

# **Challenges to the growth of international roaming in Latin America: The role of taxation**

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## **Abstract:**

*The objective of this study is to contribute to the discussion and identification of the challenges and barriers related to taxation, that hamper the growth and development of international roaming services in mobile telephony in Latin America. It is expected, therefore, that by the end, we have stimulated reflection on actions that could be adopted by the countries of the region in improving the regulatory and taxation environment in order to foster the regional integration of mobile telecommunications.*

*Thus, initially it is presented a brief assessment of the mobile telephony development in Latin America, followed by an analysis of the situation of international roaming in the region, and then we will address the tax issues involved in this kind of service, having the Brazilian case as a reference. Further on we will discuss the role played by international agreements as a way to avoid the double taxation incidence and finally, some comments are presented.*

**Keywords: international roaming, taxation, international agreements**

## **1. Evolution of mobile telephony in Latin America**

The mobile telecommunications have grown significantly around the world in recent years. This phenomenon also occurred in Latin America, where the number of mobile terminals surpassed the number of fixed lines.

According to the ECLAC<sup>2</sup> studies [1], the average growth of GDP countries was 6.4% in 2006, while the average cumulative growth of 2001 to 2006 stood at 23.7% in the region. The distribution of GDP growth in the region is shown in Figure 1.

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<sup>2</sup> ECLAC - Economic Commission for Latin America and the Caribbean

<b>Annual Variation %</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2006 vs. 2001</b>
Argentina	-10,9%	8,8%	9,0%	9,2%	8,5%	25,2%
Brazil	2,7%	1,1%	5,7%	2,9%	3,7%	17,1%
Chile	2,2%	3,9%	6,0%	5,7%	4,0%	23,7%
Colombia	1,9%	3,9%	4,9%	4,7%	6,8%	24,2%
Ecuador	4,2%	3,6%	7,9%	4,7%	4,3%	27,3%
Peru	5,2%	3,9%	5,2%	6,4%	8,0%	32,2%
Uruguay	-11,0%	2,2%	11,8%	6,6%	7,0%	16,0%
Venezuela	-8,9%	-7,8%	18,3%	10,3%	10,3%	21,1%
<b>South America</b>	<b>-1,8%</b>	<b>2,5%</b>	<b>8,6%</b>	<b>6,3%</b>	<b>6,6%</b>	<b>23,3%</b>
Costa Rica	2,9%	6,4%	4,3%	5,9%	7,9%	30,5%
El Salvador	2,3%	2,3%	1,8%	2,8%	4,2%	14,1%
Guatemala	3,9%	2,5%	3,2%	3,5%	4,9%	19,2%
Panama	2,2%	4,2%	7,5%	6,9%	8,1%	32,4%
Mexico	0,8%	1,4%	4,2%	2,8%	4,8%	14,6%
<b>Central America &amp; Mexico</b>	<b>2,4%</b>	<b>3,4%</b>	<b>4,2%</b>	<b>4,4%</b>	<b>6,0%</b>	<b>22,2%</b>
Jamaica	1,1%	2,3%	0,9%	1,4%	2,6%	8,6%
Puerto Rico	0,9%	0,1%	3,1%	0,3%	0,7%	5,1%
Dominican Republic	5,0%	-0,4%	2,7%	9,2%	10,7%	29,9%
Trinidad & Tobago	7,9%	14,4%	8,8%	8,0%	12,0%	62,5%
<b>The Caribbean</b>	<b>3,7%</b>	<b>4,1%</b>	<b>3,9%</b>	<b>4,7%</b>	<b>6,5%</b>	<b>26,5%</b>
<b>Average Region</b>	<b>0,7%</b>	<b>3,1%</b>	<b>6,2%</b>	<b>5,4%</b>	<b>6,4%</b>	<b>23,7%</b>

Fig 1 - The rate of change of Latin America and Caribbean 's GDP  
Source: ECLAC

It is interesting to note, however, as shown in Figure 2, that the economic sectors of transportation and communications, where mobile telecommunications are included, presented the highest cumulative growth in the period 2001 to 2006, in terms of participation in the average rate of Latin American GDP.

