Analysis of the internationalization of higher education between emerging countries: case study of Brazil with the others countries members of BRICS

Larissa Cristina Dal Piva Moreira¹, Sonia Maria Ranincheski²
¹,² Universidade Federal do Rio Grande do Sul

ABSTRACT
In the globalized world, education goes beyond geopolitical frontiers and brings a challenge to countries and institutions of higher education: it is necessary to internationalize to survive. In this context, university internationalization is understood as policies focused on the areas of scientific and technological knowledge established between countries and institutions of higher education. The general objective of this work is to analyze the process of university internationalization of Brazil with the other BRICS member countries - Russia, India, China and South Africa - comparing the policies adopted during the period of government of Luiz Inácio Lula da Silva (2003 -2010) and Dilma Rousseff (2011-2016). The methodology used consisted of a comparative and qualitative approach based on the content analysis of the official pronouncements of the Brazilian presidents and interviews with exponents of the area both in Brazil and the member countries of the BRICS. As results, discrepancies between visions and actions of university internationalization were identified, despite the party sequence in government. The conclusion of the study points to the differences between the two governments of the same party in relation to the topic of university internationalization, indicating that the presence of the same party in the government is not sufficient for the creation of a State policy. In order to solve the dilemma between a policy of state and government and to insert itself strategically on the international scene, Brazil would need its political elite to transcend conjunctural rivalries and choose education and the level of knowledge creation as non-interchangeable currencies.

KEYWORDS
Internationalization of education. University internationalization. Emerging countries. BRICS.
Análise da internacionalização da educação superior entre países emergentes: estudo de caso do Brasil com os demais países membros dos BRICS

RESUMO
No mundo globalizado, a educação ultrapassa as fronteiras geopolíticas e traz um desafio para os países e instituições de ensino superior: é preciso internacionalizar-se para sobreviver. Neste contexto, internacionalização universitária é entendida como políticas voltadas para as áreas de conhecimentos científicas e tecnológicas estabelecidas entre os países e as instituições de ensino superior. O objetivo geral deste trabalho consiste em analisar o processo de internacionalização universitária do Brasil com os demais países membros dos BRICS – Rússia, Índia, China e África do Sul – comparando as políticas adotadas durante o período de governo de Luiz Inácio Lula da Silva (2003-2010) e Dilma Rousseff (2011-2016). A metodologia utilizada consistiu em uma abordagem comparativa e qualitativa tendo como base a análise de conteúdo dos pronunciamentos oficiais dos presidentes brasileiros e entrevistas com expoentes da área tanto do Brasil quanto dos países membros dos BRICS. Como resultados identificaram-se discrepâncias entre visões e ações de internacionalização universitária, apesar da sequência partidária no governo. A conclusão do trabalho aponta para as diferenças entre os dois governos de um mesmo partido em relação ao tema da internacionalização universitária, indicando que não é suficiente a presença de um mesmo partido no governo para a criação de uma política de Estado. Para solucionar o dilema entre uma política de Estado e de governo e inserir-se estrategicamente no cenário internacional, o Brasil precisaria que sua elite política transcendesse as rivalidades conjunturais e elegesse a educação e o nível de criação de conhecimentos como moedas não intercambiáveis.

PALAVRAS-CHAVE
Internacionalização da educação. Internacionalização universitária. Países emergentes. BRICS.

Análisis de la internacionalización de la educación superior entre países emergentes: estudio de caso del Brasil con los demás países miembros de los BRICS

RESUMEN
En el mundo globalizado, la educación sobrepasa las fronteras geopolíticas y trae un desafío a los países e instituciones de enseñanza superior: hay que internacionalizarse para sobrevivir. En este contexto, la internacionalización universitaria se entiende como políticas dirigidas a las áreas de conocimientos científicos y tecnológicos establecidos entre los países y las instituciones de enseñanza superior. El objetivo general de este trabajo consiste en analizar el proceso de internacionalización universitaria de Brasil con los demás países miembros de los BRICS - Rusia, India, China y Sudáfrica - comparando las políticas adoptadas durante el período de gobierno de Luiz Inacio Lula da Silva (2003 -2010) y Dilma Rousseff (2011-2016). La metodología utilizada consistió en un enfoque comparativo y cualitativo teniendo como base el análisis de contenido de los pronunciamientos oficiales de los presidentes brasileños y entrevistas con expoentes del área tanto de Brasil como de los países miembros de los BRICS. Como resultados se identificaron discrepancias entre visiones y acciones de internacionalización universitaria, a pesar de la secuencia partidaria en el gobierno. La conclusión del trabajo apunta a las diferencias entre los dos gobiernos de un mismo partido en relación al tema de la internacionalización universitaria, indicando que no es suficiente la presencia de un mismo partido en el gobierno para la creación de una política de Estado. Para solucionar el dilema entre una política de Estado y de gobierno e insertarse estratégicamente en el escenario internacional, Brasil necesitaría que su elite política trascienda las rivalidades coyunturales y elegiera la educación y el nivel de creación de conocimientos como monedas no intercambiables.

