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## Conference Paper

# The integration process of the mercosur in the year of 2007 for the Global Dimension of Regional Integration Model (GDRI - MODEL)

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# THE INTEGRATION PROCESS OF THE MERCOSUR IN THE YEAR OF 2007 FOR THE GLOBAL DIMENSION OF REGIONAL INTEGRATION MODEL (GDRI – MODEL)

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**Abstract:** This article evaluates from the Global Dimension of Regional Integration Model (*GDRI – MODEL*) developed by Estrada (2004) which the level of regional integration in the year of 2007 for the Common Market of the South - MERCOSUR, considering Argentina, Brazil, Paraguay and Uruguay (Members of the block). For measurement of Regional Global Development Indexes were used the variables about politics, social, economic and technological had been considered with homogeneous interest. It was verified that: for the year of 2007 the economic indices and politician had been classified as in development. The social indices and technological as developed. It concludes that even so all the indices showed improvements when compared with previous works, is necessary that the countries members of the Mercosur search improvements mainly in the areas technological and politics.

**Key-words:** International Trade, MERCOSUR, Regional Integration

## 1 INTRODUCTION

The objective of this article is to evaluate from the Global Dimension of Regional Integration Model (*GDRI – MODEL*), the level of regional integration for the Common Market of the South - Mercosur in 2007, considering its four Countries Members: Argentina, Brazil, Paraguay and Uruguay.

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After almost three decades of negotiations searching a bigger cooperation between the countries of the South Cone, always with disputes in the politician area and democratic problems, during the decade of 1980 front the great external debt inherited of military regimes and the external crisis lived by the Latin countries and that it disabled the taking of credit in the exterior that occurs the perception of the cooperation necessity between the South-american countries for the retaken of its growth. More specifically, in the year of 1985, when Brazil and Argentina pass to be managed by civil governments and the convergence politics passes to be guided by some common objectives is signed the Declaration of Iguacu in which the intention to promote and to speed up the process of bilateral economic integration was express, being this the initial landmark of the formation of the Mercosur (LEME, 2006; SILVA, 2006).

In accordance with Mercosur (2009) currently, the block is formed by four States Members (Argentina, Brazil, Paraguay and Uruguay) and six States Associated (Bolivia, Chile, Peru, Colombia, Equator and also Venezuela), this last one in incorporation process as State Member that must be accomplished in the year of 2010.

In the year of 2006, according to ONU (2009) the total population of the South America was estimated in about 379 million inhabitants, being its distribution between the countries showed at Figure 1.

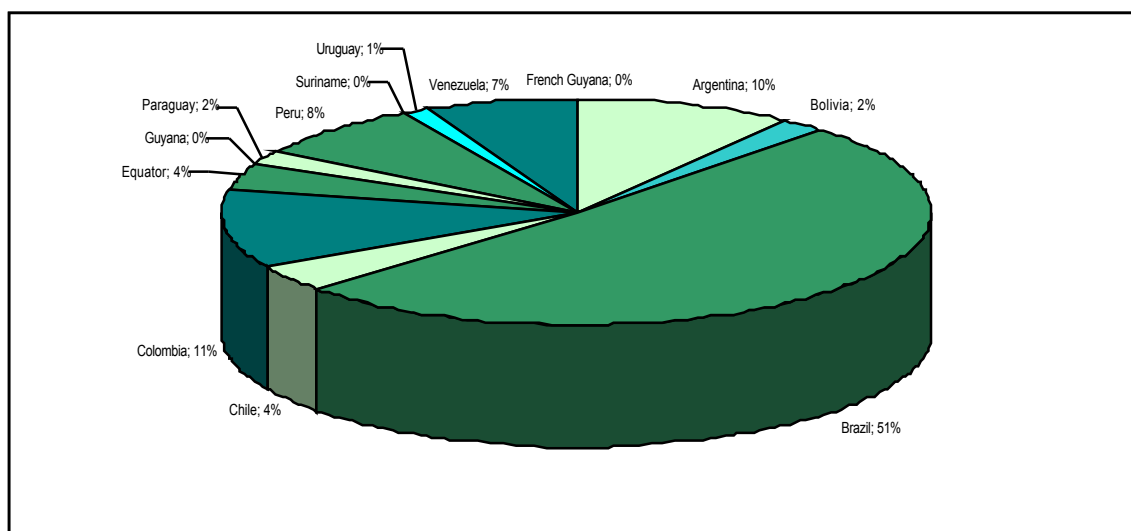


Figure 1 – Percentage of distribution of Population of the South America in 2006  
Source: ONU (2009)

Through Figure 1 it is perceived that approximately from the total population of the South America for the year of 2006, 63% is referred to the four States Members of the Mercosur, resulting in a total of 239 million inhabitants.

Regarding to Gross Domestic Product (*GDP*) for the year of 2007, according to World Bank (2009) about 7.3% of the world-wide total is produced in the South America, being this value of approximately US\$ 2.379.168 million. Figure 2 demonstrates as this wealth is divided between the integrant countries of the continent.