<b>Annual Variation %</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2006 vs. 2001</b>
<b>Transport and Communications</b>	<b>3,0%</b>	<b>4,9%</b>	<b>8,4%</b>	<b>8,8%</b>	<b>8,9%</b>	<b>37,5%</b>
Construction	-1,5%	3,9%	6,1%	8,8%	13,8%	35,1%
Mining and Quarrying	-1,0%	9,1%	5,1%	2,7%	6,9%	26,6%
Financial and Business Services	1,6%	2,2%	5,1%	5,4%	6,3%	23,3%
Trade, Restaurant and Hotels	-1,8%	2,6%	7,4%	6,6%	6,8%	22,8%
Manufacturing Industry	-0,2%	2,9%	6,2%	5,4%	7,7%	21,9%
Agriculture, Forestry, Fishing and Hunting	0,3%	4,6%	2,0%	3,4%	3,1%	20,9%
Electricity, Gas and Water	3,6%	2,1%	2,7%	3,8%	4,3%	19,6%
Personal Services and others	1,2%	2,2%	3,1%	3,3%	3,6%	14,9%

Fig 2 - The rate of Latin American and Caribbean 's GDP change by economic sector  
Source: ECLAC

According to studies developed by the GSM Association Latin American [2], the contribution of mobile telephony in Latin America's GDP doubled from 2001 to 2006, reaching the mark of 2.4%.

This growth is confirmed, as Figure 3 shows, by the analysis of the evolution of the number of mobile terminals.

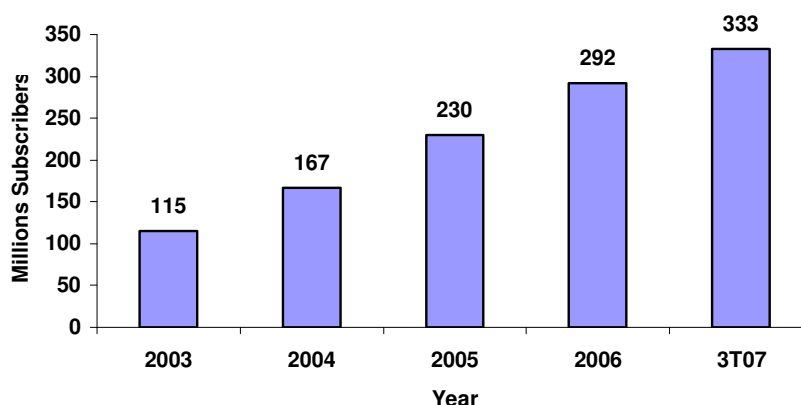


Fig 3 - Mobile Latin America

Source: TELECO [3]

In Figure 4, it appears that 6 countries concentrate more than 80% of mobile phones in Latin America. However, the two largest countries, Brazil and Mexico, as shown in Figure 5, had a low penetration rate of mobile phones per 100 inhabitants when compared with the average of the region in 2006, which stood at 61% [2]. This fact indicates an important opportunity for the continuity of the service expansion.

Country	2003	2004	2005	2006
Brazil	46.373	65.606	86.210	99.919
Mexico	30.098	38.450	47.129	57.017
Argentina	7.842	13.512	22.156	31.510
Colombia	6.186	10.401	21.850	29.763
Venezuela	7.015	8.421	12.496	18.789
Chile	7.268	9.555	11.270	13.062

Fig 4 - Major mobile telephony markets in Latin America (in thousands)

Source: TELECO [3]

Mobile/100 inhabitants	2003	2004	2005	2006
Brazil	25,77	35,95	46,58	53,24
Mexico	29,06	36,31	45,14	54,13
Argentina	20,71	35,35	57,41	80,86
Colombia	13,88	22,96	47,46	63,60
Venezuela	27,31	32,17	46,79	68,93
Chile	45,66	57,55	64,97	75,77

Fig 5 – Mobile phone penetration's rate per 100 inhabitants

Source: TELECO [3]

One of the factors that help to explain, in the last years, the development of mobile telecommunications in Latin America is the fact that most countries of the region have established their regulatory framework.

This allowed the necessary investments in infrastructure to be made by private investors. Within this context, in 1998 the REGULATEL<sup>3</sup> was created with the purpose of encouraging cooperation and coordination of efforts for the development of telecommunications in Latin America [5].

<sup>3</sup> REGULATEL – Latin American Forum of Telecommunications Regulators

In Brazil, the regulatory framework was established in 1997, starting with the adoption of LGT - General Telecommunications Law and with the creation of ANATEL<sup>4</sup>, which has powers to regulate the industry.

