and the last two are vertical forces, the stronger a force is, the lower profitability will be<sup>53</sup>. This model became popular among industries to develop better strategies. In order to apply this framework within the telecommunication industry is better to have some theoretical notions and understand which are the main structural determinants for each force.

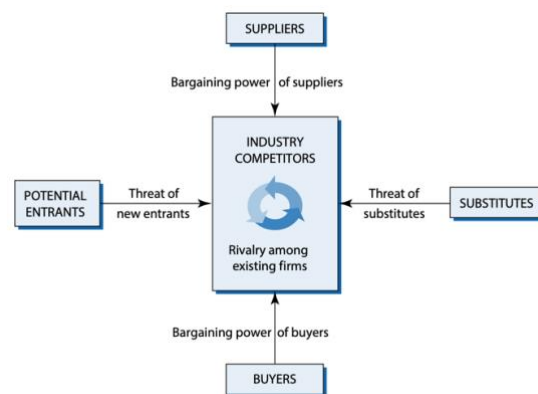


Figure 5. Porter's five forces of competition framework<sup>54</sup>

### 2.2.1 Threat of New Entrants

This force entails competitors trying to enter a market, these competitors may be a new existing company or a company already in the market but adopting a differentiation strategy and it refers to the ease with which new companies can enter an industry and compete with established firms. In particular, for what concerns this force, it is relevant the firm's form of entry because, usually, companies have to bear several difficulties which Porter calls barriers to entry. One of the main barriers to entry highlighted by Porter is capital requirements: in order to start a new business, firms have to face high costs therefore this can deter new entrants; another barrier is the economies of scale: established firms have a cost advantage over new entrants because they can spread the fixed costs of production over a larger volume of output and also established firms have a cost advantage over new entrants due to factors such as

<sup>53</sup> Dobbs, M. E. (2014). Guidelines for applying Porter's five forces framework: a set of industry analysis templates. *Competitiveness review*, 24(1), 32-45.

<sup>54</sup> Grant, R. M. (2021). *Contemporary strategy analysis*. John Wiley & Sons.

ownership of low-cost resources or learning curve advantages<sup>55</sup>. In addition to these, there are other barriers such as product differentiation: in a differentiated product business, established companies have the benefit of brand identification and consumer loyalty, therefore new entrants must spend disproportionately substantially on advertising and marketing to achieve brand awareness. Also, established firms have relationships with retailers and distributors that make it difficult for new entrants to get their products to market, however, with the creation of the Internet this barrier became easier to overcome. Finally, we have two last barriers: the first one is more political and it is one of the most effective as it is created by the government indeed governments have the power to regulate industries in ways that make it difficult for new entrants to compete; the other one is the retaliation by established firms: this can be made by cutting prices, increasing advertising, promoting sales or litigation, but in order to avoid this, new entrants may initiate small-scale entry into marginal market segments<sup>56</sup>. The effectiveness of barriers to entry depends on the resources and capabilities of potential entrants because barriers that are effective against new companies may be ineffective against established firms that are diversifying from other industries.

### 2.2.2 Threat of substitutes

This force represents the threat of products that can replace goods and services by satisfying the same need<sup>57</sup>. It is possible to affirm that this corresponds to the elasticity of the demand respectively to the price: if the demand is elastic then it means that there is the existence of substitutes so customers will decide to switch to another product based on price, while when the demand is inelastic it does not exist a substitute for that said product and thus customers will not be sensitive to price changes. A customer could decide to switch from one product to another if the good is perceived as a commodity and the competitor adopts a strong communication strategy. The threat of substitutes is particularly strong for industries that sell products that are commoditized so products that are seen as essentially the same by customers, such as gasoline or cigarettes, or that have high margins so if a product has a high-profit margin, there is more incentive for firms to enter the market and offer substitutes. The

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<sup>55</sup> Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard business review*, 86(1), 78.

<sup>56</sup> C. V. Oster and J. S. Strong Predatory Practices in the US Airline Industry (Washington DC, 2001).n  
<https://ntl.bts.gov/lib/17000/17600/17602/PB2001102478.pdf>.

<sup>57</sup> Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard business review*, 86(1), 78.

absence of close substitutes for a product means that consumers are comparatively insensitive to price<sup>58</sup>.

### 2.2.3 *Rivalry among existing firms*

In most industries, rivalry among firms within the industry is the primary determinant of the overall state of competition and the general level of profitability. Of course, rivalry can be different among industries since sometimes it can affect prices which can decline below the level of costs causing losses to the industries but, other times, rivalry focuses on advertising or innovation. The level of price rivalry between established enterprises is determined by interactions among six elements. Firstly, the concentration of firms. It relates to the size and distribution of firms competing in the market; as the number of firms in a sector rises, it becomes more difficult to coordinate prices, and the likelihood that one firm will start a cut of prices rises. In contrast, in markets dominated by a single firm or by a small group of companies, price competition tends to be restrained. Competition focuses on advertising, promotion, and new product development. The study of the industrial concentration is crucial to analyze the market power of the firms, and to have a significant market share is a strength for the firm. A sector is concentrated when firms in it have high market power and concentration reflects actual competition. Then, it is important to focus on the diversity of competitors which is another important element of rivalry: depending on how similar their beginnings, goals, costs, and strategies are, competing businesses may be able to avoid price rivalry by coordinating their prices<sup>59</sup>. Thirdly, product differentiation is another important factor influencing this force, this is about the differences that the customers perceive from one product to another, and the degree of differentiation depends on the ability of the firms to create differences in consumers' perceived value by working on attributes and perceived benefit and increasing switch costs. The degree of differentiation is influenced by brand equity, the characteristics of the goods, and the consumer characteristics. Brands work on different attributes of the products in order to gain a higher perception of their product from customers and this can be achieved by focusing on the core attributes of a product, working on experience, through symbolic attributes. Then, there are excess capacity and exit barriers: for excess capacity is intended the products that remain unused when the supply does not meet the demand, this encourages firms to offer price cuts to attract new business but it can also be

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<sup>58</sup> Grant, R. M. (2021). *Contemporary strategy analysis*. John Wiley & Sons.

<sup>59</sup> Schmalensee, R. (1989). Inter-industry studies of structure and performance. *Handbook of industrial organization*, 2, 951-1009.

cyclical or part of a structural problem resulting from overinvestment and declining demand. Barriers to exit are obstacles to the adjustment of the production capacity that prevent a firm from exiting the market, typical barriers to exit include highly specialized assets, huge exit costs, and inter-related businesses. The last two elements influencing this force are cost conditions and economies of scale. Cost conditions mean that industries with high fixed costs are more likely to have price competition, as firms will take on any business that covers their variable costs while economies of scale can be an influence because if firms are able to achieve lower costs by producing a larger volume of output it can lead to price competition because firms will try to gain market share<sup>60</sup>.

#### 2.2.4 Bargaining Power of Buyers

This force denotes the customers' ability to exert pressure on the firms and seek lower prices. It depends on two substantial factors: price sensitivity among customers and bargaining power relative to the firms within the industry. The price sensitivity depends on how important the product is to the buyer's total cost, how differentiated the product is, how intense the competition is amongst buyers, and how critical the product is to the quality of the buyer's own product or service. The greater it is, the higher the sensitivity. The relative bargaining power of firms in the industry is based on the size and concentration of buyers with respect to suppliers, the extent to which buyers are informed about suppliers' prices and costs, and the buyer's ability to integrate backward. In general, buyers are powerful when they are large and concentrated, so the seller has a problem of losing a buyer when buyers are well-informed about prices and costs as they will negotiate effectively, when buyers can easily switch to another supplier when the price is too high, and finally when the product being bought by a buyer is a major cost for them or not critical to the quality of the other product or service. Buyers with strong bargaining power will be able to squeeze profits from an industry simply by making firms lower prices to accommodate them<sup>61</sup>.

#### 2.2.5 Bargaining Power of Suppliers

This force is similar to the bargaining power of the buyer but it has an important difference: the buyers are the firms within an industry and the suppliers are the producers of inputs. Just as the power of buyers, the power of suppliers depends on how easy it is for a firm

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<sup>60</sup> Grant, R. M. (2021). *Contemporary strategy analysis*. John Wiley & Sons.

<sup>61</sup> Ibid.

to switch suppliers and the relative bargaining powers on each side of the equation. In this respect, suppliers of common materials tend to have less power than those who supply complex or specialized products or materials. The bargaining power of suppliers is high when a few firms hold a large market share, there are very few good substitutes for what the supplier offers, the costs of switching suppliers are high, and patents or copyrights give the supplier an edge. The potential impact of suppliers' bargaining power is the increase of price over the costs and the reduction of quality that diminishes business profitability<sup>62</sup>.

#### 2.2.6 Critics of the framework

Porter's five forces framework has faced criticism on two main fronts. Firstly, its theoretical basis, rooted in the “structure–conduct–performance” paradigm of industrial organization, is seen as less rigorous compared to game theory. Secondly, critics have recognized its empirical weakness because a firm's industry environment only modestly impacts its profitability<sup>63</sup>. Another popular criticism is proposed by Schumpeter that, with the concept of hyper-competition, challenges the Porter framework by emphasizing constant industry structural change driven by innovation and entrepreneurship. Though traditionally, industry structures have been stable, digital technologies and global competition are accelerating structural changes, leading to hypercompetitive environments where advantages are fleeting<sup>64</sup>. Another concept that has to be noted is that in “winner-take-all” industries, market leaders like Apple in mobile devices and Google in web search dominate profitability due to network externalities and positive feedback loops. In these cases, the dynamics of competitive advantage become more critical than traditional industry analysis, as market share leaders attract resources and sustain dominance, with supporters competing for leadership if the current leaders fall. Despite these criticisms, industry analysis remains crucial. Profitability differences within industries often exceed those between industries, and industry analysis aids firms in strategic decision-making by identifying competitive threats, attractive segments, and sources of competitive advantage. However, the limitations of the Porter framework necessitate complementary analytical approaches.

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<sup>62</sup> Ibid.

<sup>63</sup> Rumelt, R. P. (1991). How much does industry matter?. *Strategic management journal*, 12(3), 167-185.

<sup>64</sup> Schumpeter, J. (1934). *The theory of economic development* Harvard University Press. Cambridge, MA.

## ***2.3 Porter's Five Forces of Tim Italia and Brasil***

Analyzing Porter's Five Forces for Tim Italia and Tim Brasil is vital for understanding the competitive dynamics within their respective markets as this framework offers a structured approach to evaluate the various factors that influence profitability and competition, providing insights into market conditions and potential challenges; in addition, by conducting this analysis, companies can better understand their strategic position and the pressures they face from competitors, new entrants, suppliers, buyers, and substitute products or services. Comparing the Five Forces between Tim Italia and Tim Brasil is particularly important as it allows for a comprehensive assessment of how different market environments impact business strategies and performance. This comparison can reveal critical differences and similarities, guiding both companies in tailoring their approaches to maximize competitive advantage and achieve sustained growth in their distinct markets.

### **2.3.1 Porter's Five Forces of Tim Italia**

*Threat of new entrants:* There is no threat of new entrants for the telecommunications industry in Italy, mainly due to the high entry barriers in this sector because, to begin with, a considerable initial investment is required in infrastructure, especially building up communication networks, acquiring spectrum licenses, and sophisticated technologies. Again, substantial government rules and laws exist that prevent the entrance of newer players. At the same time, frequency allocation and the quality of service are carefully regulated by Italian authorities, limiting the possibilities of entrance for new competitors. Innovations in technology and business models like MVNOs represent another threat to operators. However, most MVNOs do not invest much money in infrastructure but prefer to lease the capacity of significant operators' networks<sup>65</sup>.

*Threat of substitutes:* The threat of substitutes is moderate in the telecommunication industry since, with the advancement in communication technologies, there are several substitutes to the traditional voice telephone or short message services with the likes of WhatsApp, Telegram, and in general the provision of VoIP services by Skype, Zoom, amongst

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<sup>65</sup> Lee, S., Chan-Olmsted, S. M., & Ho, H. H. (2008). The emergence of mobile virtual network operators (MVNOs): An examination of the business strategy in the global MVNO market. *The International Journal on Media Management*, 10(1), 10-21.

others, which have significantly affordable, and in most cases, accessible means of accessing customer communication, thus reducing the reliance on traditional telecommunications services<sup>66</sup>. However, some of the strengths of TIM's network are more challenging to duplicate for substitute services: quality, reliability, and coverage. Apart from this, a number of the features offered by telecommunication services have more comprehensive coverage of integrated services—for instance, call security and service continuity—that is still a display of value addition to several customers. Additionally, TIM Italia boasts and delivers one seamless, all-encompassing bundle of services to provide mutually distinct customer needs. However, new technologies, such as 5G and the Internet of Things (IoT), could create both new opportunities and new threats from new entrants and existing competitors and to mitigate the threat of substitute services TIM Italia could invest in advanced technologies, expanding its digital service offerings, and integrating innovative solutions that improve the overall customer experience <sup>67</sup>.