PALABRAS CLAVE
Internacionalización de la educación. Internacionalización universitaria. Países emergentes. BRICS.
Introduction

This article aims to analyze the process of higher education internationalization of Brazil with the other BRICS countries - Russia, India, China and South Africa, comparing the policies adopted in Brazil during the period of government of the President Luiz Inácio Lula da Silva (2003 -2010) and the President Dilma Rousseff (2011-2016). In the last decades the internationalization of education theme has emerged as one of the important issues of higher education, but also as an element of the strategic plan of foreign policies of the countries. Globalization and the advancement of knowledge are crucial to national economies, not only at the emerging countries such as Brazil, to closer academic, scientific and technological ties with other countries (WIT, 2002; KNIGHT, 2004; ALTBACH, 2007).

In addition, present-day society brings with it the challenge of the independence of states in relation to both their external and internal policies, since these are interrelated in the current context (PUTNAM, 2010). To that extent, domestic government policies can be examined in order to understand the external relations present in these policies. Analyzing the university internationalization policies of the Lula and Dilma governments contributes, therefore, to the discussion about the purposes of these two governments in the external agenda.

Under Lula's governmentment (2003-2010), foreign policy maintained a multilateralist stance, with characteristics of a policy influenced by the strong personal leadership of the president, although there was the active and dynamic diplomatic action of Celso Amorim. With Lula's government, Brazil has increased the profile of relations with African countries, not only in view of economic relations, but also the rescue of the human, social and cultural debt (VIGEVANI; CEPALUNI, 2007).

The first government of Dilma Rousseff (2011-2014) was characterized by a decline relative to the two mandates of Luiz Inacio Lula da Silva, when dealing with the concept of "ascension" (CERVO, LESSA, 2014). Likewise, the foreign policy of the Dilma period can be seen as difficult to characterize, given the oscillation of the president's decisions in this matter.

In this context, this article compares the process of higher education internationalization in the governments of Lula and Dilma with a view to verifying if there was a difference in orientation of the policy of both governments in relation to the subject, what were the specific characteristics of each one and what are the reasons for internationalization towards BRICS members.

Although geographic, historical and cultural distances, the BRICS countries have common economic and demographic aspects: they are countries of growing economies and of impact in the world political scene because they are populous (together they represent more than 40% of the world population) and of great extension and/or influence in the region/continent in which they are inserted (INSTITUTO DE PESQUISAS ECONOMICAS
APLICADAS - IPEA, 2015). By uniting rather than expanding contacts, they gain representativeness and importance to other countries considered hegemonic, strengthening the premise of a new multipolar order. The relevance and prominence of the BRICS in the international political scenario can also be verified by the ability of member countries to avoid being affected by the economic crisis of 2008, which affected the developed countries, but did not impede the growth of the group (VISENTINI et al., 2013).

BRICS nations have many differences that hamper academic and scientific cooperation, such as different languages and different academic traditions (with some similarities between China and Russia). However, some realities are shared: serious problems of management and internal governance of the university; political influence on decisions; equity of access; among others (ALTBACH, 2014). The fact that they have similar socioeconomic realities meant that at the 6th BRICS Summit, held in Brazil in July 2014, the presidents of the countries of the bloc affirmed that education is the key to long-term success and acknowledged that investing more is essential to address inequalities and to continuously foster economic growth (BRASIL, 2014a).

The analysis of cooperation interests, such as academic, scientific, technological or other topics, requires some caution. Firstly, it must be remembered that the BRICS have, to some extent, political and economic interests that often do not coalesce. On the political front, China and Russia generally adopt stricter international stances, while the other countries take a less pronounced stance. On the economic front, China and India are characterized by the export of industrial and technological products, as well as import of raw materials; Brazil, Russia and South Africa, on the other hand, basically export large volumes of mineral and agricultural resources, as well as importing industrial technologies (STUENKEL, 2017). It is also important to point out that the governments of Lula da Silva (2003 to 2010) and Dilma Rousseff (2011 to 2016) faced challenges for the country's development and overcoming the difficult social issue. Despite the positive social programs implemented, these have resulted in the strengthening of individualism as a form of social action, to the detriment of collective action, reinforcing one of the most striking features of the State's presence in Brazil (RANINCHESKI and CASTRO, 2013).

Thus, the increase of policies that generate the exchange of knowledge and the search for partnerships with other emerging countries could be strategies to be put into practice as a way to boost or even create new programs that could represent advances in the qualification of the knowledge produced in the country. Would the governments Lula and Dilma have had this motivation or would they have remained in the sphere of increased cooperation and academic mobility? To answer this question, it is necessary, in this case, to debate and clarify the concept of internationalization of higher education used to compare the policies of university internationalization of both governments.
University Internationalization

There are several conceptions of the internationalization of higher education meaning, but all converge to mention that it can be considered as a set of policies and programs that universities and governments implement to respond to the phenomenon of globalization, which affects states and institutions of higher education (HEI) (SEBASTAN, 2004; ALTBACH, 2002; GACEL-ÁVILA, 2003; KNIGHT, 2004).