However, if the existence of regulatory entities contributes to universalize telecommunications and to raise the offer of these services, on the other hand governments started to consider this industry as one of its main sources of taxes revenue. Thus, in many countries, the high tax burden has become a significant barrier to more people using mobile communications [4].

## **2. International Roaming in Latin America**

Roaming is defined as the ability of a terminal to automatically make and receive voice calls, send or receive data, or access other services when traveling outside its geographical coverage area, using the network of a visited carrier.

The international roaming is, therefore, the capability of a mobile terminal to continue working in a compatible network, even if outside the country in which it was acquired and registered. In order to make international roaming possible it is necessary a technical compatibility between the terminal technology and the visited network, as well as the existence of a roaming agreement between the carrier where the terminal is registered and the one from the visited country.

In 2007 figures, GSM technology boasted the largest number of users in the world, representing a share of about 80.5%, being adopted in more than 218 countries [6]. The standardization of the technology platform is a factor that contributes to the development of international roaming. Also in Latin America GSM technology has shown strong growth in recent years, reaching a market share of more than 75% in the region [3].

In addition, mergers and acquisitions of telecommunications companies in Latin America have led to a movement for consolidation of transnational groups such as America Movil, Telefonica and Telecom Italia. The formation of these business groups simplifies the integration of networks and international roaming agreements between operators located in different countries.

In addition to that, various other factors, potentially, encourage the growth of international roaming in Latin America.

One first significant aspect is the globalization phenomenon, leading to the reduction of economic and cultural borders among countries. By the economic growth and the flow of foreign investment over the last few years one can say that Latin America is included as an important player in the globalization process.

Another point to be highlighted is the existence and consolidation of economic integration initiatives in Latin America as Mercosul<sup>5</sup>, the Andean Community and ALADI<sup>6</sup>. These initiatives stimulate the trade among countries of the region and therefore, the international flow of people related with such activities.

Also the growth of international tourism in Latin America, both the leisure one, based on natural beauties of the region, and the business tourism, connected to international trade fairs and conferences, has contributed to increase the volume of international travelers in the region.

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<sup>4</sup> ANATEL – Brazilian National Agency of Telecommunications

<sup>5</sup> Mercosul - the Southern Common Market

<sup>6</sup> ALADI - Association of Latin American Integration

To these aspects can be added the demand for communication and connectivity, where the phone and the Internet have become part of people's everyday life. Thus it is natural that the executive or tourist on an international trip desire to have, in the other country, the same level of mobile service that they have in their own country, including number portability, in an automatic and transparent manner.

When the technical barrier is overcome, the main barrier to the growth of international roaming becomes the cost of the service to the customer.

For example, starting from a survey of the average tariff values offered by carriers in the same holding group, as can be seen in Figure 6, the minute cost of an international roaming call between Latin American countries is much higher than the one practiced in the country of origin.

Country	Chamada			
	International Roaming		Local	
	Call Received	Call Made	Pos paid	Pre paid
Argentina	0,36	0,81	0,34	NA
Brasil	6,05	2,21	0,3	0,81
Chile	1,7	1,1	0,32	0,48
México	2,63	1,32	0,16	NA
Peru	1,57	1,34	0,13	0,72

Fig 6 - average values (US\$ / min) of mobile tariffs in Latin America

Source: prepared by the author based on a research through the Internet in February 2008

Latin America	VAT or Similar Taxes	Other Taxes	Fixed Taxes (US\$)
Argentina	21,0%	4,0%	
Bolivia	13,0%		
Brazil	25,0%	3,7%	
Chile	19,0%		
Colombia	20,0%	15,0%	
Ecuador	12,0%		
Guatemala	12,0%		
Mexico	15,0%		
Peru	19,0%		
Venezuela	15,0%		0.68 - 2.74

Fig 7 - Comparative of taxes rates on telecommunications services in Latin America

Source: GSM Latin American Association [4]

### 3. Taxation of Telecommunication Services in Brazil

In order to stimulate reflection on the taxes role in the cost of telecommunications services, particularly in international roaming services, the Brazilian case is analyzed.

Brazil is a Federal Republic made up of the Union, Federal District, 26 states and 5,563 municipalities. The Federal Constitution of 1988 established the autonomy between these authorities and defined their taxation power.