*Rivalry among existing firms:* acts as one of the most potent forces in the telecommunications sector since TIM Italia faces several operators, which include Vodafone, Wind Tre, and Iliad, who have intense competition for their market share. Competition is opened by price wars, technological improvements, and promotional offers used to woo new customers. The permanent evolution of technologies, coupled with the demand for modern high-performance networks, intensifies competitive pressures even more. Operators never stop pursuing opportunities to distinguish themselves through product innovation, improved service quality, and network coverage. TIM Italia always strives to be at the forefront concerning its offerings, technologies, and services to be ahead in the marketplace. As a new entrant in the market is penetrating, growing demand for digital services drives up the competition; hence, TIM Italia should be flexible and promptly follow the changes in the market<sup>68</sup>.

*Bargaining Power of Buyers:* because the force is also high in the telecommunications industry, both individual and corporate customers have numerous options to choose from, with different operators offering competitive packages and promotions to lure new users.

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<sup>66</sup> Cecere, G. (2009). VoIP diffusion among new entrants: a path dependent process. *Industry and Innovation*, 16(2), 219-245.

<sup>67</sup> Sarfaraz, A., & Hämmäinen, H. (2017, November). 5G transformation: How mobile network operators are preparing for transformation to 5G?. In *2017 Internet of Things Business Models, Users, and Networks* (pp. 1-9). IEEE.

<sup>68</sup> Cricelli, L., Gastaldi, M., & Levialdi, N. (2002). The impact of competition in the Italian mobile telecommunications market. *Networks and spatial economics*, 2, 239-253.



In addition, it makes it easy to shift operators because, in this way, this raises the bargaining power of end customers. The customer will also be wary and demanding about service quality connection speed, and pricing, which continuously exerts pressure on operators towards improvement, as is the case with TIM Italia. For this reason, TIM Italia should focus on innovative solutions, quality of service, and competitive prices to retain existing customers and attract new ones. The loyalty programs and improvement in user experience will offset the bargaining power of buyers.

*Bargaining Power of Suppliers:* This can vary enormously in the case of the telecommunications industry since companies like TIM Italia rely on a wide array of suppliers for technology equipment, software, network services, and infrastructure maintenance. Some suppliers, in particular, have massive leverage because they have a strong market presence or there are very few alternatives: in this respect, the network equipment vendors with critical technologies that the functioning of TIM Italia depends on—companies such as Ericsson, Nokia, and Huawei. On the other hand, TIM Italia, as a well-established large player, has some bargaining power and can influence the contract terms based on its size and importance. The high overall scope of operations allows TIM Italia to obtain more preferential terms from its suppliers and, through this part, from its weakness of bargaining power.

### 2.3.2 Porter's Five Forces of Tim Brasil

*Threat of new entrants:* In order to operate in the telecommunications sector in Brazil, it is necessary to be authorized to do so, which only happens with the approval of the regulatory agency, Anatel. Any company interested in entering the market must meet certain prerequisites, such as economic and financial conditions, fiscal regularity, technical quality, as well as having to present a technical operating project. The same goes for companies that are already in the market and intend to operate in a new geographical area or obtain operating licenses in another frequency band. There is a high potential for economies of scale and scope on the part of established companies and indeed the need for scale is a peculiarity of the telecommunications sector<sup>69</sup>. The concession regime itself, which ensures a certain stability in the market can be considered a cost advantage independent of scale, given that access to the networks of the former Telebrás is unique. There is also the need for high investment in building and expanding

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<sup>69</sup> Quintella, R., & Costa, M. A. (2009). The mobile telephony sector in Brazil after SMP: strategies of operators and fixed-mobile convergence. *Revista de Administração Pública*, 43, 123-150.

networks, subsidies, and marketing to build and maintain the brand. Such a large amount of capital investment requires a high level of commitment from companies, which can lead to retaliation against potential entrants. Given this, we know that any entrant into the industry must have a very high amount of capital and be willing to face possible retaliation from existing competitors thus it is possible to say that this force is relatively low.

*Threat of substitutes:* The threat of substitutes exists and it is moderate as well. With the evolution and development of new products based on IP protocols, converging on the same network, the range of possibilities for companies outside the industry expands, allowing them to visualize offering something different to consumers. In Brazil an example can be the Wimax technology as a deconcentrating innovation, capable of allowing companies from other markets to offer associated services in direct competition with traditional companies in the sector. As it has lower entry barriers and requires a lower level of initial investment, it enables internet providers, cable TV companies and small telecommunications companies, once authorized, to offer wireless internet services. Changes in legislation and government incentives for the use of new technologies can also affect the dynamics of the market<sup>70</sup>.

*Rivalry among existing firms:* From the point of view of competition in the industry, it can be said that, despite having a large number of companies operating in the market, it is largely dominated by a few players as it is possible to see from Figure 2. The fixed costs found in the sector are high, there is little differentiation between companies' services, and there are few switching costs for the end consumer which can lead to a price war and increased competition thus we can say that this force is high<sup>71</sup>.

*Bargaining Power of Buyers:* It is possible to say that sometimes the buyers' behavior is directly linked to their income level. For those with higher purchasing power, the demands are more sophisticated and they prioritize broad flexibility, wanting integrated services that include home devices such as TV, security, internet, and telephony<sup>72</sup>. The price elasticity of demand is high, but the price of telecommunications services is directly affected by government regulatory policies which, in some cases, determine the composition of tariffs,

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<sup>70</sup> Tigre, P. B., et al. (2008). Perspectives on investment in information and communication technologies. Rio de Janeiro: UFRJ, Institute of Economics.

<sup>71</sup> Quintella, R., & Costa, M. A. (2009). The mobile telephony sector in Brazil after SMP: strategies of operators and fixed-mobile convergence. *Revista de Administração Pública*, 43, 123-150.

<sup>72</sup> Tigre, P. B., et al. (2008). Perspectives on investment in information and communication technologies. Rio de Janeiro: UFRJ, Institute of Economics.

subsidies in the provision of services and the impact of taxation<sup>73</sup>. For mobile telephony, prices are determined by the free market and the fact that consumers face some switching costs due to the cost of connection and network externalities, where the cost of calls between lines of the same operator is lower than when made to a second operator, weighs in favor of the companies in the sector such as TIM Brasil. However, the level of information consumers have about the prices and offers of all the companies in the sector can be considered good, since price comparisons are perfectly possible with a simple visit to the operator's website or store. Number portability also contributes to the consumer's favor, where changing the operator, whether fixed or mobile, does not mean changing the phone number so it is possible to say that this force is high<sup>74</sup>.

*Bargaining Power of Suppliers:* According to the Telecom Yearbook, the supplier market is fragmented, with several companies capable of supplying equipment, components and infrastructure to operators, and is therefore less concentrated than the purchasing industry. Their sales depend heavily on the growth in demand from operators. Uncertainties over investments, whether in expanding networks or adopting new technologies, directly affect the supplier sector's performance, however, as the industry is historically dependent on imported inputs, fluctuations in the dollar affect suppliers' prices thus this issue is certainly something that affects price negotiation and weighs in favor of the supplier industry, demonstrating its importance to buyers<sup>75</sup>. Therefore we can conclude by saying that this force is relatively low.

## ***2.4 The macro-environment: PESTEL Analysis***

The PESTEL analysis is a structured way that companies use in checking and understanding exterior macro-level aspects that have a vital influence on the strategy formulation process. It provides a detailed framework, giving a quick insight into the external pressures the company is facing and the constraints they may impose upon company strategy. Analyzing the external environment of business is not just applicable to understanding profitability and opportunities, but an analysis is imperative to know the competitive

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<sup>73</sup> Loura, C. de A., & Leal, R. L. V. (2010). Challenges and opportunities in the Brazilian telecommunications sector. CEPAL-IPEA Discussion Papers, 27. Brasília: CEPAL Brazil Office/IPEA. Available at: [http://www.ipea.gov.br/portal/images/stories/PDFs/TDs/td\\_1545.pdf](http://www.ipea.gov.br/portal/images/stories/PDFs/TDs/td_1545.pdf).

<sup>74</sup> Quintella, R., & Costa, M. A. (2009). The mobile telephony sector in Brazil after SMP: strategies of operators and fixed-mobile convergence. *Revista de Administração Pública*, 43, 123-150.

<sup>75</sup> Anuário Telecom. (2023). São Paulo: Fórum Editorial. Available at: <http://www.forumeditorial.com.br/wp-content/uploads/2012/12/AnuarioTelecom2013.pdf>.

advantage. A macro environment consists of distant factors to an organization but significantly impacts the organization's financial decisions and generally affects performance. The acronym PESTEL stands for Political, Economic, Social, Technological, Environmental, and Legal factors. Each category under PESTEL relates to general and far-reaching trends and factors that may impact how a company can operate, how and to whom a business can sell, and how profitable any given enterprise will be. As a summarized view of the threats and opportunities about the environment, the PESTEL tool provides business strategies that are related to the realization of current market circumstances that allow businesses to survive in the long run and to take advantage of newly emerging circumstances. However, it is good to note that the importance of some factors will be industry-dependent. As such, one of the significant pre-conditions before embarking on PESTEL analysis is determining the specific industry context<sup>76</sup>.

The Political factor in the PESTEL entails government policy influence on a business, including all institutions from both local and national governments. This should understand how stable the political environment is concerning tax policies, trade restrictions, tariffs, and overall political stability. For instance, a firm that wishes to develop a larger market share in international markets cannot succeed in politically unstable countries where such turmoil translates to market instability and thereby affects business. Additionally, government policies on taxation and trading could influence the company's profitability and competitiveness in global markets. Getting to understand the political environment helps these organizations anticipate any alteration and change their policy to take into considerations ways that might save them from this risk caused by politics<sup>77</sup>.

The Economic factors denote the general economic environment where a business is operating, showing the level of prosperity in the country and the likeliness of it growing further. The factors analyzed here usually include economic growth rates, interest rates, exchange rates, inflation, and unemployment. Knowing these factors will assist businesses in predicting the conditions of a market and thus make investment decisions, pricing strategies, production cost estimations, and expansion decisions. For example, high inflation may reduce consumer purchasing power and, therefore, demand for products and services. Low interest rates can lead to more borrowing and investment drive economic growth and thus boost consumer spending.

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<sup>76</sup> Helmold, M. (2019). Tools in PM. In *Progress in Performance Management* (pp. 123-145). Springer, Cham.

<sup>77</sup> Makos, J. (2024, July 1). *PESTEL Framework: The 6 Factors of PESTEL Analysis*. PESTLE Analysis. <https://pestleanalysis.com/pestel-framework/>

By analyzing economic indicators, businesses can negotiate economic cycles and make wise strategic decisions that are about the current surrounding economic circumstances<sup>78</sup>.

The Social factor is trends in levels of population focusing on consumer behaviors and how they can be dynamic and, therefore, drive changes in demand and market size. This takes the consumer as an individual and as a member of a reference group within all activities in the social world. It encompasses population growth, age distribution, lifestyle changes, education levels, and societal norms and values. Businesses are, therefore, supposed to take note of such features carefully to reconfigure their products and marketing strategies towards the altering preferences of the target audience. For instance, an aging population can increase the demand for products and services in health care, while a rising emphasis on sustainability and ethical consumption might nudge businesses toward more environmentally friendly practices. This facilitates companies to develop products and services that resonate with their target market, thereby enhancing customer satisfaction and loyalty<sup>79</sup>.

Technological factors concern innovations and their effect in the given industry, especially those technologies that are applied to perform operations. Thus, they cover the rate of technological change, levels of R&D activity, automation, and how technology is transferred between actors. By being conscious of technology trends, a firm can thus achieve competitive advantage, improved efficiency, and an orientation to new customer requirements. The fourth industrial revolution brings a dynamic spread of technological and digital innovations that shape how companies define strategies while interacting with customers and businesses. They can easily disrupt an existing business model and also possibly create a new opportunity. In effect, those firms that are leveraging technological innovation can become more competitive through operational streamlining, product development, and the improvement of value in customer experiences. For instance, e-commerce has revolutionized retail. Physical stores have had to come to grips with online platforms and digital marketing strategies to survive and be competitive. Using new technologies will lead to higher effectiveness and operational efficiencies, which will add to the market improvement of a company<sup>80</sup>.

Environmental factors in PESTEL analysis consider the ecological and environmental aspects that can affect business operations: climate change, environmental regulations, carbon

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<sup>78</sup> Ibid.