According to Knight (2004), the internationalization of higher education is conceptualized as the process that integrates a global, intercultural and international dimension into the objectives, functions and offer of post-secondary education. This idea is corroborated by Sebastián (2004), who defines international academic cooperation as a set of activities carried out among university institutions that, through multiple modalities, implies an association and collaboration on issues of policy and institutional management. It is perceived that there is a vision of internationalization focused on cooperation at the institutional level between higher education institutions.

On the other hand, Hawawini (2011) affirms that this definition does not capture the essence of the internationalization process, whose fundamental goal should be to integrate the institution to the emerging global knowledge and to the learning network, to the detriment of the integration of the international dimension with the institutional environment existing. The process, then, should be looking outside rather than looking inward, emphasizing the institution's ability and ability to become an integral part of building the world's knowledge, not only to benefit from it, but also to contribute to development.

Although the concept of internationalization of higher education is recent, dating from the 1990s (WIT, 2002), the international character of universities has been present since the Middle Ages with the creation of the first European schools. The formation of these schools, called "universitas", counted on teachers and students from different regions and countries, building communities that met in search of a common objective: knowledge (STALLIVIERI, 2004).

However, there was a change in the paradigms, which followed in the same direction of the reformulation brought about by globalization, walking side by side with the evolution of societies. Before, the universities did not have to justify their work before the society. However, the process of massification of higher education opened the university's doors to various sectors of society. This is another definition of the importance of the internationalization of higher education, for which students, parents, government, educational lending agencies, research funding agencies, and the market have come to be evaluators who are close to university directions (TROW, 1970). This can be illustrated by the need for students to have a great academic experience, the demands of the job market for a particular professional profile, the question of teaching quality assessments, the requirements to guarantee project financing, as well as the accreditation of programs and courses.
In this sense, Gornés (2001) affirms that academic cooperation can be seen as the capacity that can develop the relations between the different academic, governmental and social institutions, through the exchange of academic products (teaching, research, extension, diffusion or academic-professional services), in order to match needs with possibilities. It is no less important to point out that, in the case of Brazil, there is competition among university institutions that, suffering the loss of resources, perceive the possibility of international cooperation as a double gain: conditions to win competition in the university ranking and earn more resources. In this sense that Lima and Contel (2009) emphasize the marketing characteristic involving the funding of international students in the case of foreign universities. In the Brazilian case, the main source of funding is the State, so its importance for study and influence in the internationalization process of national higher education institutions is reinforced.

Knight (2004) mentions the national, sectoral, and institutional levels in relation to the levels of policies that influence and are affected by the internationalization process. At the national level, the policies relate to the area of foreign relations, immigration, education, science and technology, culture and history, social development, industry and commerce, among others. At the sectoral level of education, policies are related to purpose, accreditation, licensing, fundraising, curriculum, teaching and research.

Regarding the institutional level, Knight (2004) states that policies can be interpreted as and two forms: the broadest and most restricted. The first is characterized by policies at the institutional level, related to the planning of guidelines to analyze the implications of internationalization, that is, it verifies whether the institution has adopted an integrative and sustainable approach, including quality maintenance, planning, personnel, finance, teacher development, student support, among others. The most restricted refers to declarations related to the international dimension in the mission of the institution, as well as to purposes, values, functions and policies (study abroad, student recruitment, international connections and partnerships, cross-border courses, sabbaticals).

Thus, the presence of three main actors is evident: the governments of the national states, institutions and academic networks, that may or may not effect academic cooperation. The process may occur, first among academics, but it needs the endorsement of the state. For states, the internationalization policy has more political force to press for the participation of academics in this process of internationalization. In other words, at the state level, cooperation on educational issues is a political instrument. Academic mobility consists mainly of the presence of foreign teachers and students on the country's campus and can be verified by the degree of international immersion in the curriculum. Scientific and technological mobility is perceived in joint actions among countries, such as: conducting research projects with foreign institutions; participation in international research consortia; granting scholarships for international research; development of international patent projects (BARTELL, 2003, STALLIVIERI, 2004).
It is perceived that, in the process of university internationalization, there is reciprocity and exchange between the educational institutions and their countries. However, the relationship between countries and educational institutions is not always symmetrical, since there are programs promoted by governments with strategic objectives that end up generating asymmetric and non-reciprocal relations. Morosini (2006), also supported by Altbach (2007), adds the term "multinationalisation of higher education", which refers to academic programs of institutions belonging to one country and offered in other(s) country(s). Generally, multinationalisation or transnationalization marks relations between unequals and has as its main objective the profit. Among the types of multinationalisation/transnationalization, we can mention the establishment of campuses abroad, where the teachers and the curriculum come from the foreign institution, as well as the classes are taught in the language of the foreign country. The comparison between the actions of international academic cooperation in the scope of internationalization and multinationalization/university transnationalization can be seen in Table 1.