The Brazilian tax burden is very high. According to information from the Brazilian Internal Revenue Service, it accounted for 34.23% of gross domestic product in 2006 [7].

As a comparison, it is presented in figure 8 the tax burden's evolution in Latin America from 1990 to 2006, where it is easy to see Brazil's tax burden leadership.

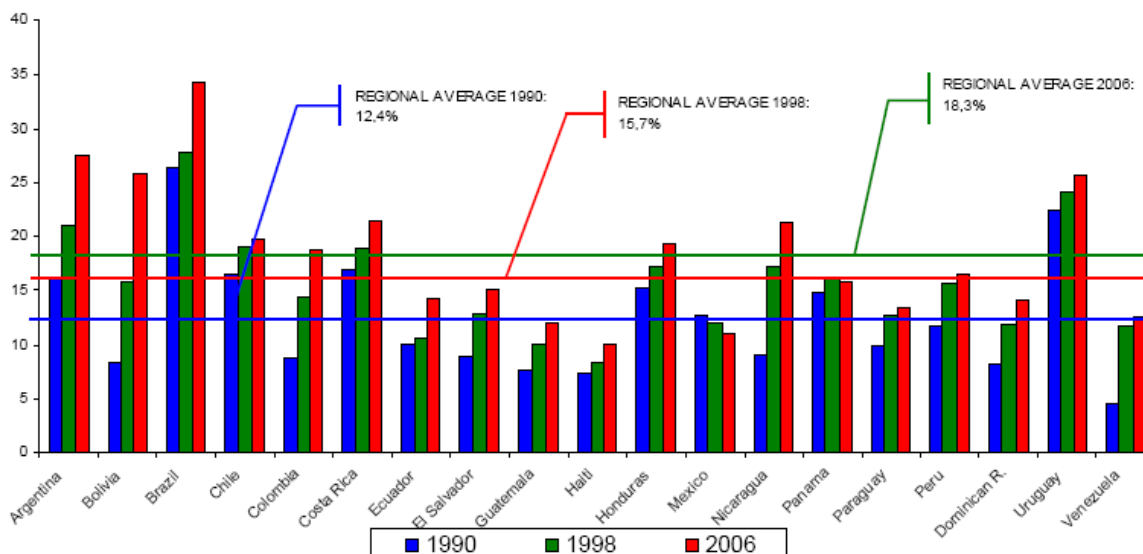


Fig 8 - The Latin America and the Caribbean tax burden, 1990-2006 (Percentages of GDP)  
Source: ECLAC

The main taxes applied to telecommunications services in Brazil are ICMS, PIS, COFINS, FUST and FUNTTEL.

### 3.1. ICMS - tax on transactions relating to the movement of goods, transportation service and communication

The ICMS is levied by the states and the Federal District, pursuant to section II of Article 155 of the Federal Constitution of 1988.

This is the most important tax on telecommunication services and has as its main characteristic to be a non cumulative tax. So, in order to calculate the tax due in a given operation, the amount of tax collected in a phase is compensated in the next one. So the ICMS is a kind of VAT – value-added tax. However, in the particular case of telecommunications services, there is a legal agreement between the States, so the tax collection on these services is deferred to the moment the service is provided to the end user. Thus, the ICMS is not charged on interconnection services between carriers.

The ICMS tax rate incident on telecommunications services is very high when compared to the rates applied in operations with goods. As a rule, for most Brazilian States, the tax rate on telecommunications is 25% over the value charged on the end user. But this rate can be even higher, reaching, in some states, the mark of 30%. On the other hand, the rates in operations with goods are generally 17% for local transactions and 7% or 12% for interstate transactions, depending on the destination region.

The ICMS is the main source of resources for states and the Federal District, and the collection of ICMS on telecommunications services represents one of its largest stakes, ranging from 10% to 20% of the total revenue.

The municipalities receive a share of 25% of the total amount of ICMS collected by states by constitutional imposition.

The main discussion on taxation by the ICMS related to the telecommunications industry concerns the so-called VAS - value added services such as Internet access provision. The LGT - Brazilian General Telecommunications Law (Law 9.295/96) established in Paragraph 1 of Article 61 that the

VAS is not a telecommunication service. However, the Federal Constitution when establishes the responsibility of states to establish the ICMS, uses the term communications instead of telecommunications. The controversy on the subject on then built. On one hand, the companies understand that VAS is not a telecommunications service, and so the ICMS cannot be charged in this kind of service.