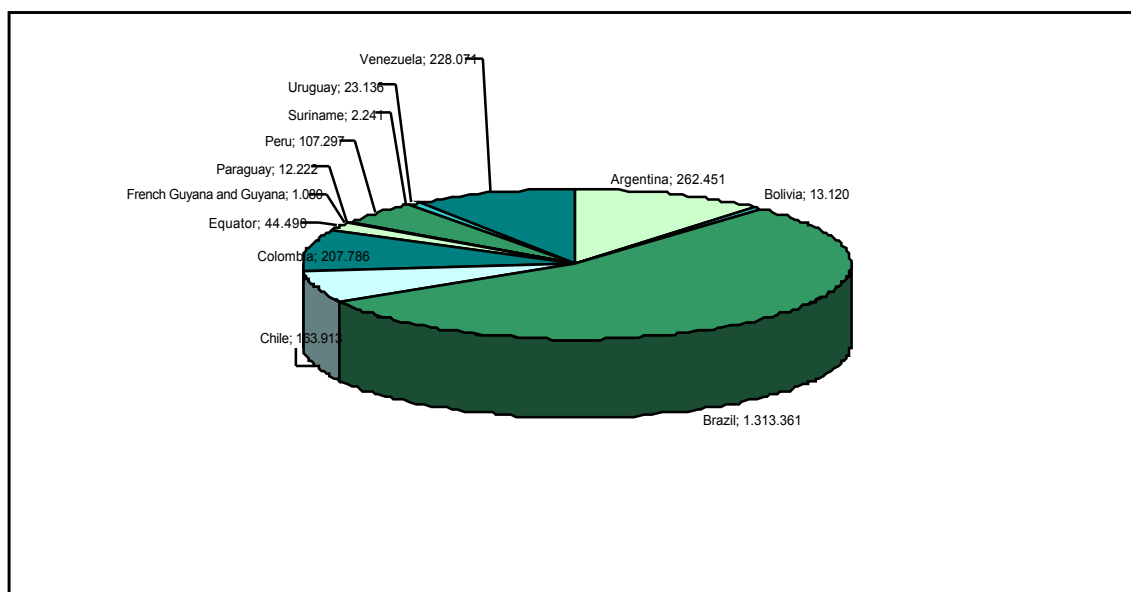


Figure 2 - Distribution of the *GDP* of the South America - 2007 (US\$ millions)

Source: ONU (2009)

Thus, if to consider the four States Members of the Mercosur, almost 68% (US\$ 1.611.170 million) of all the *GDP* of the American South continent. However is valid to stand out that this wealth is not distributed uniformly between the same ones; Brazil is only responsible for 81.52% of this total, followed by Argentina with 16.29%, Uruguay with 1.44% and Paraguay with only 0.76% of the total.

Although much already has been argued concerning the regional integration and of the proper Mercosur this work searches to evaluate through a large perspective such integration process.

The methods showed for evaluation of the regional integration are characterized mainly for a static, taking advantage most of the time the study through only one area of the knowledge, ignoring excessively.

Beyond this factor, Izerrougene (2007) based on the thesis of that the effect of the integration are the increase of the investment and the income, the diversification of the demand and increase of the specialization intra-industrial and, of the deduction of that the importance of the flows intra-industrials corresponds to the degree of convergence in the levels of development between integrated economies. However, only countries with common characteristics can arrive at a homogenization of its levels of development through the market, that is not the case of the countries of the Mercosur.

In this context, exist great discrepancies among the levels of development of the Members States. The absence of chances for the promotion of an equal development among all the countries can represent for the poor countries a permanent responsibility and cumulative, for richest countries the increase of its leadership front to others, leading the crises in the integracionist process (IZERROUGENE, 2007).

In this way, the evaluation of the integration does not have to only concentrate in the effect on creation and diversion trade, having to consider the structural changes that the process can cause in the most diverse areas. Thus, its distinguished importance of the evaluation of the Mercosur through the Global Dimension of Regional Integration Model (*GDMI*), that encloses the perspectives politics, economic, social and technological in the determination of the level of the regional integration.

Through this analysis it is possible to demonstrate as each one of the States Members behaves front to each one of these four perspectives, being of basic importance for taking of decisions of the government and society in order to reduce or same to nullify such discrepancies aiming at a more homogeneous and egalitarian economic integration.

Beyond this introductory part, this article presents a revision of literature concerning the sprouting of the theory of the economic integration and the manifestation of this in the South America. In the second part, the methodological procedures. In the third part, the results and quarrels. In the fourth part, finally, the final conclusions.

## 2 REVISION OF LITERATURE

The regional integration started to have privileged place front the quarrel guidelines between the countries in last sixty years and, the formation of the concept is confused with the question of the international trade. In accordance to Machulp (1976, apud ROLIM, 1994, p.56) the use of the integration word to assign the combination of separate economies in great economic regions starts to occur between the years of 1939 and 1942, being used in official documents in 1947 and soon it is spread, mainly for the Europe and United States.