Table 1. International Academic Cooperation Actions – university internationalization x university multinationalization/transnationalization

<table>
<thead>
<tr>
<th>University Internationalisation</th>
<th>Multinationalisation / transnationalisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and student mobility</td>
<td>Establishment of campuses in other countries</td>
</tr>
<tr>
<td>Scholarships granted by the Government for studies and research in another country</td>
<td>Provision of distance education contracts in other countries</td>
</tr>
<tr>
<td>Development of research projects with foreign institutions</td>
<td>Development of training courses in other countries</td>
</tr>
<tr>
<td>Participation in consortia and international research networks</td>
<td>Level of international immersion in the national curriculum</td>
</tr>
<tr>
<td>Development of international patent projects</td>
<td>Foreign language courses in the national context</td>
</tr>
<tr>
<td>Dual degree programs</td>
<td>Lectures given by foreign teachers even at a distance</td>
</tr>
</tbody>
</table>


The difference between internationalization and multinationalisation/transnationalization of higher education may be in function if this policy contributes to the scientific and technological development of the countries involved or allows one country to exercise influence over another (soft power). One can also say, observing concepts of Knight (2004), that the process of university internationalization occurs between countries (across nations), while multinationalisation or transnationalization of higher education occurs through intervention beyond the borders of national politics (cross-border). This difference can be observed in the relationship between the developed countries that occupy the position of knowledge producers and the emerging countries that have subsisted in the role of consumers of knowledge (CELANO, GUEDES, 2014). This characteristic is also evident in the practice of internationalization actions by higher education institutions, with a recognized tradition of European and American institutions in international academic mobility.

Internationalization actions are used with different objectives: either to "attract friends", as is the case in Germany, or as a source of financial resources and trade, as seen by the United States, but both carry with them the strategy of soft power for international
strategic positioning of the country in the global context (ALTBACH, 2013). In the case of the emerging countries of the 21st century, such as Brazil, Russia, India, China and South Africa, which form the BRICS group, the benefits of the internationalization of teaching and research activities practiced by universities in national development have been affecting and modifying the relationship in the global context. If before the discussion was only about the need for access and fairness of teaching at the national level, the training of global professionals for the generation of innovation in the national scenario is now also on the agenda. These professionals, many trained with experiences abroad, bring to national higher education institutions the need to internationalize academic curricula and scientific production as a source of international financial resources.

This research used the concept of university internationalization policy as the whole of discourses and programs promoted by the government with the purpose of promoting relations and actions of academic and scientific cooperation with the other countries. The internationalization policy starts from the State and is likely to be applied by higher education institutions. The role of Higher Education Institutions is relevant because it is in them that policies are transformed into actions. Thus, based on the presented context, the present work has the following guiding question of research: what was the policy of Brazilian university internationalization for the BRICS countries during the Lula and Dilma governments?

Methodology

The methodology used at the present research consists of a qualitative, exploratory and descriptive approach, with a case study, characterized by the description, understanding and interpretation of facts and phenomena (MARTINS and THEÓPHILO, 2009).

One of the characteristics of the methodology of this study is the use of the comparison in the sense of knowing the differences, although it is not in the scope of this article to deal with the impact of these differences on the observed object. The comparison of university internationalization in the Lula and Dilma governments was carried out considering that it is a methodology that allows, by contrast, to identify the distinct characteristics in both governments. In this sense, the objective was to locate the differences, since they are governments of the same political party, the Partido dos Trabalhadores (PT), and the logic would be to have the same project of university internationalization. In other words, the comparison was made to find the differences, since the hypothesis itself pointed to this.

Based on the secondary data, such as information, government discourses and interviews, it was sought to compare, analyze and explain the politics and actions of university internationalization of Brazil with the other BRICS member countries during the Lula and Dilma governments. This research can be classified as an exploratory one. In order to corroborate, Godoy (2006, 128) states that this methodology "seeks to study how people
from different countries, regions or cultures appropriate certain concepts and meanings guiding their behavior."

The chosen time cut includes the period of the governments of Lula (2003-2010) and Dilma Rousseff (2011-2016). This choice is due to the accessibility to the data and to the fact that it is a significant period because the BRICS acronym was launched in 2001, which does not justify the study being done previously. In addition, when choosing the theme of governments as a perspective of analysis, it is intended, at the end of this research, to verify if there were significant changes in the policy of internationalization of Brazilian higher education in relation to the BRICS with the change of government.

The comparative analysis is carried out in three complementary levels: the national, the sectorial and the institutional. The national level, for the Brazilian case, is related to government policy and includes data from government agencies promoting international academic cooperation, such as: a) Ministry of Foreign Affairs, with data from the Brazilian Cooperation Agency (ABC) and the Division of Educational Issues (DCE); b) Ministry of Education with data from the Coordination for the Improvement of Higher Education Personnel (CAPES); c) Ministry of Science and Technology: data from the National Council for Scientific and Technological Development (CNPq).

At the sectoral level, which includes non-governmental organizations that support the process of university internationalization, as in Brazil the Brazilian Association of International Education (FAUBAI), data were searched on the website (faubai.org.br) and interviewed Professor José Celso Freire, president of the association.

The institutional level includes institutions of higher education that are also actors involved in the process of university internationalization. Seven internationalization policy advisers from major Brazilian universities and representatives of public institutions (USP, UNICAMP, UFRGS, UFRJ) and private (PUC-São Paulo, PUC-Campinas, PUC-Rio de Janeiro) were interviewed. For the selection of higher education institutions to be researched, it was used the best ranked in the report "QS University Rankings: BRICS" in the year of 2016.