<sup>79</sup> Ibid.

<sup>80</sup> Ibid.

footprint, and sustainability initiatives. This sphere covers all the environmental issues and legislation that act on customer values, market values, as well as stakeholder and investor values. Environmental factors: With the growing pressure, a business is expected to adopt sustainable practices to reduce its environmental impact. Failing this, there can be penalties due to regulation, brand reputation may go down, and at the worst scenario, consumer trust may also be broken. Environmental factors check out the impact that is on the environment because of a business and how far the environmental regulations affect the working of it. Decisions that the companies need to put in regard to include climate change, resource depletion, and waste management. Sustainable practices benefit the environment, provide a competitive brand image, and attract a more environmentally aware consumer. For instance, a company in the manufacturing industry will need to retain an environmental element within its operations to avoid litigation or other legal actions regarding the emissions of gases, waste management, and meeting expectations from green practices through the consumer push. Additionally, such sustainability efforts will lead to newer market opportunities for product innovation<sup>81</sup>.

Legal factors represent the regulations and laws controlling business. Employment laws, health and safety issues, antitrust and other kinds of rules on intellectual property, and laws concerning consumer protection are part of these. Business operations must uphold these regulatory obligations to avoid potential lawsuits, fines, and damage to their reputation, and mainly to operate ethically. It includes all the legal processes that condition the activity of the sectors of activity, so it interacts with the political environment. For example, stringent labor laws would require business operators to offer safe working conditions and fair wages, while robust intellectual property laws will protect innovations and brand identities from misusers. Legal compliance makes businesses more capable of facing the increased number of regulations in force and sustaining their operational integrity. Lastly, consumer protection laws will guarantee that businesses carry out their practices transparently and fairly, thus winning the confidence and loyalty of consumers. Businesses should proactively monitor legal changes to create minimization strategies from risk exposure and exploitation strategies to maximize possible growth in a shift for compliance<sup>82</sup>.

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<sup>81</sup> Ibid.

<sup>82</sup> Ibid.

The PESTEL analysis gives the best means by which businesses can understand the external drivers and influence on the operating environment. That is what enables the company to come up with strategies that are responsive to the existing situation and, at the same time, stand challenges into the future. Whether it is a must for organizations to adjust to new standards, take advantage of technology, or fit in with changes in social values, a well-conducted PESTEL analysis shall provide the strategic roadmap for sustainable success and competitive advantage.

## ***2.5 PESTEL Analysis of Tim Italia and Brasil***

TIM (Telecom Italia Mobile) is a key player in the worldwide telecoms business, having major operations in Italy and. The PESTEL study, which stands for Political, Economic, Social, Technological, Environmental, and Legal elements, provides a comprehensive and extensive framework for evaluating a business's external environment. Understanding these TIM-related issues in Italy and Brazil will help better grasp the two markets' current strategic challenges and opportunities.

### ***2.5.1 Tim Italia***

The political environment of Italy is such that it has a very sound democratic government; however, the political oscillations are pretty frequent, leading to the forming of coalition governments. These political changes sometimes alter regulation policies that can affect the telecommunications industry. The Italian government and the European Union closely watch the operations of the telecommunications sector. Regulatory bodies such as AGCOM (Italian Communications Authority) have implemented regulations that allow fair competition in the market and protect consumers' interests. TIM has to comply with these regulations. Italy has a highly complex tax system that is not business-friendly. The corporate tax rate and digital service tax affect TIM's investment and profitability decisions. The government can alter the tax policy at any time, which may bring uncertainty at some point. Italy is part of the European Union, which follows trading policies from the economic bloc. This means that any policy change by the EU concerning either legislation or trading agreement impacts TIM's operation in the market<sup>83</sup>.

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<sup>83</sup> Amundi. (2023, October 27). *A view on Italy and its government debt*. Amundi Research Center. <https://research-center.amundi.com/article/view-italy-and-its-government-debt>

Italy's economy has low growth rates and huge public debt. Economic stability impacts consumer expenditure on telecommunications services, indeed, economic downturns might result in lower spending on non-essential services such as premium mobile plans. Furthermore, shifting inflation rates and the European Central Bank's interest rate policies have an influence on consumer purchasing power and corporate financing. For example, high inflation can raise operating costs, while interest rates affect borrowing costs for infrastructure expenditures. Italy's relatively high unemployment rate influences consumer purchasing since a high unemployment rate might result in reduced disposable earnings, reducing TIM's revenue from individual consumers. Exchange rate variations can have an influence on TIM's financial performance because the company operates abroad. The euro's strength versus other currencies affects the cost of importing technology and equipment<sup>84</sup>.

Italy's aging population presents both challenges and opportunities: older consumers may prefer traditional telecommunications services, while younger generations demand high-speed internet and advanced mobile technologies, indeed there is a growing demand for digital and mobile services. In addition to this, consumers expect high-quality, fast, and reliable internet and mobile services thus TIM must continuously innovate to meet these expectations; also, increasing remote work and digital lifestyles drive demand for robust telecommunications infrastructure and in this case, TIM has the opportunity to expand its services to cater to the needs of remote workers and digital nomads. In Italy there is also a high educational level that is increasing throughout the years together with technological awareness, this means that the demand for advanced telecommunications services thus TIM needs to invest in educational initiatives to promote digital literacy and usage of its services<sup>85</sup>.

Rapid technological changes, such as 5G, IoT, and AI, require significant investment in infrastructure and R&D so TIM must stay ahead in adopting new technologies to remain competitive as it is in fact doing. However, continuous innovation is essential: TIM invests heavily in research and development to enhance its service offerings and maintain a competitive edge, but with increasing cyber threats, TIM is starting to invest in robust cybersecurity measures to protect its network and customer data because ensuring data privacy and security is critical to maintaining consumer trust. In addition, the quality of Italy's digital

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<sup>84</sup> Fonseca, M., Gorter, O., Kutcher, E., Nattermann, P., & Vanderspar, B. (2019). *Telecom operators: Surviving and thriving through the next downturn*. McKinsey & Company.

<sup>85</sup> Ibid.



infrastructure influences TIM's service delivery: upgrading networks and expanding coverage are ongoing priorities to meet the growing demand for high-speed internet<sup>86</sup>.

Italy has strict environmental standards aimed at decreasing carbon emissions and supporting sustainable practices which include investing in green technology and energy-efficient operations thus TIM must follow them, also because there is an increasing public desire for environmentally friendly businesses. TIM has improved its brand image by implementing sustainable practices and encouraging environmental initiatives. Furthermore, efficient utilization of resources, such as energy and raw materials, is critical. TIM must employ efficient resource management methods to lower its environmental impact and operating expenses<sup>87</sup>.

Adherence to national and EU regulations is mandatory. TIM must navigate complex legal frameworks governing telecommunications, data protection, and consumer rights and protecting intellectual property is vital for maintaining a competitive edge, this is done by TIM by ensuring robust IP management practices to safeguard its innovations. Italy has also strong consumer protection laws thus TIM must ensure compliance with these laws to avoid legal disputes and maintain customer trust. Labor laws in Italy are stringent, affecting hiring, working conditions, and employee benefits. TIM must adhere to these laws to ensure a positive working environment and avoid legal issues<sup>88</sup>.

### 2.5.2 Tim Brasil

In recent years, Brazil has faced political uncertainty, with frequent shifts in government leadership and policies and this instability poses challenges for TIM in navigating the business landscape; another challenge is posed by Brazil's intricate tax system that can be a burden for businesses due to high taxation rates on telecommunications services, impacting TIM's profitability and pricing strategies. The Brazilian National Telecommunications Agency (ANATEL) oversees the sector and changes in regulations and compliance requirements can significantly influence TIM's operations and strategic choices. Additionally, the country's trade

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<sup>86</sup> Capdeville, L. (2024, March 7). *Technology & Network Strategy*. In *Free to Run - TIM Capital Market Day 2024* (pp. 27-33). TIM.

<sup>87</sup> Danese, E. (2024, March 7). *ESG*. In *Free to Run - TIM Capital Market Day 2024* (pp. 54-57). TIM.

<sup>88</sup> *TIM's Business Plan - The Journey*. <https://www.gruppotim.it/en/group/TIM-Business-Plan-The-Journey.html>

policies, including import tariffs and trade agreements, play a role in determining the costs associated with importing technology essential for telecommunications infrastructure<sup>89</sup>.

Brazil's economy is characterized by periods of volatility and uncertainty, holding implications for consumer spending on telecommunications services and economic stability is vital for sustained consumer demand because downturns can lead to reduced spending. Historical high inflation rates have impacted purchasing power and operational costs in Brazil and fluctuations in interest rates affect borrowing costs for infrastructure investments, while the country's elevated unemployment rate impacts consumer spending power. Lower disposable incomes result in reduced demand for premium telecom services. Lastly, exchange rate fluctuations between the Brazilian real and other currencies can also affect TIM's financial performance by influencing import costs for technology equipment<sup>90</sup>.

Brazil has a young and expanding population, which benefits the telecom industry as younger individuals tend to embrace new technologies and seek advanced mobile services leading to a high demand for mobile and internet services in Brazil. Consumers look for cost-effective and top-notch telecom services, so TIM must meet these preferences to stay competitive. The increasing use of the internet and digital lifestyles create a need for reliable telecom infrastructure, giving TIM opportunities to broaden its services for the tech-savvy population. Despite growing tech awareness, there remains a digital gap in Brazil requiring TIM to invest in initiatives that promote digital literacy and extend its market presence<sup>91</sup>.

Brazil is swiftly embracing advancements like 5G and IoT, prompting TIM to upgrade its infrastructure to satisfy consumer needs through ongoing research and development investments essential for staying competitive. Developing innovative solutions tailored to the Brazilian market can give TIM an edge. With escalating cyber threats, investing in robust cybersecurity measures becomes vital for safeguarding network integrity and customer data as

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<sup>89</sup> Economic and political outline Brazil - Santandertrade.com (2024)  
<https://santandertrade.com/en/portal/analyse-markets/brazil/economic-political-outline>

<sup>90</sup> Ibid.

<sup>91</sup> Sasson, J. M. W. (2024, January 17). *Environmental, Social & Governance Law Brazil 2024*. International Comparative Legal Guides International Business Reports. <https://iclg.com/practice-areas/environmental-social-and-governance-law/brazil>

data privacy is crucial for maintaining consumer trust. The quality of Brazil's digital infrastructure varies significantly<sup>92</sup>.

TIM should invest in expanding and improving its network to offer reliable, top-notch services nationwide. In Brazil, there are regulations in place to promote sustainability. TIM must follow these rules, which might mean investing in eco-friendly technologies and energy-efficient operations because consumers are becoming more mindful of the environment, and by embracing sustainable practices and advocating for green initiatives, TIM can boost its reputation. With Brazil facing the impacts of climate change like extreme weather events, TIM must make sure its infrastructure is strong enough to handle such challenges. It's crucial for TIM to manage resources efficiently. Implementing effective resource management strategies can help minimize environmental harm and cut down on operational expenses<sup>93</sup>.

Adhering to national regulations is a must for TIM. Navigating the intricate legal landscape governing telecommunications, data protection and consumer rights in Brazil is essential. Safeguarding intellectual property is key for staying competitive. TIM needs solid IP management practices to protect its innovations in Brazil. The country has strict consumer protection laws that TIM must comply with to prevent legal conflicts and maintain customer confidence. Labor laws in Brazil impact hiring practices, working conditions and employee benefits at companies like TIM. Adhering to these laws is crucial for fostering a positive work environment and steering clear of legal troubles<sup>94</sup>.

## **2.6 *Assessment of the analysis and positioning of both companies***

This section aims to provide a comprehensive assessment of the strategic position held by TIM Italia and TIM Brasil, respectively, in their national telecommunications markets. After having used Porter's Five Forces model and PESTEL as a framework, it is going to help define what the best strategic options are so as to increase or maintain their competitive advantage.