From now on, the term regional economic integration starts to consolidate itself and becomes a derivative of the theory of the international trade. In the year of 1961, economist Bela Balassa publishes the in titled book "The Theory of Economic Integration", considered as initial landmark of the pure theory of the economic integration. In accordance to Balassa (1964) until then the "economic integration" did not have a concept clearly; some authors included the social integration in this concept, others still considered the international cooperation and, some authors who considered the simple existence of commercial relations between independent countries as an integration form.

For Balassa (1964) the economic integration can be considered as a process or as a final situation, that exactly occurred thanks to the development of this process. This process is understood as the search of measures destined to the abolition of discriminations among the countries and, as situation, corresponds to the absence of these diverse forms of discrimination.

The distinction between integration and cooperation is still valid, being this not only qualitative, but also quantitative. The cooperation includes only one action of trend to diminish certain discriminations, already the economic integration estimates measured that lead the suppression of some forms of discrimination (BALASSA, 1964).

The levels that a process of economic integration can pass are mentioned by Balassa (1964), they are: Area or Zone of Free Trade, Customs Union, Common Market, Economic and Monetary Union end, the final level called Total Economic Integration. He is valid to detach that, according to author, not necessarily all these levels are followed until the process becomes a

final situation or the integration can beginning in more advanced level that a simple zone of free trade.

The Area or Zone of Free Trade appears as the first level of the process of economic integration among the countries. In this initial level, the elimination of the tariff and non-tariff barriers to trade of products among the participant countries of the block, however, each country keeps its trade restrictions in relation to the others countries that do not belong to the block (BALASSA, 1964).

To prevent that products of countries non-members of the free-commerce area are benefited in preference negotiation there is the necessity of creation of a certificate and rules that define the nationality of the product (generally based in the value added in the country member); also the alignment of the exchange rate of the participant countries becomes necessary preventing the appearance of superavits of the partners due to induced competitiveness for the devaluation (GONÇALVES et al., 1998 and BAUMANN et al., 2004).

The level of the integration process is the Customs Union, that as well as the free trade area is configured as an agreement among the countries of the economic block. According to Balassa (1964) beyond the elimination of the tariff and non-tariff barriers trade of products, in this level occurs the equalization of the rights in relation to the trade with countries non-members of the economic block.

For Gonçalves et al. (1998) this level occurs through the setting of a Common External Tariff (CET) to the countries that are not part of the block, not being more necessary the certificate of origin of the products, therefore, any product happened of a country non-member receives the same tariff. Baumann et al. (2004) standes that despite of an international negotiation the country-members of the customs union will answer uniformly, starts to occur the necessity of convergence of the exchange, monetary and fiscal politics for an alignment of the economic cycles of the country-members.

The next level, already considered sufficiently advanced, is configured in the formation of a Common Market, that encloses the measures of the previous levels, increased the possibility of free circulation of the other productive factors, that are people, services or capitals (BALASSA, 1964).

Beyond the coordination of the politics exchange, fiscal and monetary becomes necessary to make compatible the norms corresponding for example - providence norms, regulation of capital, protection to the investors, regulation of competition and others. In case of internal or external decisions there is the necessity of the existence of supranational institutions, aiming at homogeneous decisions (BAUMANN et al., 2004).

The level subsequent to constitution of a Common Market is the formation of a Economic Union, in which according to Balassa (1964, p.13) "it associates the suppression of restrictions to the movements of merchandises and factors with a certain degree of harmonization of the national economic policies", aiming at the abolition of possible discriminations resultant of differences among these politics.

After this level, is arrived the final phase of the process of integration through the Total Economic Integration, with the unification of the monetary politics (creation of a common only currency), inspectors, social and ant cyclical, commanded for the supranational authority, being its accepted decisions obligatorily for country-members (BALASSA, 1964; CARBAUGH, 2004).

Balassa (1964, p.13-14) displays the theory of the integration in such a way:

The integration economic theory can be faced as an aspect of the international economy, but also it widens the area of the international trade theory in the measure where it analyzes the influence of a fusing of national markets on the growth and examines the necessity of coordination of the economic policies in the interior of an union. Finally, the integration economic theory must also consider elements of the theory of the localization. The integration of neighboring countries leads to the abolition of artificial barriers that hinder the continuous economic activity through the national borders and the alteration of the localization of the production and the trends of from there resultant regional concentration and decentralization cannot conveniently be argued without using the instruments of the locational analysis.

Tracings basic the theoretical concepts concerning the economic integration, are followed for one brief demonstration of the integrationist manifestations in the South America that had culminated in the creation of the Mercosur.



In fact, since the beginning of the decade of 1950 the countries more to the South of Latin America - Argentina, Brazil, Chile and Uruguay - kept a level of considerable commercial relation, about 12,2% of all the commerce carried through with the exterior in the year of 1953 (FURTADO, 1978).