Also interviewed were advisers responsible for the internationalization policy of foreign universities, such as: Friendship University, Russia; Beijing University of Technology, China; and Indian Institute of Technology Madras - IITM, India. Besides these, two researchers were interviewed in the area of Brazilian university internationalization: prof. Claudio de Moura Castro, president of CAPES from 1979 to 1982, and Prof. Luciane Stallivieri, with postdoctoral degree and specialist in the area of university internationalization.

These interviews were carried out following a questionnaire in order to address the meaning of university internationalization in general and for Brazil in particular, such as: a) What were the policies and main actions of international academic cooperation developed...
throughout the Lula and Dilma? b) Who were the national and international actors involved in these actions? c) What motivated the implementation of these policies / actions? d) What were the results achieved?

The research on secondary data, whether books, magazines or websites, besides allowing the theoretical basis, in the specific case of this study, was used as a resource in the impossibility of direct interview with the leaders of the government agencies involved in the process of internationalization of higher education in Brazil or other BRICS member countries.

To analyze the data collected, the content analysis technique was used. This, according to Bardin (2006), consists of a set of communication analysis techniques that uses systematic procedures and objectives to describe the content of the messages. The intention of the content analysis is the inference of knowledge regarding the conditions of production (or, possibly, reception), which inference uses quantitative or not. For Moraes (1999), the biggest challenge of content analysis is in the preparation of the information, which requires classification by its interaction and relevance to the purposes of the study.

Content analysis followed the steps: a) unitarization: process of classification of information; b) categorization: process of grouping information according to their affinities, and can be performed by categories defined a priori or a posteriori; c) description: presents the notes of the category and their meanings; d) Interpretation: seeks to interpret and understand the subjects reviewed throughout the process of categorization and description.

After the classification and description of the data found, it is interpreted if the relation of academic cooperation of Brazil with the other member countries of the BRICS is in the stage of multinationalisation/transnationalization or internationalization of higher education. Finally, Creswell (2010) states that external validity in qualitative research can be achieved with techniques such as triangulation between different sources of information and peer review. Thus, the validation of the final analysis and the confirmation of the hypotheses obtained through the triangulation of the secondary data with the interviews were realized.

Results Analysis

As already mentioned in the introduction to this article, the acronym BRICS emerged in 2001 by analyzing the perspective of economic growth in the countries, but from 2008 onwards it assumed a political role in the international scenario. Looking at GDP growth, the estimate of Jim O’Neil (2001) was surpassed by the combined growth of the BRICS. However, this growth was due to the expansion of China and India, not by an equal growth of each country in the group. In addition, there was a drop in GDP in Brazil, Russia and South Africa from 2014 to 2016. In this sense, the economic scenario in the Lula and Dilma governments differ: while the Brazilian economy under the Lula government has gone through an ascending phase, the opposite appeared in the data during the Dilma government, with GDP falling from 2014 to 2016.
When observing the number of institutions of higher education, it is noticed that there was a significant increase in the number of HEIs between 2001 and 2016, mainly in Brazil, India and China. In the case of Russia and South Africa, there was a reduction in HEI due to restructuring and higher education reforms in those countries. These data can be seen in Table 2 bellow.

Table 2. Number of HEI in the BRICS – 2001, 2010 and 2016

<table>
<thead>
<tr>
<th>YEAR</th>
<th>HEI</th>
<th>Brazil</th>
<th>Russia</th>
<th>India</th>
<th>China</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>HEI Public</td>
<td>183</td>
<td>621</td>
<td>-</td>
<td>-</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>HEI Private</td>
<td>1208</td>
<td>387</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>TOTAL HEI</td>
<td>1391</td>
<td>1008</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2010</td>
<td>HEI Public</td>
<td>278</td>
<td>634</td>
<td>-</td>
<td>-</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>HEI Private</td>
<td>2100</td>
<td>446</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>TOTAL HEI</td>
<td>2378</td>
<td>1080</td>
<td>621</td>
<td>2358</td>
<td>-</td>
</tr>
<tr>
<td>2016</td>
<td>HEI Public</td>
<td>296</td>
<td>530</td>
<td>-</td>
<td>-</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>HEI Private</td>
<td>2111</td>
<td>366</td>
<td>-</td>
<td>-</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>TOTAL HEI</td>
<td>2407</td>
<td>896</td>
<td>757</td>
<td>2560</td>
<td>141</td>
</tr>
</tbody>
</table>


When analyzing Table 2, it is noted that the number of Brazilian universities in 2016 is similar to the number of Chinese universities, but this does not mean that Brazil has similar numbers of academic, scientific and technological production. Also noteworthy is the large number of private higher education institutions in the Brazilian context, equivalent to 87.70%, totaling 2,111 private higher education institutions in the country.