On the other hand, states and the Federal District believe that the taxation by the ICMS on communication services has to be broad. This controversy will only be definitively solved when the Federal Supreme Court, responsible for constitutionality control, addresses the matter.

Regarding the impact of ICMS on the operations of international roaming services, initially it is important to know that Article 155, § 2, X, of the Brazilian Constitution establishes an ICMS exemption on operations that sell goods abroad, as well as on services provided to users located in others countries.

So, in international roaming service, regarding the inbound traffic, when a costumer with a terminal registered in another country, comes to Brazil and is attended by the network of Brazilian mobile operator (carrier visited) to make or receive calls , it is considered an export of telecommunications service. As seen before, the export of service is exempt of ICMS. In this situation the user will pay to his carrier for the mobile services he had in Brazil and, in turn, this foreign operator will pay the Brazilian operator for the use of the network, based on the roaming agreement they have [8].

In international roaming service, in an outbound traffic situation, when the Brazilian mobile phone user travels to another country and then makes or receive calls on his terminal, it is considered an import of telecommunication services.

The import of services is subject to the ICMS on the service started in Brazil and completed abroad. In this situation, the costumer will pay to his operator in Brazil for the mobile service he had used abroad, and the Brazilian carrier will be responsible for the payment due to the foreign carrier, according to the roaming agreement they have [8].

### **3.2. PIS and COFINS**

Federal contributions PIS<sup>7</sup> and COFINS<sup>8</sup> are based on the monthly income of companies, namely the total revenue received by the legal person.

These contributions were converted into non-cumulative taxes at the end of 2003 by the laws n° 10.637/03 and n° 10.833/03 respectively. However, these same laws established some exceptions of income that remained cumulative, as the ones received by telecommunications services. The rates applicable to the sales of telecommunications companies are 0.65% in case of PIS and 3% for COFINS.

As for international roaming, similarly to what happens with the ICMS, in an inbound traffic situation, when a foreign traveler comes with his phone to Brazil, that is considered an export of service, and so there are tax exemptions established in PIS and COFINS legislation.

Conversely, in the situation of outbound traffic when a Brazilian user is traveling abroad with his terminal, this roaming service is considered an import of telecommunications services. In this case it should be charged PIS (import type) at a rate of 1.65% and COFINS (import type) at 7.6% as determined by the law n° 10.865/04, over the payment due to the foreign carrier.

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<sup>7</sup> PIS - Program of Social Integration

<sup>8</sup> COFINS - Contribution for the Financing of the Social Security

As a general rule, in import cases, when PIS and COFINS can be considered entries for the operation they can be compensated by the company as non cumulative taxes.

However, in the case of telecommunications service, as already seen, the PIS and COFINS are considered cumulative taxes, and so impossible to compensate. Therefore, in outbound traffic, the carrier must collect the PIS and COFINS on both values, the one received from the Brazilian customer related to the mobile service he used abroad, and on the value that the Brazilian operator had to pay to the foreign carrier for the use of its network by the Brazilian user. This double collection of PIS and COFINS without compensation represents one of the problems faced by Brazilian operators in international roaming services.

### **3.3. FUST and FUNTTEL**

The FUST<sup>9</sup> was created by the law n° 9.998/2000. It is a fund which is intended to cover a part of the cost attributable solely to fulfill the obligations of universalizing the telecommunications services, which can not be recovered with the efficient exploitation of the service.

The FUST rate is 1% over the monthly gross operating revenue, resulting from telecommunications services, excluding the ICMS, the PIS and COFINS.

The FUNTTEL<sup>10</sup> was created by the law n° 10.052/2000. It is also a fund which is designed to stimulate the process of technological innovation, encourage the training of human resources, promote the generation of jobs and access of SMEs to capital, in order to improve the competitiveness of the Brazilian telecommunications industry.

In the case of FUNTTEL, the rate is 0.5% on the earnings of companies from telecommunications service, excluding the sales cancelled, the discounts granted the ICMS, the PIS and COFINS.

FUST and FUNTTEL are also charged over the values received by the carrier from the Brazilian customer related to the mobile service he used abroad in the international roaming service (outbound traffic).