With the displacement of the international hegemony of the Europe for the United States after World War II, in the year of 1958 the Brazilian government launched Negotiation Pan-American with intention to receive the support from the North Americans in the proposal of regional leadership of Brazil; in this exactly period the Argentine government also searched an aid for its development on behalf of the North American strategical interests in the region. This arguments were fortified by the Cuban Revolution and perception the delay of Latin American could be a point of vulnerability of the external politics of the Cold War of the United States. This convergence of Argentine and Brazilian interests in favor of its development passed to be called Alliance for the Progress and was the precedent for the creation of the Latin American Association of Free Commerce (PINTO, 2006).

The South Cone (Chile, Argentina, Paraguay, Uruguay and part of Brazil) represents then, the portion of the Latin America in which the integration desire becomes constantly present since middle of the decade of 1940.

Beyond the Alliance for the Progress of the year of 1958 that it served as base for the creation of the ALALC, the South Cone already had searched an integration through a Customs Union between Brazil and Argentina in the year of 1941. However, such yearning did not materialize due the great politics and diplomatical differences that if had revealed after between them the offensive Japanese to the American base of Pearl Harbor and the taking of distinct attitudes in relation to them of the axle (GARCIA, 2007).

This divergence of external politics was evidenced during the period of the Cold War, while Argentina kept a position of not-lined up while Brazil in search of recognition front to the international community kept a position of support to the North Americans (SILVA, 2006).

Another fact that resulted in increase of the rivalry between the two countries, after the fact of industrialization and urbanization occurred in Brazil the decade of 1930, taking the country to the status of power in the sub-region. However, the confrontation became eminent in the decade of 1970 with the

signature of Itaipu Treaty between Brazil and Paraguay for construction of the Hydroelectric plant of Itaipu, frustrating an Argentine hydroelectric project next to the region to Itaipu. The normality of the geopolitical balance was only restored in 1979, after the signature of an agreement between the three countries for construction of an hydroelectric plant in Argentine territory (SILVA, 2006). In the reality, this sequence of facts is a consequence of the existing historical rivalry between Brazil and Argentina, inherited of the Portuguese and Spanish disputes for territory in then the colonies.

During the decade of 1980 with the enormous external debt inherited of regimes military and the lived external crisis and with the disabled of credit in the exterior there were the perception of the necessity of cooperation for the retaken of growth. More specifically, in the year of 1985, when both the countries had passed to be managed by civil governments, the convergence politics was guided for some common objectives, demonstrated for Leme (2006, p. 113):

a) the consolidation of the democracies; b) the necessity to preserve the regional politician-strategical stability; c) the urgency in redefining criteria of international insertion; d) the importance in rescuing the credibility next to international the economic community; e) the necessity to act of form coordinated before common problems to both, as the raised external indebtedness and the increasing trade protectionism of developed countries and, f) the urgency in finding alternatives to the crisis of the developed model that, for more than five decades, had conditional the two economies, as much in the economic area as in the area politician-diplomatics, the national.

The definitive approach had beginning in November of 1985 when the Iguazu Declaration was signed, in which the intention to promote and to speed up the bilateral economic integration process was express. In this exactly year also was signed the Joint Tax Return on Nuclear Politics affirming the pacific intentions of the nuclear programs developed by both and the intensification of the cooperation in this area; beyond these other documents concerning the security had been signed aiming at the overcoming of the existing tension between the countries (SILVA, 2006).

From now on, in the economic area also the document signature occurred diverse of cooperation. Already in 1986 the Act of Brazilian-Argentina

Integration was firmed that established the basic principles of the Integration Program and Economic Cooperation - PICE (SILVA, 2006).

According to Dutra Júnior (2006) in 1988 was signed the Treated to Integration, Cooperation and Development that a process of bilateral integration consolidated and searched the institution in a stated period of ten years of a common market between the two countries. In this exactly year, as Silva (2006) also was celebrated the Alvorada Act, a decision of tri countries, that foresaw the integration of Uruguay to the bilateral agreements between Brazil and Argentina.

Giving to sequence the search for the integration the Buenos Aires Treated was signed in the month to July of 1990 in which the decision of establishment of a bilateral common market between Argentina and Brazil until the end of the year of 1994 was affirmed. However, in September of the same year, data the interest of also neighboring Paraguay, the representatives of this country, including Brazil, Argentina and Uruguay had waked up with the creation of the common market among the four, having this new arrangement the base already established by the Buenos Aires Treated (SILVA, 2006).

Thus, in March, 26 of 1991, the Assuncion Treated was signed, with intention to create the Common Market of the South (Mercosur). Given the allotment of values that are express for its democratic, pluralistas, defending societies of the basic freedoms, the human rights, the protection of the environment and the sustainable development, the consolidation of the democracy, the legal security and combat to the poverty and, with the economic and social development with equity (MERCOSUL, 2009).