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<sup>92</sup> Caldeira, F. (2023). *Os desafios e impacto do Programa de Melhoria na TIM*. TIM Brasil

<sup>93</sup> Sasson, J. M. W. (2024, January 17). *Environmental, Social & Governance Law Brazil 2024*. International Comparative Legal Guides International Business Reports. <https://iclg.com/practice-areas/environmental-social-and-governance-law/brazil>

<sup>94</sup> *Consumer Protection: Comprehensive Analysis in Brazil (2023) - Global regulatory insights*. (2024, February 17). <https://globalregulatoryinsights.com/insight/comprehensive-analysis-consumer-protection-laws-in-brazil-2023/>

### *2.6.1 Porter's Five Forces Analysis*

Both markets have high entry barriers and, therefore, the threat of new entrants is relatively low. In Italy, the need for substantial regulatory control and the high initial capital demand are followed up in Brazil, where regulatory approval and significant amount of capital are important. The economies of scale for the existing players in both countries work as a strong barricade for the new competitors. At the other end of the spectrum, both TIM Italia and TIM Brasil are subject to a medium threat of substitutes powered by technological advances and alternative means of communication. While TIM Italia's strategy of network quality and offering of converged service packages guards its flank from the threat of substitutes better than TIM Brasil, its market position in which regulatory shifts and market conditions make substitution risk just a little more elevated than that faced by TIM Brasil. Both TIM Italia and TIM Brasil serve very competitive markets. While TIM Italia differentiates itself with its technological leadership and an extensive portfolio of services, there is intense price competition for TIM Brasil due to low differentiation and low switching costs. The nature of the competitive landscape is such that continuous innovation and strategic agility is crucial in both markets. Both these markets have high buyer power as they have plenty of choices with the switching cost being very low. In conclusion, TIM Italia and TIM Brasil are not only expected to be innovative but also innovative with the competitive price. The development of loyalty programs and enriched customer experience are core techniques that the two companies have to adopt in addition to drastically reducing the high buyers bargaining power. However, TIM Italia has a high level of supplier power compared to TIM Brasil because of reliance on core technology providers, while TIM Brasil has a high level of supplier power attributed to its fragmentation. On the contrary, the two companies leverage scale and market position to negotiate favorable terms and control dependencies on suppliers. High entry barriers, a medium threat of substitutes, intense rivalry, high buyer power, and variable supplier power characterize the telecoms sector where both TIM Italia and TIM Brasil operate. While both companies face somewhat similar strategic challenges, their approach to innovation, market positioning, and regulatory compliance is different between them based on the respective market dynamics. For TIM Italia, technological leadership, integrated service offerings, and network quality remain central foci to sustaining competitive advantages in this heavily regulated and very competitive market. On the other hand, TIM Brasil has been able to cope with a harsh economic environment characterized by price wars in the market through the use of its market presence, as well as being adaptive to increasing regulation. In summary, both TIM Italia and TIM Brasil

are challenged by the need for constant innovation and investments in new technologies and greater customer experience to retain their place in the market and ensure future growth. The comparative analysis confirms the strategic agility and market responsiveness demanded from the telecommunication industry.

### 2.6.2 *PESTEL Analysis*

Both TIM Italia and TIM Brasil operate in politically challenging environments. The political oscillations of Italy, alongside a very complex tax system, pose uncertainties, regulatory, and financial, whereas political instability with high taxation rates complicates the operational landscape for TIM Brasil. It also emphasizes the need for compliance and adaptability with respect to the strict regulatory oversight of AGCOM in Italy and ANATEL in Brazil. Both TIM Italia and TIM Brasil face economic challenges that impact consumer spending and operational costs. Both economies experience low growth rates—with the additional strain of high public debt in Italy—whereas in Brazil, these factors make up a generally volatile economy marked by high inflation rates; financially, this poses potential problems for the companies that necessitate careful business planning and adaptive pricing strategies. In both markets, exchange rate variability and high levels of unemployment further complicate the issue. TIM Italia and TIM Brasil operate in different social environments. However, there is a high percentage of elderly people in the high education segment in which TIM Italia operates, unlike the young internet-savvy population in Brazil. TIM Italia will also have to grapple with consumer preferences such as digital literacy and advanced services, which in TIM Brasil, are rapidly being eroded to remove the digital divide and low prices. Technological change is happening at very high speeds for both companies. TIM Italia must continue to innovate in aspects such as cybersecurity, just as TIM Brasil requires infrastructure improvements and the creation of solutions that are purpose-designed for its market. This indicates higher costs with R&D and also network enhancement in such a way that the two companies are sustained at a point where they are able to continue the competition and responsiveness to the needs of the consumer in every direction required. Both TIM Brasil and TIM Italia are exposed to strict environmental laws that require them to invest in sustainability. Highly developed standards in Italy are what push TIM Italia toward the adoption of a green technology; there is no difference in that from the big regulations on solid infrastructure and green processes of TIM Brasil, implemented due to climate change effects. In both cases, optimal resources' management is required to bring down environmental impacts and operation

costs. At the same time, operate in tough environments in terms of laws and regulations. While TIM Italia manages EU-wide regulations and robust consumer protection laws, TIM Brasil has to deal with equally large legal challenges but within its national framework. Protection of intellectual property and compliance with labor law are vital in maintaining a competitive position and a working environment that is positive for both companies. The environments within which TIM Italia and TIM Brasil operate are dynamic and challenging and arise under the influence of political, economic, social, technological, environmental, and legal factors. Although facing different sets of market challenges in terms of demographics and economic volatility in their respective markets, these two companies share certain strategic imperatives that include but are not limited to, market regulation and compliance, technological advancement, and sustainability practices. Technology leadership, support from the EU regulations, and coping with the aging population seem more to be the foci of TIM Italia as opposed to TIM Brasil, with an emphasis on political instability, coping with economic turmoil, and serving a youthful, tech-savvy segment of the population. For them to meet the dynamics of consumer needs, the competitive edges will have to be maintained in their respective markets with quite heavy investments in research and development, infrastructure, and digital literacy initiatives. Overall, what the comparative analysis elucidates includes the strategic adaptability and proactive investment in technology and sustainability and also compliance to these intricacies within the telecommunications industry of not only Italy but Brazil.

# Chapter 3: Case study: Comparison between Tim Italia and Tim Brasil

## 3.1 *Research Objective and Hypothesis*

The central objective of this research is to provide an analysis focusing on the major contrasts in competitive strategies that Telecom Italia Mobile (TIM) has carried out between Italy and Brazil's telecommunications markets. TIM, as seen beforehand, as a major player in the telecommunications industry, competes in highly volatile and competitive markets, characterized by much more significant dynamics therefore requiring an array of differentiated strategies to maintain a sustainable competitive advantage that can return benefits over time. In doing so, this study examines how these differences in strategy support TIM's competitive positioning across contexts that vary in terms of regulation, competition, and consumer behavior.

The research question addressed is the following:

*"What are the key differences in Telecom Italia Mobile's (TIM) competitive strategies in the telecommunications markets of Italy and Brazil, and how do these differences contribute to the company's sustainable competitive advantage and market positioning?"*

Italy and Brazil can be portrayed as two very different market contexts for TIM. Italy is the motherland, the place where the headquarters is located, and refers to a mature market characterized by an advanced stage of penetration of telecommunication services, with intense competition among operators - namely Vodafone, WindTre, Iliad - concerning increasing attention towards next-generation technologies such as 5G and issues about environmental sustainability. In contrast, Brazil is a representation of an emerging market, where network coverage and competitive prices have been playing a very important role in attracting and retaining customers. The difference asks for an in-depth understanding of perceptions and expectations by consumers between the two markets with a view to delineating TIM's competitive strategy.

### 3.1.1 *Technological competitiveness and sustainability: the challenge of the Italian market*

Historically, TIM has been considered a technology leader in Italy because of its large investments in network infrastructure and the introduction of technologies like 5G. In such a

competitive market, whether TIM can maintain this perception and further reinforce its competitive advantage is an urgent issue. With new operators such as Iliad, which introduced aggressive tariffs to attract customers, and the consolidation of others like Vodafone and WindTre, competition heated up in the Italian market. In this light, one of the main objectives of the research is to ascertain whether TIM is considered leading-edge from a technological point of view according to Italian consumers, and if it is seen as investing adequately in technologies such as 5G to maintain its leadership. In addition, there is an element that increasingly assumes ever-greater importance: environmental sustainability. Italian consumers are increasingly sensitive to corporate practices that contribute to reducing environmental impact and increasing long-term sustainability. This trend is reflected in the corporate policy of big companies, which adapts the strategy to contain an increasing share of attention to environmental responsibility. This will make the integration of sustainability practices into operations a lever that improves brand perception and differentiates TIM from competitors. This research, therefore, tests if sustainability is considered a relevant aspect of the overall assessment of TIM by Italian consumers and contributes to competitive advantage.

### *3.1.2 Competitive pricing and network expansion: the challenge of the Brazilian market*

The Brazilian context raises other kinds of challenges. While TIM can be considered a technology leader in Italy, in Brazil, it primarily depends on the competitive advantages in terms of pricing and full network coverage. The demand for telecommunication services in Brazil is also growing but has been highly sensitive to economic factors; for instance, people are more worried about the price of services and their ready availability. In this context, network expansion and the ability of TIM to compete with other local players, such as Vivo and Claro, are key components of the company's strategy. Competition in Brazil is not as fierce and as experienced as in Italy but is still felt to be increasingly problematic for TIM, with operators such as Vivo, which boasts established access in the Brazilian market, continuing to invest in infrastructure and expanding coverage. The other relevant point of the Brazilian context refers to the offers' transparency. Brazilian consumers clarify their tariffs by simplicity, and the capability of TIM to be perceived as a transparent and trustworthy company can join in making it possible to beat new customers and retain the ones that already exist.



### 3.1.3 Research Hypotheses

In light of these considerations, three main hypotheses were formulated to guide the analysis:

- **H1:** Italian consumers perceive TIM as a technologically advanced company, but they expect more investment in technologies such as 5G.

The hypothesis reflects the importance of technological innovation in the Italian market. Even though traditionally, TIM has been perceived as a technology leader, the hypothesis assumes that more generally speaking, Italian consumers are of the widespread opinion that TIM needs to invest further in innovations like 5G in order not to lose such an advantage. This may become of special relevance in light of the growing competition from newcomers such as Iliad, who are seeking entrance into the market through aggressive pricing policies and very selective technology investments.

- **H2:** Brazilian consumers believe TIM positions itself primarily through low-cost offerings but consider network expansion relevant.

In Brazil, the research explores how consumers perceive TIM primarily as an operator that offers competitive rates. However, in a growing market like Brazil, network coverage is a crucial factor in ensuring long-term competitiveness. The hypothesis suggests that consumers recognize the need for further network development, especially in rural or less developed areas, where TIM may find opportunities to expand its market share.

- **H3:** There are significant differences in the perception of sustainability and transparency between Italian and Brazilian customers.

This hypothesis reflects the different priorities of consumers in the two countries. In Italy, sustainability is likely perceived as a key value, with consumers expecting TIM to adopt environmentally responsible practices. In Brazil, on the other hand, the focus on transparency of offerings may be more relevant, with consumers placing greater emphasis on the clarity and reliability of tariffs.

These cultural and market differences will be explored to better understand how TIM can adapt its strategies according to local needs. Based on these perceived differences in the two

markets, this research will endeavor to outline how TIM can best optimize its competitive strategies to realize a sustainable advantage first in Italy and then in Brazil. The hypotheses formulated will be tested through a targeted quantitative survey intended to gather data with regard to consumer perceptions in each market and key factors driving TIM's strategic positioning in the respective markets.

### **3.2 Methodology**

The methodological approach followed for the present research was quantitative, based on the submission of a structured questionnaire, so that it can provide data and measurable findings that can be analyzed objectively and comparably. The quantitative survey is particularly fitting for this research, which compares perceptions among Italian and Brazilian consumers regarding the competitive strategies adopted in their respective markets by TIM. These constitute some of the main reasons why the quantitative approach was preferred, along with some specific objectives of the questionnaire.

The quantitative approach has many advantages compared to other methodologies, such as qualitative ones. Current research is supposed to obtain standardized data from a large sample of consumers to get a holistic view of perceptions about TIM in the two target markets. This would also allow the identification of patterns and trends that can be generalized to the totality of the target population, something rather more difficult with qualitative approaches, such as interviews or focus groups, which usually draw on small samples and provide less structured data. Another critical advantage of the quantitative approach lies in the capability to conduct statistical analysis. For this, a closed-ended type of questionnaire will be adopted that can be easily coded and analyzed with appropriate statistical techniques. In this way, the formulated hypothesis can be tested, verifying whether there are significant differences between the perceptions of Italian and Brazilian consumers. Another merit of the quantitative approach is that it will enable the comparison of results across different demographic segments—e.g., various groupings of age, and level of familiarity with telecommunication services, thus providing further detail concerning the variables that affect consumer perceptions. Furthermore, the online questionnaire allows to reach a considerable number of participants in two countries with generally reduced time compared to other techniques. Digital treatment and distribution provide real-time results, making sure that more people can participate without feeling the unease that may come with reaching a researcher directly.