In the specific case of Brazil, the growth of public HEIs was 51.91% from 2001 to 2010 and 6.47% from 2010 to 2016. Private HEIs increased by 73.84% from 2001 to 2010 and 0.5% between 2010 and 2016. It can be seen that, in both Lula's terms, there was a great increase of universities in the country, and the growth of the number of private institutions was 21.93% higher than that of public institutions. Under Dilma's rule, the increase in private HEIs was insignificant (less than 1%) and public HEIs were much lower than her predecessor.

The number of students enrolled reflects the same pattern found in relation to the number of HEIs. The most significant increase was the number of students in India, which in 2016 practically reached the number of students enrolled in higher education in China, as can be seen in Table 3.

Table 3. Number os students in the HEI of the BRICS – 2001, 2010 and 2016

<table>
<thead>
<tr>
<th>HEI students</th>
<th>Brazil</th>
<th>Russia</th>
<th>India</th>
<th>China</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>3,030,754</td>
<td>5 milhões</td>
<td>-</td>
<td>-</td>
<td>600 mil</td>
</tr>
<tr>
<td>2010</td>
<td>5,449,520</td>
<td>7 milhões</td>
<td>27 milhões</td>
<td>30 milhões</td>
<td>816 mil</td>
</tr>
<tr>
<td>2016</td>
<td>8,052,254</td>
<td>4,766,500</td>
<td>34,2 milhões</td>
<td>34,5 milhões</td>
<td>985,212</td>
</tr>
</tbody>
</table>

Table 3 shows that China and India have similar and very significant numbers of students in higher education, which together account for approximately 70 million students in higher education. A significant number when compared to other countries, such as South Africa, one of the most developed countries in the African continent and having less than 1 million students in higher education. It is inferred here that the large number of qualified human resources in China and India will be the intellectual future not only of their countries, but of others, thus providing an increasingly globalized education. It is also worth noting the growing number of post-graduates in China and India.

In the specific Brazilian case, in comparative terms between the Lula government and the Dilma government, a sequence was observed in the increase of students in higher education. This fact is credited to the fact that the economic crisis, with the reduction of GDP and per capita income, did not have an immediate impact on the number of students in higher education, taking into account the increase in higher education institutions in Brazil and the programs launched during the Lula administration for access to higher education, such as PROUNI and REUNI, which were maintained during the Dilma government. When analyzing the number of students studying abroad, it is noted that there was no significant change in Brazil, Russia and South Africa in the period from 2011 to 2016, but the difference between these countries and China and the India, with China being the largest "brain exporter" in the world. This difference can be observed in Figure 1.

**Figure 1.** Number of students leaving the BRICS to study abroad in the exterior of 2011-2016

![Graph showing the number of students leaving the BRICS to study abroad](image)

*Source: Unesco (2017).*

Clearly, China is the country with the highest number of students studying abroad, as shown in Figure 1. It can be concluded that the number of Chinese influencing higher education in the international scenario is even greater than the number of Indians. Figure 1 also draws attention to the low numbers of Russians, Brazilians and South Africans studying abroad. In relation to the destinations chosen, preference is given to the United States, United...
Kingdom, Germany, France, Australia, Canada and Japan. Brazilian students also seek Portugal, Spain and Italy, probably due to their proximity to the language.

During the period of the Dilma government was launched the Science Without Borders program in 2011, fostering study abroad through the funding of 101,000 scholarships for Brazilian students at the best universities in the world.

At the reception of foreign students in BRICS member countries, there are many differences:

a) Brazil is the country that attracts the least number of foreign students compared to the other BRICS member countries, and the majority of the students received in Brazil are from Angola or neighboring Latin American countries;

b) Russia is one of the countries that receives the most foreign students, almost half of whom come from neighboring countries that are former members of the Soviet Socialist Republic (USSR);

c) India is attracting more foreign students, with most of them still coming from neighboring countries such as Nepal, Afghanistan, Bhutan, Sudan and Malaysia;

d) China is experiencing a growing number of foreign students, with students from 205 countries, most notably South Korea, United States, Thailand, India and Pakistan;

e) South Africa has experienced a drop in the number of foreign students since 2012 and this is credited to the continent's financial crises since 70% of foreign students come from Southern African countries (SADC).

**Figure 2.** Number of foreign students in BRICS HEI from 2003 to 2015

The Figure 2 shows that Russia is still the most BRICS member country that attracts foreign students. Throughout this work, no data have been found to justify the abrupt drop in foreign students in the Russia in 2007. South Africa attracted many students by the year 2010, when it was reached by the number of students who began to choose China as a destination. South Africa has dropped since 2011 and since 2012 has been keeping a steady number of foreign students. This fact is credited to internal changes for obtaining visas, as well as student visa requirements for students who will stay longer in the country. It is striking that China is on a rising line of international students, perhaps due to its economic power in the international arena, standing out as another world power. Finally, it is important to realize that Brazil is the BRICS country that attracts the least foreign students and there has not been a significant change when comparing the periods of the Lula government (2003-2010) with those of the Dilma government (2010-2016).