Thus, it hopes through the integration between the countries if obtain the magnifying of its national markets and consequent acceleration of the processes of economic development. For such the objective of the Treated was the productive integration of the country-members through the free circulation of goods, services and factors, establishment of a Common External Tariff, adoption of common commercial politics, coordination of macroeconomic and sectorial politics and still with the harmonization of legislation in the pertinent areas (MERCOSUL, 2009). According to Pereira (1998), the Assuncion Treated was a legal instrument for the establishment of the negotiations of constitution of the common market.

In December of 1994 an Additional Protocol to the Assuncion Treaty was approved, the Ouro Preto Protocol, that established the institutional structure of the Mercosur and its endowment of international corporate entity. In this exactly meeting concluded the period of transition and had been adopted the instruments necessary of common commercial politics to characterize it as a Customs Union. This new stage was adopted to reach an only market with bigger economic growth for the country-members through the productive specialization, of the economies of scale, the commercial complementation and the power of negotiation of the block front to the other blocks and countries (MERCOSUL, 2009).

In January 1<sup>st</sup>, 1995 the Customs agreement of Union among the country-members started, in which all could adopt the same TEC. In 1996, the adhesions of Chile and Bolivia had occurred to the Mercosur in the condition of members associates (GARCIA, 2007).

The entrance of Venezuela in the block was signed in Caracas in the year of 2006, fixing a stated period of four years for the full incorporation of such country to the block. In this way, beyond the four country-members (Argentina, Brazil, Paraguay and Uruguay), the Mercosur counts on Bolivia, Chile, Peru, Colombia, Equator and also Venezuela as States associates (MERCOSUL, 2009).

After the historical description of the formation process of Mercosur will be transferred to the description of the methodological procedures considered similar to evaluate the period of training of regional integration of such block.

### **3. METHODOLOGICAL PROCEDURES**

Considering that the analysis of the processes of integration in the economic area has the usual characteristic of a static matrix of the new classics approach, this paper intends to use a model developed by Estrada (2004) and used for the study of the evolution of the regional integrations, leaving of a global perspective. This new model is called Model of the Global Dimension of Regional Integration (*GDRI-Model*). The advantage of this model in comparison with the other existing is that with this one there is the possibility simultaneously

to study the regional integration from the perspectives politics, social, economic and technological.

In accordance with Estrada (2004) exists four phases in the Global Dimension of Regional Integration Model (*GDRI-Model*):

Phase I: Design of the Multi-input Database Table;

Phase II: Measurement of Regional Global Development Indexes ( $X_i$ ), that includes The Regional Global Development Indexes that are Regional Global Political Development Index ( $X_1$ ), Regional Global Social Development Index ( $X_2$ ), Regional Global Economic Development Index ( $X_3$ ) and Regional Global Technological Development Index ( $X_4$ );

Phase III: Measurement of the Regional Global Development (*RGD*) Index;

Phase IV: Measurement of the Regional Integration Stage (*RIS*) Index.

The four Global Indices (Political, Social, Economic and Regional) can after be classified in three categories as follow:

- Level 1 or underdeveloped  $\Rightarrow 0 \leq X_1, X_2, X_3, X_4 \leq 0,33$ ;
- Level 2 or developing  $\Rightarrow 0,34 \leq X_1, X_2, X_3, X_4 \leq 0,66$ ;
- Level 3 or developed  $\Rightarrow 0,67 \leq X_1, X_2, X_3, X_4 \leq 1$ .

According to Estrada (2004), the number of 0 variable used in *GDRI-Model* varies depending on the objectives of the research. In the case of this research 98 variables with its respective parameters had been adopted.

For the Regional Global Political Development Index ( $X_1$ ) 19 variables had been considered among which we can detach the focus of the integration model, the regimen political, the security of the country, the respect to the human rights, number of political parties, the system of government, size of the army and the level of bureaucracy of the state sphere.

The Regional Global Social Development Index ( $X_2$ ) in turn, had considered 13 variables, amongst which is the degree of Literacy of the population, social number of religions, problems, attention of the government to the health of the population, access to the public education with quality, the existence of housing projects of low cost and the influence of the external culture on the population.

Already the Regional Global Economic Development Index ( $X_3$ ) had considered 53 variables being these related with external factors of the economy, consumption, commerce, work, investment, infrastructure and public administration.

Finally, for the Regional Global Technological Development Index ( $X_4$ ) had considered 10 relative variables to the technological level of the country. Had been considered, production of softwares, number of accesses on Internet, number of mobile telephones, number of public telephones, investment in research and development.

For each one of the variable (so quantitative as qualitative) parameters are attributed in which the result will be equal zero or one. The reason to use the binary system, in each data entry is that all the variable show the same level of importance and weight in the study of the regional integration. The binary system contributes to keep a balance between all the variable in each data entry. Another reason is that the binary system contributes to create an alternative model of analysis of countries with limited information, especially in the case of the developing countries and the less developed countries (ESTRADA, 2004).

This method is validated based on database from the national governments, central banks and still in international organizations as the Organization Nations of United, World Bank and International Monetary Fund.