The aim is to collect data on the following four key areas in line with the research objectives:

- 1) *Competitive Perception*: This section of the questionnaire explores how consumers perceive TIM against main local competitors. Since TIM operates in very different market frameworks in Italy and Brazil, it is important to explore if the consumers think the company succeeds in maintaining a competitive advantage over other operators. Competition is intense in Italy, whereas Vodafone, WindTre, and Iliad are significant competitors. Moreover, TIM faces fierce competition from Vivo and Claro, leading players in the Brazilian telecommunications market.
- 2) *Technological innovation*: TIM invested a lot in technological innovation, mainly in the 5G development, especially in Italy. It has been thought to be one of the main factors in maintaining a competitive advantage in the markets in which it operates. Questions arranged in the technological innovation section of the questionnaire had the purpose of testing the consumer perceptions about investments that TIM has been making in new technologies and their implications for service quality. Questions were designed to understand whether Italian consumers considered TIM as a technology-oriented company and whether such investments added value.
- 3) *Sustainability*: In light of recent public awareness about environmental impact issues, which also involved the telecommunications industry, the survey contained a series of questions about the perception of the commitment of TIM in this sense. Sustainability today forms part of every long-term industrial strategy, enormously helping the positioning. The questions measure just how important the issue is for Italian and Brazilian consumers, and to what extent TIM manages to come across as environmentally responsible.
- 4) *Customer satisfaction*: Customer satisfaction is considered one of the main indicators of a company's performance. This questionnaire provides questions aimed at understanding which are the factors influencing the most consumer satisfaction in the two markets, and if relevant differences between Italy and Brazil exist: service quality, competitive prices, and transparency of offerings are among the main factors examined. This section of the web questionnaire provides useful information that allows an understanding of how TIM can improve customer satisfaction in the two target markets.

### 3.3 *Quantitative survey*

The research was in the form of a quantitative approach since a structured questionnaire was administered to a sample of consumers of Telecom Italia Mobile in two countries: Italy and Brazil. The main purpose of this research is to collect empirical data about the perceptions of

consumers in the target markets regarding the competitive strategy that TIM should or will adopt, customer satisfaction, technology investments (5G among other technologies), and even sustainability. This questionnaire is fully online and web-based on Qualtrics which is a platform that supports all steps of data collection to achieve a representative number of responses from the pool of Italian and Brazilian consumers. The two questionnaires, one for Italy and one for Brazil shared the same basic structure, even though they would reflect a market-specific taste and consumer preference. This quantitative survey does therefore allow for a test of the potential consumer perceptions of the two countries, concentrated on a set of three key areas:

1. Perceptions of the relative competitiveness of TIM compared to that of local competitors.
2. Perceived level of TIM's investments in technology and its reflection in the quality of the service.
3. Key critical factors (quality, price, and transparency) in the overall level of customer satisfaction.

The approach allows the collection of quantitatively important data, which can further test the research hypotheses formulated in the previous section. Hence, the data analysis from the study obtained will provide insight as to how TIM can adapt strategies to maximize its sustainable competitive advantage in Italy and Brazil.

### *3.3.1 Participants*

The selection of the participants was made with the application of a non-probability selection based on availability and voluntariness criteria. Considering the exploratory nature of the research and the need to obtain data from a significant yet manageable sample, a sampling method was chosen that would allow an adequate number of responses to be collected in both countries. The final sample includes respondents residing in Italy and Brazil, the markets in which TIM operates in. Two markets so different in terms of economy and social life will help in comparing consumer perceptions in different competitive contexts. With this idea in mind, the criteria of different age representations, the level of familiarity with the services of telecommunications, and the habits of using TIM services ensured its adoption.

The selection criteria for these participants included:

- Age: Only participants of not less than 18 years of age were able to be included in the sample. The age brackets were 18 or higher, and hence introduced the feeling of

intergenerational diversity in the responses. For the purpose of the questionnaire, these age groups were further divided into 18- 24 years, 25-34, 35-44, 45-54 and 55+. It helps to present the difference in perceptivity across different generations, which is actually a key factor used to explain how different consumers, being of different age groups, evaluate the offerings of TIM.

- Telecommunication service familiarity: Level of experience in mobile and Internet services has been inquired, and the respondents have to grade their position starting from a “regular consumer” up to “use only for basic needs”. Under this classification, it is possible to segment the sample on different levels of experience with the consumption of telecommunication services.
- Usage of services: A consideration was made for the number of times participants used TIM services, through which, one could try to observe whether there is any relationship between intensity of use and inferences made about the quality of the company.

Such sample diversification allowed to test if and how demographic characteristics, such as the consumers’ age and the level of familiarity, affect consumers’ perceptions of competitive strategies undertaken by TIM in the two markets. For instance, younger consumers would tend to be more sensitive to technological innovations, whereas older consumers could have more interest in the quality of customer service, offer transparency, and so on.

### 3.3.2 Procedures

Data collection was strictly done in search of quality and enhancement of reliability. Dissemination of the questionnaires was accomplished in an online data collection format, which in effect, hence, let the respondents address their issues as much conveniently and anonymously as possible. The choice of an online mode was thus dictated by several factors, such as wide reach, as a matter of fact. Making use of an online platform makes it possible to get through to a high number of participants at the same time in two different countries, breaking the geographical barriers and ensuring the possibility of simultaneous data collection in Italy and Brazil. In addition, not less important was the flexibility in time, whereby respondents could fill in the questionnaire at the very time suitable to them, thereby increasing the rate of participation. By putting in place the online technique, there was no need for physical presence or face-to-face interviews. Finally, this value of ensuring anonymity of the participants is key to encouraging candid responses and reducing bias. It was also communicated that their information would be handled with discretion and used solely for the

purpose of the study. The questionnaire was submitted for methodological accuracy. More precisely, all the participants received a link to compile the questionnaire, and depending upon the country of residence, either Italy or Brazil, they were conducted in a different form. At the end of this phase, data was collected and treated by statistical elaboration. In addition, great care was taken in the translation and cultural adaptation of the questions indeed the questionnaire was in Italian for the residents in Italy, and Portuguese was used for the residents in Brazil and, since the questions had to be understandable to every respondent group and relevant to the cultures in which those questions were used, care had to be taken in each case to translate the questions properly and it was imperative to translate this questionnaire from technical, telecommunication-specific terms to colloquial, consumer-based expressions so that the respondents would not be confused in answering the questions. Most of the questions in the online questionnaire were multiple-choice questions in closed form and there were only two open-ended questions. The participant selected a response best describing their experience or opinion.

### 3.3.3 Data Analysis

The data analysis was performed utilizing the statistical processing software Python for macOS. A minimum participant count of 100 per country was required, hence 100 Italian participants and 100 Brazilian participants, totaling 200. Ultimately, the survey was completed by 115 Italian participants and 108 Brazilian participants, totaling 223 responses.

Descriptive statistics are obtained in order to examine the frequencies of the participants' responses to some questions that were constituting the questionnaire. Moreover, the differences in frequencies have been additionally examined with the non-parametric chi-squared test. This test compares the response frequency of two sub-samples based on the null hypothesis, which makes a statement about the homogeneity of the distribution of frequency between the groups under consideration. One can reject the null hypothesis if the tests conducted were significant and find that, in fact, differences exist among the groups being compared. The results were taken as significant at the level of  $p\text{-value} \leq .05$ . Further testing of the hypotheses above was conducted after an analysis of the descriptive statistics by using the t-test as a method of analysis. The t-test is a statistical test of significance that calculates the difference between two population means taken from samples receiving different levels of some independent variable (or, more exactly, calculated on normally distributed variables); then, it compares the sample mean with an expected mean in the case of a single-sample t-test,

or it compares two sample means with each other in case of a two-sample t-test, taking into account within-sample variability. The t-test requires creating an estimate of a t-statistic, displaying the ratio of the average difference, represented in the statistics, to the within-sample variability<sup>95</sup>.

### 3.3.4 *Descriptive statistics*

This section analyzes a variety of important elements regarding the perception and opinion of expenditure in general that consumers have developed about TIM in the Italian and Brazilian markets. The objective of the current analysis is that of being able to provide a detailed overview regarding the various variables that enable one to understand how the perception of the telephone company and competitive positioning is affected with regards to the other operators present on the territory of the two countries. One of the first analyzed elements is the age of the respondents. The analysis divided the participants into different age groups, allowing us to investigate whether and how consumer perceptions change with age. This demographic segmentation is essential to understand whether there are significant differences in the preferences or expectations of different age groups, especially in a sector such as telecommunications, where younger generations may be more sensitive to technological innovation, while older generations may favor aspects related to transparency of offers or quality of customer service. The distribution of the respondents' age is as follows:

*Table 1. Age frequency of respondents in both countries*

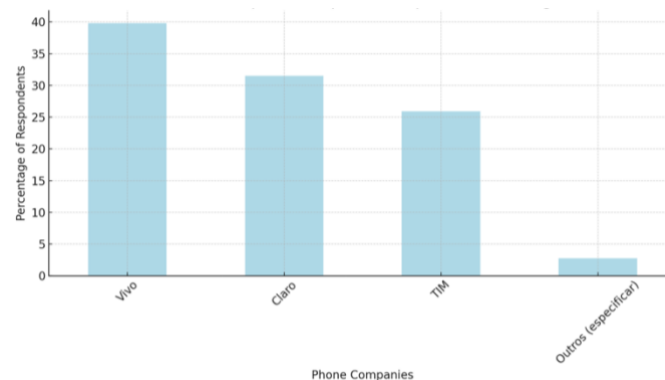
Age range	Brazil's Frequency	Italy's Frequency	Total	Brazil's Relative Frequency	Italy's Relative Frequency
18-24	46	40	86	43%	35%
25-34	45	38	83	42%	33%
35-44	11	17	28	10%	15%
45-54	5	10	15	5%	9%
55+	1	10	11	1%	9%
Total	108	115	223	100%	100%

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<sup>95</sup> Montgomery, D. C., & Runger, G. C. (2010). *Applied statistics and probability for engineers*. John Wiley & sons.

The chi-squared test generated a p-value of 0.0253. Since this value is below the common significance threshold of 0.05, we can conclude that there is statistically significant evidence to suggest that the age distribution differs between Brazil and Italy. In simpler terms, the age range distributions for the two countries are not independent, implying that the proportion of people in each age category varies significantly between the two countries. This may reflect different demographic structures or age-related preferences in the telecom market.

Another crucial aspect concerns telephone companies, in this part of the analysis, the level of recognition and usage of TIM relative to its main competitors was studied. Assessing TIM's competitive positioning relative to other companies, such as Vodafone, WindTre, and Iliad in Italy, and Vivo and Claro in Brazil, provides important insights into how the company is perceived by consumers in terms of reputation, service quality, technological leadership, and commercial offerings. Below is represented the distribution of the respondents' telephone companies in Brazil:

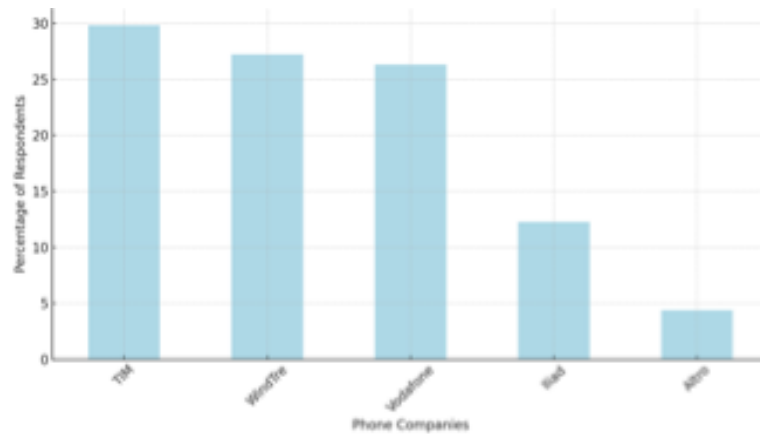


*Figure 6. Brazilian respondents' phone companies (Percentage)*

The chart provided shows the following market share percentages for the major telecom operators in Brazil: Vivo with 40 percent, Claro with 31 percent, TIM with 26 percent, and Others with 3 percent. Analyzing these data, it appears that Vivo has the highest market share, with 40%, confirming its role as the industry leader, as indicated by recent ANATEL surveys that estimate a share of more than 38%. Claro follows with a 31 percent share, which is close to the 34 percent mentioned by ANATEL. TIM ranks third with a 26 percent share, which is in line with the 23.8 percent reported by ANATEL, indicating a solid market presence due to its competitive pricing plans and reliable services (Section 1.5). Finally, the “Outros” category accounts for only 3 percent of the market, suggesting that other operators are significantly less influential than their main competitors. Overall, the percentages in the graph are consistent



with the information provided by ANATEL, with small variations that may reflect recent updates or changing market dynamics. In the Italian market, the situation is similar:



*Figure 7. Brazilian respondents' phone companies (Percentage)*

TIM holds the largest share of respondents with 30%, making it the leading company in this dataset. This market dominance aligns with the trend in telecommunications suggesting TIM as the leader in the Italian market. WindTre follows closely with 27%, suggesting a robust presence in the market that is nearly tied with Vodafone with 26%. Iliad holds a smaller yet notable share with 12%. All these percentages are in line with the AGCOM Report (Figure 1): WindTre and Vodafone almost tying and TIM being the leader without a relevant difference from these two, the only element slightly changing is Iliad's percentage that in the report was almost 9% while the results in the survey show a 12%.