The low attraction of foreign students to Brazil can be explained by several reasons, among them, the following:

a) Language: in Brazil, there are still few courses offered in English language. With the exception of the African countries of Portuguese colonization, few foreigners are fluent in Portuguese;

b) Logistic cost: Brazil is considered a high-cost country, both to travel to and through the country as well as fixed expenses for survival, such as rent and food.

c) Bureaucracy: Brazilian higher education institutions, despite having "university autonomy", are heavily regulated and controlled by government agencies, especially public ones.

In the mobility of the students of the BRICS countries, we highlight South African students going to India, Indian and Chinese students going to Russia. It is noticed that only Brazil does not maintain a strong relation of academic mobility with the other countries members of the BRICS.

The professions sought by Brazilian students are a contrast between other BRICS countries. While China and India have been reducing government participation in higher education, the opposite occurs in Brazil; as an example, we can mention the establishment of programs such as PROUNI and FIES, in which the state finances the higher education in private institutions (MORCHE, 2013).

Studying the investment in scientific research and development (R & D), in the last year of the Lula government and in the government Dilma, it is perceived that China is the country that has invested more public resources in the area, around 370 million dollars, which is equivalent to only 2% of its gross domestic expenditure. The value invested by South Africa has remained constant, around 5 million, which is equivalent to 0.7% of its gross domestic expenditure. Investments by Brazil and Russia average more than South Africa, around 1.15% of its gross domestic expenditure, which is equivalent to 39 million on average. India is the country that has least invested in R & D, around 0.65% of its gross domestic expenditure.
expenditure, but equivalent to little more than the gross value invested by Brazil and Russia. As a result, China has been emerging as the second country with the most scientific publications. There are 836,255 articles, only behind the United States, which lead with 3,048,662 articles. Despite having a lower R & D investment share, India has more publications than Brazil and Russia in absolute numbers in scientific publications.

Regarding the number of researchers, there are in Brazil 698 researchers per million inhabitants; Russia leads the BRICS with 3,101 researchers; China is following, with 1,113 researchers; and, finally, South Africa, with 437 researchers per million inhabitants. The same order is maintained in relation to the number of patents filed by country (WORLD BANK, 2017).

The question of productivity is directly influenced by the requirements and the governmental goals for granting scholarships and financing research projects. While in Brazil the quality of a researcher is traditionally measured by the number of papers published (a purely quantitative evaluation), China follows the standard of measurement adopted by the United States, that is, by the number of times its works are cited by other scientists around the world (a qualitative assessment of the importance of research). As a result, Brazilian academic scientists tend to be more conservative and do smaller-scale, lower-risk research to secure their publications index and maintain funding for their labs while the Chinese also strive to publish high impact papers (ESCOBAR, 2013).

Table 4. Data of Higher Education internationalization of BRICS countries (2016)

<table>
<thead>
<tr>
<th>Data Internationalization HE</th>
<th>Brasil</th>
<th>Russia</th>
<th>India</th>
<th>China</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of international students</td>
<td>19.855</td>
<td>220.000</td>
<td>42.420</td>
<td>442.773</td>
<td>72.960</td>
</tr>
<tr>
<td>Number of students abroad</td>
<td>40.891</td>
<td>50.000</td>
<td>181.872</td>
<td>544.500</td>
<td>6723 (2014)</td>
</tr>
<tr>
<td>Number Researchers / inhabitant</td>
<td>698</td>
<td>3101</td>
<td>156</td>
<td>1113</td>
<td>437</td>
</tr>
<tr>
<td>Número articles (scientific production)</td>
<td>212.243 (15º)</td>
<td>265.721 (13º)</td>
<td>293.049 (11º)</td>
<td>836.255 (2º)</td>
<td>-</td>
</tr>
</tbody>
</table>


Table 4 shows the numerical differences between higher education data and the internationalization process among the five countries:

a) Brazil and China have the highest number of higher education institutions, around 2,500, while Russia, India and South countries do not reach 1,000 higher education institutions.

b) China and India have the largest number of students in higher education, around 34 million; Brazil has a little more than 8 million, Russia almost reaches the mark of 5 million, and South Africa has not yet reached 1 million students in higher education.
c) China leads the largest number of foreign students among member countries of BRICS - more than 400,000 international students; it is followed by Russia, with more than 200,000 foreign students. South Africa attracts more foreign students than Brazil and India, being 70,000 against 20,000 and 40,000, respectively. The low rate of attractiveness of foreign students to Brazil is emphasized here.

d) China also leads the number of students studying abroad, with approximately 550,000 students. It is followed by India, which sends 180,000 students to foreign educational institutions. Following are Russia and Brazil, with 50,000 and 40,000 students abroad, respectively. Finally, South Africa has a tendency towards a low number of students abroad; were just over 6,000 in 2014.

e) Russia has the largest number of researchers, with more than 3,000 for every million people. It is followed by China, with just over 1,000 researchers per million inhabitants; Brazil, with approximately 700 researchers per million inhabitants; South Africa, with approximately 500 researchers per million inhabitants; and finally India, with 156 researchers per million inhabitants.

f) China ranks 2nd in terms of number of articles and scientific production, although it does not present the largest number of researchers per million inhabitants.