After the definition of all variable and all parameters, they are listed in each data entry. The next step is to add up the values of all variables in the column of the Actual Situation ( $AS$ ) in each multi-input database table. The Total Possible Results ( $TPR$ ) obtained are then located in the  $TPR$  column next to  $AS$  column. With  $TPR$  in place, the next step is to compute each Regional Global Development Indexes ( $X_i$ ). The computation is done by applying the expression 1 to the values in the multi-input database tables.

$$(1) \quad X_i = \frac{\sum_{i=1}^4 AS(i)}{\sum TPR(i)} \times 100$$

Each Regional Global Development Indexes ( $X_i$ ) plays an important role in the measurement of the Regional Global Development ( $RGD$ ) index and the Regional Integration Stage ( $RIS$ ) index. These two indexes can be affected by any change in the  $X_i$  indexes in the short and long run.

The third phase of the implementation of the  $GDRI$ -Model presents a general definition about the Regional Global Development ( $RGD$ ) index (see

Diagram 1). The *RGD* index is an indicator to compare different historical periods of the regional integration process in any region. It is based on the Regional Global Development Indexes ( $X_i$ ) of a region. Therefore, the *RGD* index is a signal to analyze the evolution of any regional integration process from a global perspective. For the *DGR* a graph is located on the basis of index  $X_i$  and it consists of four different areas, where each area has a limit equivalent the 0.25 and the total value of these four areas is equal the 1.

The last phase in the implementation of the *GDR*-Model is the measurement of the Regional Integration Stage (*RIS*) index. The *RIS* index measures the degree or stage of the regional integration development that any region achieves in its different stages of evolution. The *RIS* index is considered a dependent variable in the *GDR*-model.

In the measurement of the *RIS* index, four Regional Global Development Indexes ( $X_i$ ) are used: Regional Global Political Development Index ( $X_1$ ), Regional Global Social Development Index ( $X_2$ ), Regional Global Economic Development Index ( $X_3$ ) and Regional Global Technological Development Index ( $X_4$ ). A constant coefficient – Regional Integration Approach Incline (*RIAI*) - is also used concurrently. The *RIAI* is represented by  $a$ ,  $b$ ,  $c$ , and  $d$  in expression 2 and is applied to each global development index ( $X_i$ ). Each *RIAI* ( $a$ ,  $b$ ,  $c$ , or  $d$ ) has a limit that is equal to 0,25 being called *RIAI* with Homogeneous Interest, that is, the sum of the *RIAI*'s cannot be more than 1, demonstrated in Equation 3.

$$(3) \quad Y = RIS = aX_1 + bX_2 + cX_3 + dX_4 \leq 1$$

$$(4) \quad a = 0.25, b = 0.25, c = 0.25, d = 0.25 = 1 \Rightarrow RIAI \text{ homogeneous interest}$$

After the type of *RIAI* to be applied is determined, the Regional Integration Stage (*RIS*) index is measured according to expression 2. The *RIS* index analysis may reveal one of three different scenarios, namely (a) under-developed stage ( $0 \leq RIS \leq 0.33$ ), (b) developing stage ( $0.34 \leq RIS \leq 0.66$ ) and (c) developed stage ( $0.67 \leq RIS \leq 1$ ).

This new concept of graphic representation consists of five axes, each one with a positive value. (In the case of this research, the value in each axis is represented by a percentage). Once the axes of the graph are in place, the next

step is to plot the four  $X_i$  indexes (politics, social, economic, and technology  $X_i$  indexes) in four of the axes respectively. These  $X_i$  indexes are independent variables. The total value of the four axes is equal to 1 (see Figure 3).