Another particularly relevant aspect concerns the perception of competition, indeed, in this context, it is explored how consumers evaluate the level of competition between TIM and other telecom operators. This parameter is particularly significant in Italy, where the market is highly competitive, with the presence of numerous established operators and new entrants adopting aggressive pricing strategies such as Iliad. Even in Brazil, where TIM faces competitors such as Vivo and Claro, the perception of competition is a crucial indicator for understanding the effectiveness of the company's positioning and growth strategies. In the contingency table below the percentages are shown and a chi-squared test is going to be conducted.

Table 2. Distribution of the comparative perception of Competition intensity

Perception	Brazil's Frequency	Italy's Frequency	Total	Brazil's Relative Frequency	Italy's Relative Frequency
Very intense	89	73	162	82%	63%
Moderately intense	18	34	52	17%	30%
Not very intense	1	6	7	1%	5%
Not intense at all	0	2	2	0%	2%
Total	108	115	223	100%	100%

From the contingency table above, it becomes obvious that there is a difference in the use of competition intensity in both Brazil and Italy. For example, 82% of the respondents of Brazil perceive the competition as "Very intense", whereas for Italian consumers, this is 63%. On the other hand, in Italy, a higher percentage of respondents, 30% versus 17%, perceive competition as "Moderately intense". Answers in the categories "Not intense at all" and "Not very intense" are few in both countries, though a bit higher in Italy. The chi-squared test for perception of competition has a p-value of 0.00785, which is very much lower than the common significance level of 0.05. This would mean that Brazilian and Italian respondents differ significantly in their perceptions of the intensity of competition. Said differently, the responses distribution about ordinal intensity of competition- Very intense, Moderately intense, etc. - is radically different between Brazil and Italy. That would mean that in these two countries, people think very differently about competitiveness in the telecommunications market. Below a visual representation of the data:

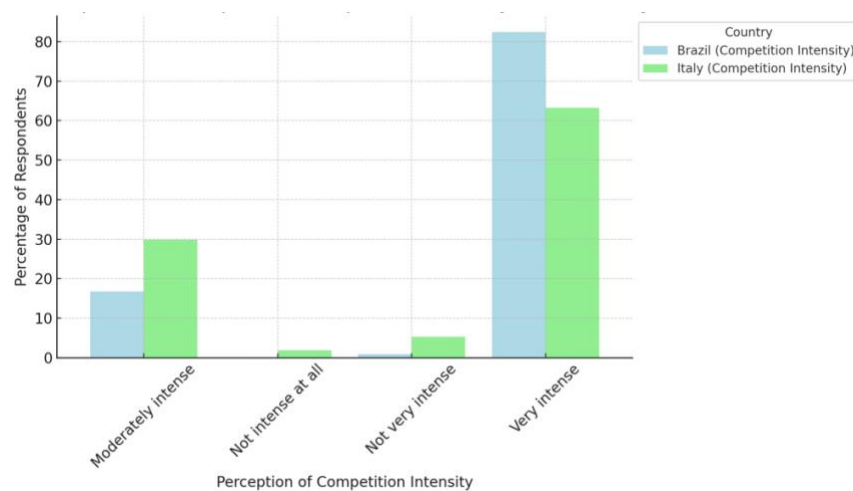


Figure 7. Comparative perception of Competition intensity

These differences indicate that, on average, Brazilian consumers might have perceived competitive forces stronger than the Italian ones; this could be due to the diverse nature of competitive pressures and market structure between the two countries.

Finally, customer satisfaction is one of the key factors to be analyzed. Consumers were asked a series of targeted questions to establish their overall level of satisfaction with the services offered by TIM. This factor encompasses several other elements that are considered, such as the quality of the services, the network coverage, how well the commercial offering has been explained, and the price competitiveness. For this reason, the analysis of the level of satisfaction will allow for the identification of not only the strong points of the company but also the areas in which TIM has to make an effort in order to better customer expectations, both in Italy and Brazil.

*Table 3. Distribution of the satisfaction level in both countries*

Satisfaction Level	Brazil's Frequency	Italy's Frequency	Total	Brazil's Relative Frequency	Italy's Relative Frequency
I've never used TIM's services	38	33	71	36%	29%
Not very satisfied	28	28	56	26%	24%
Quite satisfied	24	32	56	22%	28%
Very dissatisfied	9	2	11	8%	2%
Very satisfied	9	20	29	8%	17%
Total	108	115	223	100%	100%

In the table above, the percentages reveal notable differences in satisfaction levels between Brazil and Italy. A significant portion of Brazilian respondents (36%) reported that they had never used TIM's services, compared to 29% of Italians. Among those who have used the service, 26% of Brazilians reported being “Not very satisfied”, a figure that is closely mirrored by 24% of Italians. However, Italian consumers appear to be more satisfied overall, with 28% reporting being “Quite satisfied”, compared to 22% in Brazil. Furthermore, 17% of Italian respondents stated that they are “Very satisfied”, whereas only 8% of Brazilians share this sentiment. Interestingly, dissatisfaction is higher in Brazil, with 8% reporting being “Very

dissatisfied”, as opposed to only 2% in Italy. These differences highlight varying levels of satisfaction between the two markets, with Italian consumers generally showing higher satisfaction with TIM's services. As per the chi-squared test, it generated a p-value of 0.0385, which is lower than the commonly used significance level (0.05). This indicates that there is a statistically significant difference in the distribution of satisfaction levels between consumers in Brazil and Italy. In other words, the data suggest that satisfaction levels with TIM's services are not uniformly distributed between the two countries. Italian consumers appear to be more satisfied than Brazilian consumers, which may reflect differences in perceived service quality or other market-related factors. Below is a visual representation of the data:

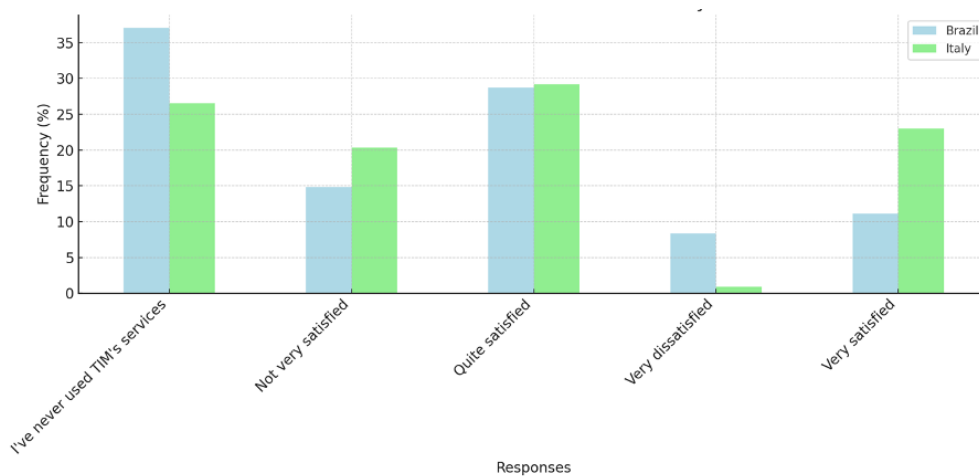


Figure 8. Comparative satisfaction levels

### 3.3.5 Testing Hypotheses

Previously, the following hypotheses were formulated to explore consumer perceptions of TIM across different markets:

- **H1: Italian consumers perceive TIM as technologically advanced but expect more investment in technologies like 5G.**

In fact, the hypothesis formulated indicates that Italian consumers perceive TIM as a leading company in technological innovation but, at the same time, vividly expect further investments by the company, especially in new technologies such as 5G. This hypothesis will be verified through a comparison of the answers given by consumers with regard to their perception of the current technological positioning of TIM and their expectations related to future investments. Should the data reveal that consumers demand more investment in 5G, despite acknowledging TIM's technological leadership, the hypothesis would be supported. A

one-sample or independent t-test could be conducted to examine whether the average perception of technology investment is significantly below a neutral baseline, thus providing statistical evidence for or against the hypothesis.

In order to analyze Italian consumers' responses regarding TIM's technology positioning and their views on 5G investment, it was necessary to follow a structured approach in several steps. Firstly, two key survey questions were identified: the first one relates to the technological positioning of TIM: Q4: "What do you think is TIM's main strength in Italy?" that will try to understand if consumers are recognizing the company's technological leadership, especially on themes which are paramount like 5G and IoT. The second question regards the investment in 5G and it will help understand the level at which consumers believe TIM is investing in such technologies (Q5: "Do you think TIM is investing sufficiently in new technologies such as 5G to remain competitive in Italy?").

Then, the hypothesis was developed that suggests that consumers recognize TIM's technological leadership but still expect more investment in 5G. Accordingly, it was important to test whether consumers identify TIM's technology leadership (answering "Technology leadership" to the first question) and at the same time express a desire for more investment in 5G (answering "No, could do more" or "Partly" to the second question). Then, statistical analysis was performed using a single-sample t-test to test whether the perception of 5G investment differs significantly from a neutral or expected level. The null hypothesis (H0) states that the average consumer response is neutral, that is, they believe TIM is investing sufficiently while the alternative hypothesis (H1) suggests that the average perception is below this neutral level, implying that consumers expect more investment in 5G.

The results of the t-test were as follows:

- t-statistic: 4.91
- p-value: 3.20e-6

The p-value significantly less than 0.05 allowed to reject the null hypothesis, indicating that the average perception of TIM's investment in 5G is significantly different from the neutral level. The positive t-statistic suggests that the average perception of investment is higher than the neutral value. However, this does not necessarily imply that consumers are completely satisfied with TIM's investment in 5G. Although they recognize that TIM is making significant investments, there may still be an expectation for further improvements or more effort in this area.

- **H2: Brazilian consumers believe TIM positions itself primarily through low-cost offerings but consider network expansion relevant.**

This hypothesis focuses on the perception among Brazilian consumers that TIM emphasizes competitive pricing while also recognizing the importance of network expansion. The analysis here would involve examining consumer responses related to pricing strategies and network coverage, identifying whether these are indeed the main factors influencing their perception of TIM. A correlation analysis could be helpful in determining if there is a relationship between consumers who prioritize cost and those who also consider network expansion important. Furthermore, a chi-square test or correlation analysis could be used to explore the association between these nominal variables, providing clarity on the alignment of TIM's positioning with consumer expectations.

This hypothesis suggests that Brazilian consumers perceive TIM as a company that positions itself primarily through low-cost offerings, but at the same time, they consider network expansion relevant. To test this hypothesis, an in-depth analysis of consumers' responses was conducted, focusing on their perceptions regarding the two dimensions: the focus on low-cost offerings and the importance attached to network expansion. The first step involved analyzing the textual responses contained in Q9: "Do you think TIM should focus more on cheaper offerings or network expansion to compete with Vivo and Claro?". The possible answers were three: those that expressed a preference for low-cost offerings, those that showed a greater focus on network expansion, and finally those that indicated a balance between the two factors. This ranking process was key to understanding how consumers perceive TIM's positioning and what they focus their attention on most. After analyzing the responses, it was found that 48 consumers indicated a balance between low-cost offers and network expansion, 39 focused on network expansion, and 21 expressed a preference for low-cost offers. Below is a table representing this frequency:

*Table 4. Distribution of Q9: Do you think TIM should focus more on cheaper offerings or network expansion to compete with Vivo and Claro?*

Do you think TIM should focus more on cheaper offerings or network expansion to compete with Vivo and Claro?	Frequency
Balanced between both	48
More focused on network expansion	39
More focused on economic offerings	21

These results showed a balanced distribution among the three categories, which suggested a varied perception by Brazilian consumers regarding TIM's strategy. To test whether there was a significant difference between the preference for low-cost offerings versus network expansion, a chi-square statistical test was conducted. This test was applied to determine whether the distribution of responses was significantly skewed toward either dimension. However, the test results were as follows:

- chi-square value: 0.0
- p-value: 1.0

These results indicate that there was no statistically significant difference between consumers' preferences for either aspect. As a result, the distribution of responses was sufficiently even, suggesting that neither dimension, neither low-cost offerings nor network expansion, prevailed clearly. These results lead to the conclusion that Brazilian consumers do not perceive TIM exclusively as a low-cost-oriented company, nor do they give a decisive preference to network expansion. The balanced distribution of responses indicates that consumers attach similar importance to both low-cost offerings and network expansion. Thus, Hypothesis 2, that Brazilian consumers see TIM as primarily focused on low-cost offerings but with attention to network expansion as well, is confirmed. Although TIM's positioning is perceived as oriented toward low cost, the emphasis on network expansion is equally relevant to consumers.