### **3.4. IRPJ and IRRF**

The IRPJ<sup>11</sup> is a Federal tax based on item III of the Article 153 of the Brazil Federal Constitution of 1988 which focuses on companies sales.

The IRPJ is calculated over the profit earned by the company in a period. The IRPJ rate is 15%, with an additional 10% for amounts earned above R\$ 20,000.

The IRRF<sup>12</sup> is a tax due over many specific income situations set out in federal law. However, for the purpose of this paper, it is enough to know that payments made by a Brazilian company to a company located abroad are charged by the IRRF at a rate of 25%.

So, in the case of outbound traffic related to international roaming service, when the Brazilian carrier must pay to the foreign carrier due to the use of its network when a Brazilian traveler visited that country, there will be a charge of IRRF over this operation. Therefore Brazilian carrier must collect 25% over this payment.

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<sup>9</sup> FUST – Fund for universalizing the Telecommunications services

<sup>10</sup> FUNTTEL - Technological Development Fund

<sup>11</sup> IRPJ – Brazilian Corporations Income Tax

<sup>12</sup> IRRF – Brazilian Income Tax Withheld



The IRRF, conceptually, is a tax that can be compensated by the income beneficiary. In the case presented, the foreign carrier should have the right to compensate de IRRF paid by the Brazilian carrier.

But there are carriers in several countries, and local laws, in the vast majority of cases, do not allow compensation of the tax that was paid in Brazil. As a consequence, in order to enable the service abroad for its customers, the Brazilian carriers when establishing the roaming agreements, ultimately accept clauses that all tax burden should be entirely supported by the Brazilian operator.

Therefore, to further exacerbate this problem, by the time the Brazilian operator sends the payment to the foreign carrier, it should include the IRRF over the proper basis, bringing the effective rate to 33.33% and not 25%. This procedure is adopted by the Brazilian operator to ensure that the carrier receives its revenue abroad without any taxation impact, as the tax withheld in Brazil, in this case, may not be compensated abroad.

As an example, suppose that the value of \$ 100 is due by the Brazilian operator to an operator abroad as remuneration for a roaming service (outbound traffic), and that the operator's country does not accept compensation for the IRRF paid in Brazil.

In this scenario, as the rate of IRRF is 25%, to guarantee the payment due to the foreign carrier, without any loss from the IRRF that is \$ 100, the Brazilian operator will consider as the basis for calculating the IRRF the value of \$ 133, 33. This numeric example with some possible scenarios is presented with more details in the box.

**Scenario 1**

There is no possible to compensate the tax withheld in Brazil.

Service: US\$ 100.00

Basis for IRRF: \$ 100.00 / 0.75 = US\$ 133.33

IRRF Rate: 25%

IRRF paid in Brazil: 25% x \$ 133.33 = US\$ 33.33

Amount received by the carrier abroad: US\$ 133.33 - US\$ 33.33 = US\$ 100.00

**Scenario 2**

There is an international agreement between the two countries to ensure the compensation of tax withheld in Brazil.

Service: US\$ 100.00

Basis for IRRF: US\$ 100.00

Rate: 25%

IRRF paid in Brazil: US\$ 25.00

Amount received by the carrier abroad: US\$100 - US\$25 = US\$ 75 plus US\$ 25 resulting from the compensation paid to the IRS in Brazil.

**Scenario 3**

There is an agreement between the two countries establishing an exemption to this kind of taxation

Service US\$ 100, without any restraint.

An important point to be emphasized is that the reciprocity, in most cases is not present. That is, when the payment is due to the Brazilian carrier (inbound traffic), and there is not a similar taxation in the other country, so it becomes much more expensive the cost of roaming for Brazilian operators than for foreign operators.

Furthermore, Brazil is one of the signatories of the Constitution and Convention of the ITU<sup>13</sup>, both concluded in Geneva/1992 and included in the Brazilian legislation by means of the Decree 2.962/99.

Thus, it became applicable in the country the provisions of the so-called "Regulation of International Telecommunications Melbourne," which, in its item 6.1.3, specifically about the taxation of international telecommunications, states: "When the national legislation of a country establishes the application of a tribute on the rate of perception, over the international telecommunications services, this tribute only applies to international telecommunications services charged to customers of this country, unless agreed otherwise, to meet special circumstances. "

Since that, Brazil has considered that it is not required the taxation by IRRF over the payments for the use of the telecommunications network to complete calls initiated in Brazil when the foreign carrier is a member of ITU. But this understanding is not adopted by Brazil for the international roaming.