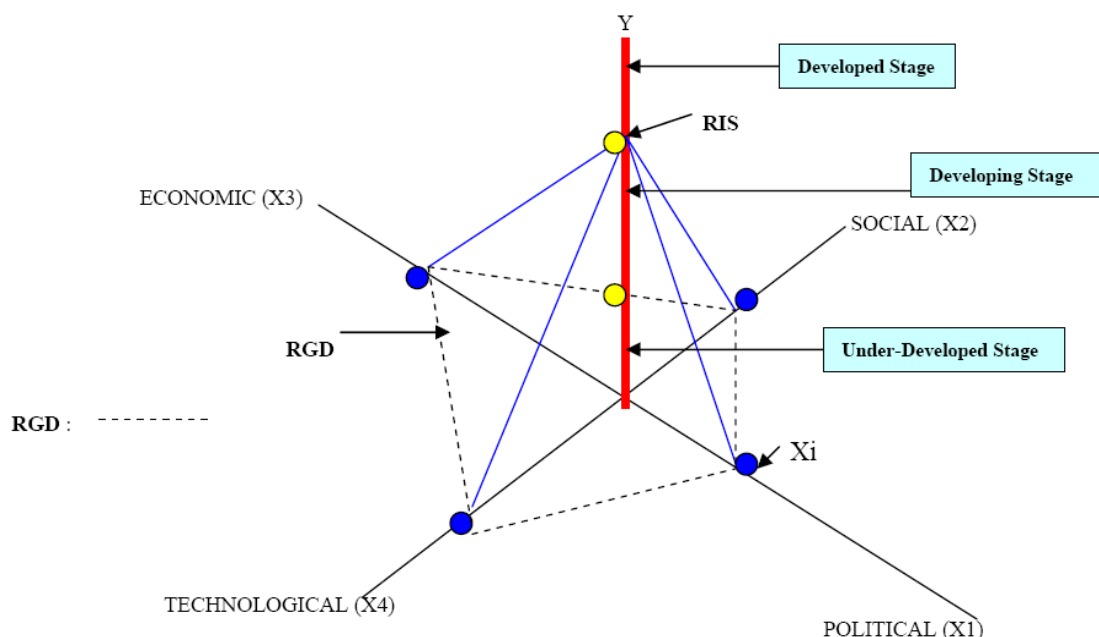


Figure 3 - The Regional Integration Stage (*RIS*) Index

Source: Estrada (2004)

#### 4. RESULTS AND DISCUSSION

Remembering that in this paper, are only considered the States Members of the Mercosur: Argentina, Brazil, Paraguay and Uruguay.

Thus, for the Regional Global Political Development Index ( $X_1$ ) in the year of 2007 the four countries had gotten an equal index the 0.575. With such result the economic block of the Mercosur can be classified in a period of training of integration of level 2 or in development when considered the variable politics.

The Regional Global Social Development Index ( $X_2$ ) in turn for the block in the year of 2007 was equal the 0.711 being considered of level 3 or developed, being this the index with more significant value before excessively.

Already the Regional Global Economic Development Index ( $X_3$ ) had a result in the category in development, being equal the 0.411, weighing negative in the EIR.



Finally, the Regional Global Technological Development Index ( $X_4$ ) for the Mercosur in the year of 2007 also was fit in the developed category, having equal value the 0.700.

Applying it methodology for attainment of the Regional Global Political Development Index, got the equal value the 0.348, considered of expansion when compared with previous paper developed by Estrada (2004) for the decades of 1980 and 1990, where such index presented equal values respectively 0.08 and 0.15.

As salient previously this paper assumed a constant coefficient, through the Regional Integration Approach Incline ( $RIAI$ ) with homogeneous interest, attributing one weight of 0.25 for each one of Indices  $X_i$ , for attainment of the Regional Integration Stage, being this presented by Figure 4.

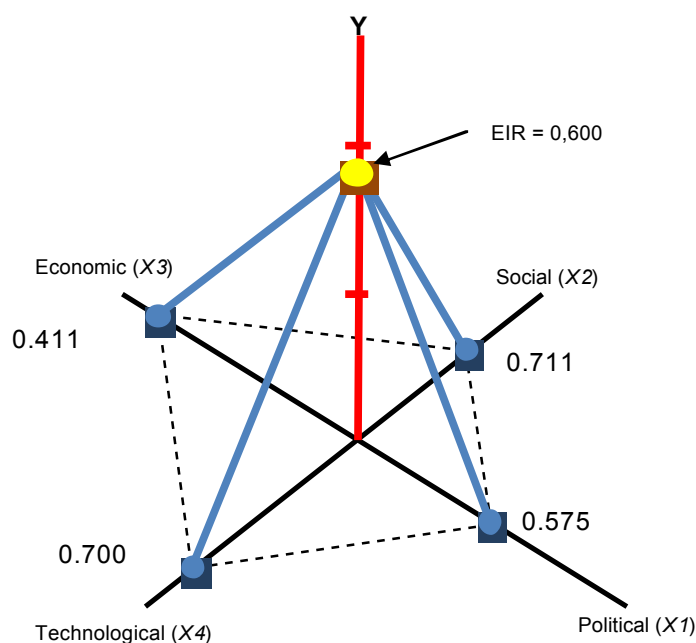


Figure 4 - Regional Integration Stage Index (RIS) in the MERCOSUR – 2007

Source: Data of the research

As it can be observed in Figure 4, through Indices  $X_i$  got the value of the Regional Integration Stage equal 0.600, fitting the Mercosur as an economic block in development phase.

## 5. CONCLUSION

The subject of the economic integration started to have great expression after World War II, moment at which the countries had perceived that exaggerated protectionism already did not make possible the economic development.

In the South America, after innumerable frustrate attempts of integration, in the decade of 1980, same countries started to form Mercosur through the initiative of two of its main countries, Argentina and Brazil, aiming at the regional development a period of intense crisis.

This paper looked for evaluate from the Global Dimension of Regional Integration Model (*GDRI-Model*), the Regional Integration Stage for the Common Market of the South - Mercosur in the 2007, considering its four States Members: Argentina, Brazil, Paraguay and Uruguay.

For this year the block's result of the Regional Global Political Development Index (X1) was 0.575 and the Regional Global Social Development Index (X2) was 0.711. Meanwhile, the Regional Global Economic Development Index (X3) and Regional Global Technological Development Index (X4) were 0.411 and 0.700 respectively.