- **H3: There are significant differences in the perception of sustainability and transparency between Italian and Brazilian customers.**

This hypothesis proposes that Italian and Brazilian consumers hold different views on TIM's approach to sustainability and transparency. To test this, a comparative analysis using tools such as cross-tabulation or bar charts would highlight variations in how the two groups rate TIM on these attributes. Quantifying whether there were significant differences in perceptions between the two groups was aided by using statistical approaches, such as an independent t-test and chi-square. This provided further insight into how the sustainability efforts of TIM are perceived across its markets.

This hypothesis predicts significant differences in perceptions between Italian and Brazilian customers in terms of sustainability and transparency. The subsequent hypothesis has been subjected to a more comparative analysis, relying on two sets of data; the first set asked about the sustainability of the operations offered by TIM, as described by Italian customers.

On the other hand, this set compares to those answers provided by Brazilian customers when they were asked about the transparency of the operations offered by TIM. In the Italian context, Q6: “How do you assess the environmental sustainability of TIM’s operations in Italy?” involved the respondent’s perception of TIM’s sustainability operations, and the answers were categorized as follows: “Very important”, “Moderately important”, and “Not very relevant”; similarly, in the Brazilian context, Q8: “In your opinion, how important is transparency in TIM’s offerings to maintain its competitiveness in Brazil?” involved the respondent’s perception on TIM’s transparency, particularly regarding its offerings and the possible answers were the same as in the Italian survey. Comparison of perceptions and execution of the t-test had to be performed between the two groups, hence categorical responses had to be mapped to numerical values undefined. After that, it was possible to use a t-test to check whether there were statistically significant differences between Italian customers’ perceptions of sustainability and Brazilian customers’ perceptions of transparency.

The results were:

- t-test: -5.71
- p-value: 4.53e-8

The results showed a significant difference suggesting that Italians' perception of sustainability and Brazilians' perception of transparency differ substantially. Below a visual representation of the distribution:

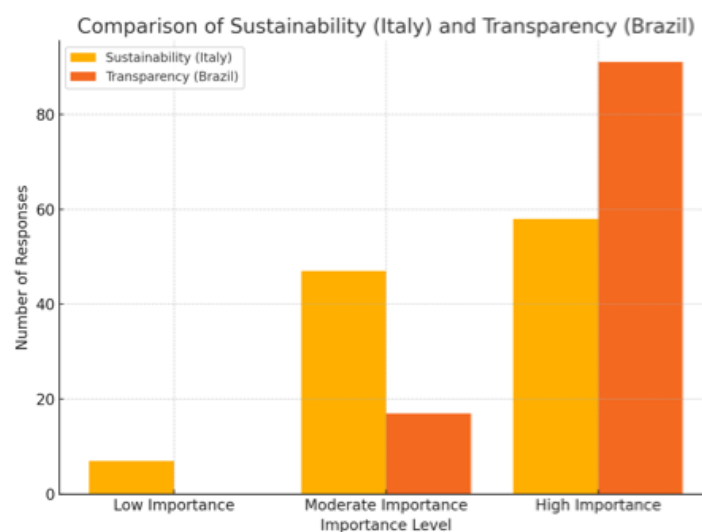


Figure 9. Comparison of Sustainability and Transparency



This result supports hypothesis H3, showing that Italian and Brazilian customers have different perceptions regarding these two aspects of TIM's operations, however, the differences are not as pronounced. While Italians view sustainability as an important element in the company's strategy, Brazilians place a crucial importance on transparency, but with perceptions that differ significantly from Italian perceptions of sustainability. Indeed, while there is a sample of Italians that does give low importance to sustainability, there are none in the Brazilian context for what concerns transparency. The analysis suggests, therefore, that TIM might consider distinct approaches to meeting customer expectations in the two markets, focusing more on transparency in Brazil and sustainability in Italy to further strengthen customer trust and satisfaction in these key aspects.

### 3.3.6 Analysis of open-ended questions

Besides the multiple-choice questions, open-ended questions were also included in the survey for more in-depth and qualitative information from participants. These open-ended questions allow the user to express a thorough opinion and make concrete suggestions; thus, providing a broader understanding of what is expected and perceived. An appealing fact is that these open-ended questions are the same for both Italian and Brazilian responders, thus allowing a more direct and homogeneous comparison among different markets. Participants are asked to answer to two questions:

- *“What do you think is the most important aspect TIM should focus on to improve its competitive position in your country?”*
- *“What suggestions would you give TIM to improve its service and consolidate its market position?”*

These open-ended questions aim to gather ideas and opinions not limited by the default options, giving a direct voice to the needs of users in two key markets for TIM.

Two big themes emerged regarding the first question in Italy: price reduction and customer service. Price reduction emerged as a very important theme according to the survey participants' judgment. This would mean that there is a wide perception from subscribers that the costs of the telecom services offered by TIM are too high or not in line with market offerings. Price is a major determinant in an industry that experiences growing

competitiveness, indeed, usually, for new entrants it starts with lower rates as it is the case of Iliad. It indicates that users expect greater affordability thus a price reduction, without compromising service quality. This may also mean that TIM has to revise the pricing strategy or provide more flexible and customized offerings to reach distinct customer groups more efficiently, probably creating new offerings for young generations for example. Another point is that price cuts can help the company counter the competition and, subsequently, increase its competitive advantage in the market. Customer and service focus is another key aspect that emerged from the responses. Many participants stressed the importance of improved customer service, including increased availability of technical support and faster and more efficient response to user needs. This can be interpreted as a clear signal that, beyond the cost of service, customers also seek quality interaction with the company. Effective and timely service can really build up a lot more loyalty among customers. The consumers feel taken care of and listened to, and it makes them stick with this brand even when there is an opportunity for them to get cheaper deals from other operators. Moreover, strengthening customer focus will be able to enhance the image and perception of TIM as a people-oriented company, not oriented toward profit. Emphasis on customer service excellence may turn out to be a strategic competitive advantage in a highly competitive environment. Calls to reduce prices and improve customer service indicate that to strengthen its competitive position, TIM should strike a balance between quality and convenience. This could allow the firm to gain new customers who are more cost-sensitive with an aggressive pricing policy. On the other hand, investing in a better customer experience-in terms of support and personalized services-allows for a closer and more lasting relationship with existing customers. In the end, to strengthen itself in the marketplace, TIM has to consider working along two complementary sides: reducing costs while remaining competitive and improving customer service toward differentiation from pure low-price competitors. It is such an integrated approach that could be the clue to long-term sustainability in the telecommunications industry.

On the other hand, in Brazil, the most recurrent answers to this question regarded network coverage and technology investments. One of the problems most felt by users concerns signal quality and network coverage, especially in remote or underserved areas. Many responses indicate that the signal is perceived as inadequate in several areas, and improving coverage is considered a key issue for TIM. Another factor that increases competitiveness implies network extension and stable connection, even in the most difficult locations. Users want to be able to count on the service, no matter where they will be, without cuts in the signal or drops, which is of particular relevance to rural areas or areas far from large urban centers. “Network

expansion” is a priority that emerges repeatedly, demonstrating that the ability to provide uniform coverage is seen as a prerequisite for quality telecommunications service. In a competitive market, where other operators may already offer more extensive coverage or more advanced technologies, the ability to improve and expand the network can become a key strategic advantage. In addition to coverage, another closely related issue is investment in new technologies, particularly the enhancement of mobile data services and the introduction of 5G. Users perceive technological innovation as a vital part of service improvement, and the implementation of 5G is seen as a necessity to ensure a superior user experience. Not only would 5G increase connection speed and network capacity, but it could also improve signal reliability, especially in areas of high user density or in settings where 4G is insufficient. Calls for improved “mobile data” and a call to “invest more” underscore that customers expect the operator not only to solve problems with current coverage but to anticipate future market needs. The point is that TIM needs to create a two-track approach: on one side, reassure the country of full network coverage by reaching every corner and having an always-stable signal everywhere; on the other side, it should invest in advanced technology such as 5G that will help to reach high standards of speed. This can be achieved through the adoption of a strategic approach that will combine network expansion with the application and adoption of advanced technologies, ensuring solutions are found not only for current problems but also for building strong, long-term competitive advantages.

Regarding the second question regarding suggestions to TIM, the most popular answers were similar to those given in the previous question i.e. price reduction and improving the quality of customer service. Many users believe that the current pricing structure is too high and suggest lowering costs by introducing packages that are more affordable and competitive with those offered by other operators. Another key suggestion concerns improving customer service. Many users expressed the need for more efficient, clear, and personalized interaction with the operator. There is a clear demand for more staff expertise and more transparent and less invasive customer service. The customers also declared a total of unsolicited promotions and pushy calls, which they believe worsen the overall experience, underlining that the operator should focus on targeted and useful communication to the users. Providing good customer care, efficient in responding promptly to users' demands, would strengthen the brand name perception. Another theme that emerged from the suggestions concerns the need to differentiate offerings. Users want more flexible and personalized plans that stand out from the usual standardized offerings. This suggests that TIM should focus on more innovative promotions aimed at different age groups and lifestyles, offering solutions that better suit the specific needs

of customers. In particular, there is a request to target young people more with tailored offers that can attract a new generation of users, who are used to using new technologies. Another theme that emerged from the suggestions concerns the need to differentiate offers. Users want more flexible and customized plans that stand out from the usual standardized offerings. This suggests that TIM should focus on more innovative promotions aimed at different age groups and lifestyles, offering solutions that better suit the specific needs of customers. In particular, there is a call to target young people more with tailored offers that can attract a new generation of users who are used to using new technologies.

Similarly, for Brazil, the themes highlighted in this question are also very similar to the previous one. One of the most recurring suggestions concerns improving the signal. Many users complain of poor connection quality in different areas of the country and suggest that the operator invest in network expansion to provide wider and more stable coverage. Phrases such as “Improve the signal in specific spots” or “there is the need of a network with a larger reach” clearly indicate that a significant proportion of users find the current service unsatisfactory, especially in terms of connectivity. Some users also point out that public perception of network quality is negative, as reflected in the comment “Show the public that there has been some kind of change, because most Brazilians have a very precarious idea of TIM.” This suggests that the operator must not only improve service, but also effectively communicate the progress made, to change the image associated with poor quality data service. Another interesting theme that emerges is transparency in plans and contracts, in fact, as seen from the analysis Brazilians consider transparency in offers crucial. Users want more clarity about what is offered and complain about the difficulty of fully understanding the terms of contracts or tariffs. The phrase “Transparency in plans/contracts” reflects a need for simplification and clarity in commercial offerings so that users are not confused or misled by hidden costs or unclear terms. This suggests that improving communication and offering simpler and more straightforward plans could lead to increased trust in the brand. Finally, an interesting point raised is the desire of users to reduce the invasiveness of promotional communications. Some comments suggest that the operator should avoid “annoying with dozens of calls and message spam,” pointing out that the continuous bombardment of unwanted calls and messages worsens the user experience and damages the company's image. Limiting these practices, instead favoring more discreet and targeted communication, could help improve customer relations.

### **3.4 *Discussion of the results***

This section shall, therefore, present the discussion and interpretation of the results from the analysis of consumer perceptions and competitive strategies of TIM in Italy and Brazil described in the previous sections. Three main hypotheses were at the base of this research, and data retrieved through the quantitative survey gave a lot of insight into the behavior of consumers but also into the market expectations and competitiveness of those two different markets.

Indeed, one of the key objectives of this research refers to assessing how consumers in Italy and Brazil perceive TIM's relative competitiveness against its main rivals. This has indeed brought to light some quite striking divergences between the two markets, reflecting factors such as market maturity, competition intensity, and consumer priorities. The investments made, in particular, in new-generation technologies such as 5G, have given the group a leading position in terms of technology, but it is clear from the results that Italian consumers consider TIM a leader in this sense and would want more investment to keep it competitive. The hypothesis that Italian consumers perceive TIM as technologically advanced, yet expect more investment in 5G (H1), was confirmed through statistical analysis. In fact, a t-test revealed a significant difference between consumer perceptions and a neutral baseline, indicating that while TIM is viewed positively in terms of technology, there is still room for growth in meeting consumer expectations regarding 5G. For Italian consumers, especially for the young generation, technological innovation is a crucial factor, as evidenced by their responses in the survey. It means that further investment in 5G and other advanced technologies is requisite to maintaining the leading position for TIM. But it also speaks to a potential challenge: with Iliad and other competitors entering the market with very aggressive pricing, TIM needs to balance its technological offerings with competitive pricing to maintain its market share. It is therefore becoming imperative for TIM not only to innovate but also to be able to communicate such innovation to consumers so that their expectations with regards to technological advancements are fully met.