#### **4. International agreements against double taxation**

One of the definitions more widely diffused and accepted by scholars about the phenomenon of international double taxation is the one prepared by the Fiscal Committee of the OECD<sup>14</sup>, according to which: "The phenomenon of double international taxation can be defined, in a general way, as the result of the charge of similar taxes in two - or more - states, on the same taxpayer, the same subject and same period of time "[9].

According to Borges [10], the international double taxation affects the international economic activities, to intervene in the movement of capital and people, in the transfer of technology and exchange of goods and services.

Also according to this author, the unilateral actions imposed by a country to prevent, mitigate or eliminate international double taxation, although they may be more easily adopted, are inadequate and insufficient for the unilateral sacrifice involved and its limited character [10].

Barretto says that considering the limitation of unilateral actions to solve the problems of international double taxation, the bilateral conventions are the proper way to avoid double taxation [11].

Thus, through bilateral agreements, the states limit their tax powers in a so much more comprehensive manner than it could do by itself [10].

Brazil has now bilateral agreements to avoid double taxation with 24 countries, of which only 2 from Latin American countries (Argentina and Ecuador) [12] while Mexico has 51 agreements, of which 6 from Latin America and the Caribbean countries [13].

#### **5. Questions to be addressed**

In this chapter, some questions are proposed in order to trigger a discussion on the main taxation barriers that hamper the growth of international roaming service in Latin America, and thus, allowing us to put forward proposals towards the construction of a positive agenda.

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<sup>13</sup> ITU - International Telecommunication Union

<sup>14</sup> OECD - Organization for Economic Cooperation and Development

### **Tax Barriers:**

- Is the tax burden on telecommunication services high in Latin American countries?
- What are the causes of this tax burden?
- Will a reduction in the tax burden on telecommunication services lead to the loss of revenue for countries or on the contrary, will it increase revenue due to the consumption of services growth?
- Could taxation explain the high cost of international roaming in Latin America? Are there any other reasons?
- Is VAT or a similar tax charged on international roaming in Latin American countries? Is this taxation on inbound or outbound traffic, or both ?
- Is the phenomenon of double taxation a problem in all Latin American countries?
- What are the reasons that prevent the income tax charged by a country on the payments for international roaming services from not being accepted as compensation by another country?
- What are the reasons for the low number of agreements against double taxation between Latin American countries?
- Why are the deliberations on telecommunication taxation included in the International Telecommunication Regulation of Melbourne not enforced by all the signatories?

### **Actions to change the scenario:**

- Could the development of a multilateral agreement between Latin American countries exempting the taxation of international roaming services be possible?
- Could the construction of a multilateral agreement between Latin American countries allowing the compensation of the income tax withheld on international roaming services be viable?
- Would a proposal to amend the clause on taxation in the International Telecommunication Regulation of Melbourne to reach the operations of international roaming services be necessary?
- Might a multilateral agreement between Latin American countries in order to establish regulation on the maximum tariffs to be charged by mobile operators in Latin American in roaming services, similarly to what is happening in the European Union, be possible?

## **6. Final Comments**

Latin America presents several factors that, potentially, can positively influence the growth of international roaming services in the next years. Among these factors deserve to be highlighted economic aspects such as: globalization, growth in international trade, regional economic blocs, growth in international leisure and business tourism, and technical aspects such as: growth of mobile telephony, mobile technology's standardization in the region (GSM) and the formation and consolidation of business telecommunications groups.

Allied to these factors there is still the demand of consumers that are traveling overseas for the same communication and connectivity services that they have everyday in their home countries.

On the other hand, there are some barriers that hinder the rise of international roaming in Latin America. One of the most important is the high cost of this service to consumers in the countries of the region.

Starting from the analysis of the Brazilian case, it appears that the taxation on telecommunications services may help to explain this reality. Among the taxation aspects the main ones that can be considered are the high tax burden, the quantity and complexity of taxes, and the occurrence of international double taxation. Thus, space is open for the discussion of ways and alternatives for the improvement of this scenario.

Among the many possible alternatives for improvement, one is the construction of multilateral tax agreements between the countries of Latin America that could prevent double taxation and ensure reciprocal treatment in the fiscal operations for international roaming on mobile telephony among the signatories.

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