Then, the indices of the variable economic and politics had been classified as level 2 or in development and, the indices related of the variable social and technological had been classified as level 3 or developed.

Considering such values and a boarding of homogeneous interest the Common Market of the South can be considered as an economic block in development, having gotten a value for the Regional Integration Stage equal 0.600. For this classification can be concluded that even so the indices when compared with previous works have occurred improvements in all, the analyzed countries showed improvements in the areas politic and economic hoping to raise the Mercosur to the status of developed economic block.

As suggestion for subsequent researches it is important the inclusion of States Associates for measurement of the Regional Integration Stage.

## REFERENCES

BALASSA, B. **Teoria da Integração Econômica**. Lisboa: Livraria Clássica Editora, 1964. 452 p.

BANCO MUNDIAL. **Data & Research**. Disponível em: <<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/0,,menuPK:476823~pagePK:64165236~piPK:64165141~theSitePK:469372,00.html>>. Acesso em: 12 ago. 2009.

BAUMANN, R.; CANUTO, O.; GONÇALVES, R. **Economia Internacional: Teoria e Experiência Brasileira**. Rio de Janeiro, Elsevier, 2004. 441 p.

CARBAUGH, R. J. **Economia Internacional**. São Paulo, Pioneira Thomson Learning, 2004. 587 p.

DUTRA JUNIOR, J. C. **Integração Econômica e Direito da Integração: Fundamentos do Direito do Mercosul**. 2006. 206 f. Dissertação (Mestrado em Direito), Universidade Católica de Brasília, Brasília, 2006.

ESTRADA, M. A. R. Global Dimension of Regional Integration (GDRI) Model. **FEA Working Paper**, n. 07, 2004. Disponível em: <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=672861](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=672861)>. Acesso em: 11 jan. 2009.

FURTADO, C. **A Economia Latino-Americana**. 2. ed. São Paulo: Companhia Editora Nacional, 1978. 339 p.

GARCIA, V. P. V. **A Dimensão Social dos Processos de Integração Regional: As estratégias do Mercosul e da União Européia**. 2007. 108f. Dissertação (Mestrado em Integração Latino-Americana), Universidade Federal de Santa Maria, Santa Maria, 2007.

GONÇALVES, R.; BAUMANN, R.; PRADO, L. C. D.; CANUTO, O. **A Nova Economia Internacional: Uma Perspectiva Brasileira**. 3. ed. Rio de Janeiro: Campus. 1998. 392 p.

IZERROUGENE, B. Os Obstáculos à Integração de Economias Desiguais: O Caso do Mercosul. **Cadernos PROLAM/USP**, v. 2, n. 11, 2007. Disponível em: <[http://www.usp.br/prolam/downloads/2007\\_2\\_6.pdf](http://www.usp.br/prolam/downloads/2007_2_6.pdf)>. Acesso em: 01 abr. 2009.

LEME, A. A. S. P. **A Declaração de Iguazu (1985): A Nova Cooperação Argentino-Brasileira**. 2006. 195 f. Dissertação (Mestrado em Relações Internacionais), Universidade Federal do Rio Grande do Sul, Porto Alegre, 2006.

MACHULP, F. A History of Thought on Economic Integration. In: MACHULP, F. **Economic Integration: Worldwide, Regional, Sectoral**. Londres: Macmillan Press, 1976. p. 61-85.

MERCOSUL – Mercado Comum do Sul Portal Oficial. Disponível em:< <http://www.mercosur.int/msweb/Portal%20Intermediario/PT/index.htm>>. Acesso em: 12 abr. 2009.

ONU – Organização das Nações Unidas. **Demographic Yearbook**. Disponível em:< <http://unstats.un.org/unsd/demographic/products/dyb/dyb2.htm>>. Acesso em: 12 ago. 2009.

PEREIRA, L. V. Tratado de Assunção: Resultados e Perspectivas. In: BRANDÃO, A. S. P.; PEREIRA, L. V. **Mercosul: Perspectivas da Integração**. 3. ed. Rio de Janeiro: Editora FGV, 1998. p. 11-46.

PINTO, H. E. M. **A Estratégia de Integração Econômica Regional na América Latina: O Caso da Comunidade Andina**. 2006. 254f. Tese (Doutorado em Integração da América Latina), Universidade de São Paulo, São Paulo, 2006.

ROLIM, C. F. C. Integração X Integração – A Busca dos Conceitos Perdidos. In: LAVINAS, L.; CARLEÍAL, L. M. F.; NABUCO, M. R. **Integração, Região e Regionalismo**. Rio de Janeiro: Bertrand Brasil, 1994. p. 55-88.

SILVA, L. T. **Política Externa Brasileira para o Mercosul: Interesses Estratégicos e Crise da Integração Regional**. 2006. 107f. Dissertação (Mestrado em Ciência Política), Universidade de São Paulo, São Paulo, 2006.