Moreover, compared to the Italian market, where technological innovation is considered one of the competitive features, Brazilian consumers are more sensible to the price and network coverage. The analysis confirms the second hypothesis (H2), which identified that Brazilian consumers' perception about TIM would highlight low cost as the operator's main value proposition while acknowledging network expansion as a key driver of long-term competitiveness. The results of the current survey indicated satisfaction with price offerings

but showed an extraordinary demand for network coverage in more remote regions. This also links to the wider competitive dynamics in Brazil, where players such as Vivo and Claro continue to invest a great deal in their networks to reach less covered areas. Strangely enough, in regard to Brazilian customers, the chi-square test results did not show any priorities between low-cost offerings and network expansion. This represents an opportunity for TIM to differentiate its company through a parallel focus on affordable prices coupled with the growth of the network. Building a better network, especially in those less-developed areas, will enhance TIM's competitive positioning while raising its appeal for more customers that are getting relatively affordable services.

The third hypothesis (H3), which posits that there are significant differences in the perception of sustainability and transparency between Italian and Brazilian consumers, was also confirmed by the data. The survey results highlight how sharp the contrast in priorities is between the different groups of consumers. While there is a decidedly high emphasis on environmental sustainability by Italian consumers, the Brazilian consumers put more importance on the transparency of the TIM commercial offering. Today, it is the concept of sustainability that plays a leading role as one of the determining factors in shaping consumer perceptions in Italy. It can be surely confirmed that Italian consumers would like to see TIM adopt more environmentally friendly policies and view sustainability as an important element in the long-term business strategy of the company. This finding is especially appropriate in respect to the rising global consciousness about environmental issues where consumers increasingly hold companies responsible for their ecological impact. For TIM, the introduction of sustainability at the core business level has the potential to enhance brand loyalty, together with a factor of differentiation from competitors. Overall, the results of the survey show that TIM is considered sustainable by consumers; however, there is still much work to be done by the company in raising its voice and communicating crucial initiatives to the market. By aligning its sustainability goals with consumer expectations, TIM can strengthen its competitive advantage in a market that is becoming more environmentally conscious.

In Brazil, the emphasis is on transparency, particularly in pricing and the offering of services. Brazilian customers remain highly sensitive to prices and prefer simple, easily understandable tariffs. The results from this survey indicate that the ability of TIM to clearly and transparently communicate its pricing structures is an essential way through which it can generate confidence in its customers. In a competitive market where operators like Vivo and Claro are expanding their reach, TIM's focus on transparency can serve as a differentiating factor, helping it to retain existing customers and attract new ones. Yet the survey also shows

that Brazilian consumers believe that the clarity and reliability of TIM's offerings can be improved even more. This would suggest that, even though TIM is transparent, it really does have quite significant room for improvement, particularly in presenting its pricing plans and features of its services. Indeed, improved business transparency would do well not only with consumer expectations but also to reduce some risks related to dissatisfaction or any confusion over the terms of service.

The survey provided valuable insights into overall customer satisfaction in Italy and Brazil, revealing both strengths and areas for improvement in TIM's service delivery. In general, Italian customers showed a higher satisfaction than Brazilian customers. The chi-square test pointed out that the difference between the two markets was statistically significant: Italians were more satisfied than Brazilians, particularly about the quality of services and technological leadership. Customer satisfaction in Italy is for certain influenced by perceived service quality and technological innovation. The data indeed show that consumers appreciate TIM's investments in technology, but at the same time they expect further improvements, in particular regarding 5G. That is a challenge but at the same time it's an opportunity for TIM: well-regarded for their technological capabilities, the company has to keep the pace of rapidly changing consumer expectations if it wants to maintain high levels of satisfaction. Another factor influencing consumer satisfaction is the emphasis on sustainability. While consumers increasingly become sensitive to environmental issues, their expectations also grow to accommodate more sustainable practices within companies' operations. Brazil has relatively lower scores in customer satisfaction on such issues as network coverage and price transparency. Though highly valued is the competitive pricing strategy of TIM, there is a clear imperative for infrastructure improvement in the country, particularly in less-well-served areas. Addressing these issues will be crucial for TIM in enhancing customer satisfaction and positioning itself in the Brazilian market. In addition, it has been observed that transparency is valued in Brazil; therefore, clarity in communication about services helps to derive a positive response from customer satisfaction. The easy pricing and clarity on the comprehension of service packages will help TIM earn more trust and loyalty from consumers in Brazil, through the simplification of price structuring and assurance that consumers have clarity over options towards its services. Lastly, to answer to the research question posed before:

*"What are the key differences in Telecom Italia Mobile's (TIM) competitive strategies in the telecommunications markets of Italy and Brazil, and how do these differences contribute to the company's sustainable competitive advantage and market positioning?"*

It is possible to argue that the critical variants in TIM competitive strategies of Italian and Brazilian telecommunication markets concern the difference of market dynamics, customers' expectations, and competitive environments of these countries.

The strategy that TIM has adopted in Italy is very much oriented towards technological leadership, mainly through investments in next-generation technologies such as 5G. One feature of the Italian market is its being mature and strongly competitive with competitors such as Vodafone, WindTre, and Iliad; these situations push TIM toward innovation and quality of service. Additionally, sustainability also plays a significant role in Italy because Italian consumers more and more value corporate environmental responsibility; therefore, TIM's ability to embed its operations with sustainability practices strengthens its brand via differentiation against competitors in a market which confines an awarding shape to corporate responsibility. In Brazil, by contrast, TIM anchors its strategy more on competitive pricing and the expansion of network coverage. When one is dealing with an emerging market like Brazil, the issues of affordability and accessibility assume far greater significance, and hesitation to pricing becomes much more accentuated. In fact, the development of the network, especially in rural and underserved areas, becomes a very important determinant for TIM to compete with operators such as Vivo and Claro. Transparency in pricing is also a significant competitive element in Brazil, as consumers demand clear and simple tariff structures thus TIM's emphasis on these areas helps it cater to the specific needs of the Brazilian market, allowing the company to maintain its competitive positioning.

In a broader view, such strategic variances make TIM gain sustainable competitive advantages since it allows TIM to orient its strategy according to the particular conditions of the specific market. In fact, attention to technology and sustainability in Italy meets consumer expectations of innovation, which is an important factor for the image of a company. Such positioning factors place TIM in a premium position. In Brazil, the focus on affordability, network expansion, and transparency enables TIM to compete effectively in a price-sensitive market while addressing the infrastructural needs of the region. The adaptation to the local context means that TIM will be better placed to catch up with a stronger market position and will henceforth have greater long-term competitiveness within Italy and Brazil.



# Conclusion

Through this thesis, the in-depth analysis into the competitive positioning of TIM within the telecommunication markets of Italy and Brazil aimed to study strategic moves taken by the company to safeguard and build on its competitive advantage. This is not an incidental choice, given that the two markets represent profoundly different economic, social, and regulatory contexts, each of which requires a different strategic approach.

It was possible to underline the challenges and opportunities that TIM has faced in each market through a detailed analysis based on theoretical models of Porter's Five Forces and PESTEL analysis, together with a comparative case study. This showed how the company has reshaped its strategy to answer local dynamics. Through this analysis, it is possible to see that telecommunications is one industry that is dynamic and competitive, where the fast pace of technological development changes customer behavior and increases pressure from regulators, especially on sustainability and protection of data. Companies should therefore develop other strategies to compete in prices and quality of services, as well as they should continuously invest in technological innovation so that they will be able to stay competitive within the industry.

As highlighted, in Italy, TIM operates within a mature and saturated market, where competitiveness must be driven by continuous technological innovation and quality of service offered. In addition, other operators such as Vodafone, Wind Tre, and Iliad have made the market highly competitive for tariff offers, but especially for the quality of mobile networks. The most important challenge that TIM faces in Italy is how to maintain technological leadership considering the implementation of 5G and digital service enhancement, while responding to growing consumer expectations in terms of environmental sustainability. Indeed, adopting sustainable behavior is not a choice anymore but a need that has the necessary purpose to consolidate reputation and attract green-sensitive customers, as stated by the PESTEL analysis.

This is very different in Brazil. The TIM Group operates in the emerging market, with demanding development in the demand for telecommunications services, especially from rural and less privileged areas. The significant determinants for success are the expansion of network coverage and highly competitive rate plans. Competition, although less aggressive compared to Italy, is very remarkable, with great market shares held by operators like Vivo and Claro. In the specific case, TIM has carried out its strategy in Brazil, focusing on network development

and differentiation through the transparency of offers and customer loyalty through customer-oriented policies. On the other hand, the vulnerability from an economic-political point of view highlighted by the PESTEL analysis of the country may instead compromise the stability of the market; for this reason, TIM will necessarily need to stay flexible and agile, promptly changing direction when necessary. The competitive strategies that TIM undertook for both Italy and Brazil reflect the issue of being responsive to particular market specificities.

The company has also focused on innovation in technology and sustainability in Italy: two increasingly important factors to help differentiate from the competition and attract an increasingly sophisticated and ecologically aware customer base. Key examples of such strategic steps include deployment in 5G networks and investment in new technologies, such as the Internet of Things and cloud computing, to try to keep up. However, the case study does note that there still widely exists a perception among Italian consumers that TIM needs to invest more in improving the quality of the customer service. This would seem to indicate that while there has been improvement, there is still room to do better.

The strategy so far pursued by TIM in Brazil is network development and appealing prices, both considering the fact that the cost for services is the deciding factor for either consumer category, and that is why the Company has managed to be distinctive with its targeted offers and paying attention to claims of transparency and simplicity. However, as Porter's Forces analysis points out, the price competition will become - together with the investments in continuous infrastructural development - a challenge in itself for TIM. Furthermore, political and economic instability in Brazil could make consumers less likely to spend, and the high inflation rate and high unemployment could continually force TIM to adopt very aggressive pricing to capture new customers and retain existing ones. Conclusively, it is quite evident that in the future, sustainability and innovation will continue to be the main vectors of growth for TIM, both in Italy and Brazil.

Price competition, combined with the need to continue investing in infrastructure, is a constant challenge for TIM. Besides, the political and economic instability in Brazil, such as the high inflation rate and high unemployment, can depress consumers' spending further, which may mean TIM has to maintain its aggressive pricing policy in order to secure new customers and hold on to those it already has. No longer a fashion, sustainability in Italy is an important point that will characterize every decision made by consumption and institutional regulation. Up until today, TIM has already made significant steps to reduce its own environmental impact; further efforts will be needed if more ambitious objectives are to be pursued in terms of reduction of carbon emissions and efficient management of resources. The greener the

economy transition is the greater the opportunity for TIM, not only to improve its image but also to innovate services and offer general sustainable solutions to its customers. It is necessary for Brazil to enhance its competitive advantage by making technological innovation. This could also provide new opportunities to the company for growth in those emerging segments of the market linked to digital finance, education, and health due to the deployment of the 5G network and the adoption of new technologies, such as IoT. In this regard, it is recommended that TIM increase its infrastructure investment and expand coverage in some of the isolated corners of the country in order to maximize these new opportunities. Furthermore, transparency and simplicity of offering will give additional elements needed to be able to maintain consumer trust.

Based on the performed analysis, some recommendations can be done for TIM: first of all, in Italy, the company has to further invest in enhancing its infrastructure and implementing 5G with regard to the reinforcement of the perception of leading in technologies. In addition, TIM should strengthen its sustainability policies, further integrating green practices into its operational strategy, so as to meet the growing expectations of consumers and institutions. In Brazil, it is necessary to push forward with the network expansion strategy on the part of TIM, focusing on rural and less well-served areas where large margins for growth remain. In parallel, the company should maintain its policy of transparency in tariffs and communication with customers, a distinctive element that allows it to compete effectively in a price-sensitive market. Finally, it will be crucial for TIM to closely monitor the evolution of the Brazilian political and economic environment, adapting its strategies flexibly and quickly to changing market conditions. TIM is in a privileged position to be able to seize the opportunities given by two deeply diverse markets. It is the ability of the company to adapt such competitive strategies to the specifics of each particular context, together with a firm commitment to technological innovation and sustainability, that will be decisive for long-term success. On the other hand, however, the constant investment in infrastructure and human resources envisaged for TIM also should be matched by a competitive response to increasingly sophisticated consumer needs in the two countries.



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