Despite the numerical differences, it cannot be said that education in one country is much superior to the other in every respect: China may have the largest number of HEIs, students and publications, but Brazil proportionally has classrooms four times less crowded than those in China, and Russia has twice as many researchers per inhabitant as China. Russia stands out because it already has a solid foundation of higher education, that is, there are many human resources already trained and with a high school level. China has invested heavily in the education sector, increasing research and patenting results, making it even more competitive on the international scene.

In a more general and brief way, although each BRICS member country has its system of teaching, they can even be equated in the following classifications: public and private institutions; level of higher education is composed of undergraduate courses lasting between three and six years, depending on the area and postgraduate courses at the levels of specialization, masters and doctorate. This similarity in the structure of education can be used in favor of the internationalization process of BRICS higher education institutions.

Based on the analysis of the data, both in the Lula and Dilma governments, China was the BRICS country with the highest number of official visits. This fact is credited to the importance that China has assumed in the world economic scenario. On the other hand, the Brazilian visits during the Lula and Dilma governments were inverted in frequency when compared to Russia and India: in the Lula government, there were 11 visits to India and 9 visits to Russia, while in the Dilma government there were 5 visits to India and 11 visits to India. Russia. Official visits to South Africa were the least frequent in both governments.
President Dilma showed a significant reduction in the number of international trips compared to President Lula. In her first term, the president spent 144 days abroad in state visits or multilateral meetings, a reduction of 46.5% over that observed in President Lula's second term. He was away from Brazil for 269 days between 2007 and 2010. Compared to Lula's first term (2003-2006), Dilma spent a third less time traveling abroad. The predecessor spent 216 days out of the country. The president traveled less days than Fernando Henrique Cardoso (165 days between 1995 and 1998 and 159 days between 1999 and 2002), although he visited, on average, more countries (SCHREIBER, 2015).

It is also noted that during the Lula administration, more cooperation agreements were generally signed with the BRICS member countries than in the Dilma government. In the Lula administration, 11 agreements were signed with Russia, 22 agreements with India, 27 agreements with China and 9 with South Africa, totaling 69 international acts of Brazil with BRICS member countries. Under the government of Dilma, 11 agreements were concluded with Russia, 8 agreements with India, 8 agreements with China and 2 agreements with South Africa, totaling 29 international acts of Brazil with the BRICS member countries, that is, 40 acts less than in the government of its predecessor.

Thus, the number of agreements of academic, scientific and technological cooperation between the countries also decreased in the government Dilma in relation to the government of Lula. These are differences found based on the analyzed data.

At the sectoral level, which encompasses the associations and non-governmental organizations involved in the internationalization process of the institutions of each country, such as FAUBAI in Brazil, there is an interest in closer ties between BRICS member countries, but neither is there an agreement among them or a joint effort with each one of them.

At the institutional level - between higher education institutions - there were still few academic cooperation agreements between BRICS member countries. China is the country with Brazilian educational institutions maintain the largest number of agreements. In addition, it can be seen that the public institutions are the ones that most relate to the other members of the BRICS; private educational institutions do not usually have agreements with these countries.

According to the representative of the Office of International and Institutional Affairs of PUC-SP, André Piai, "despite the agreement signed, in the exchange announcement were not offered places for student academic mobility for BRICS member countries." Prof. Ricardo Borges Alencar of PUC-RIO confirms that "the students' interest in BRICS member countries is still low when compared to the United States and European countries". This fact is credible for several reasons: there is no demand by Brazilian students for these countries as a destination, besides the difficulty of communication and academic achievement in the return to effect the equivalence of disciplines.
Prof. Douglas Barros, Director of the External Relations Department of PUC-Campinas, added the example of South Korea: the fact that the company Samsung is based in Campinas (SP) has already attracted Korean higher education institutions to Brazil and also Brazilian students are applying to go to South Korea in search of improvement for a job placement when they return. Finally, he believes that the path opened by the trade should also serve as an example for BRICS member countries.

Research projects carried out jointly with other BRICS member institutions depend on Brazilian educational institutions, not on the Brazilian government, since the latter has as its main action scholarships for academic mobility, mainly for students, happened in the case of the Science without Borders program.

In the area of academic mobility, it should be noted that Russia and China maintain reciprocal scholarship programs, but not India and South Africa. Only Brazil has sent students to the latter two countries. In relation to South Africa, it is also perceived that Brazil aims to attract students from that country through the PEC-G and PEC-PG programs.

In the analysis of the relations between BRICS universities, it was noted that there was a reciprocity character throughout Lula's government, but the same changed throughout the Dilma government with the Science without Borders Program and with the addition of South Africa in the PEC-G and PEC-PG programs. These two Dilma government programs failed to guarantee reciprocity and symmetry of mobility by sending students to India and attracting students from South Africa.

This asymmetry can be identified in the actions of multinationalisation or transnationalization of higher education, such as: establishment of campuses in other countries; offering of distance education contracts; development of training courses in and to other countries; and foreign language classes in the national context. It is noticed that, for the most part, there are no cases among BRICS member countries, except for episodes of training of Brazilian officials by the Indian government.

At the national level, in relation to the actions of the Dilma government in the scope of academic and scientific cooperation, reciprocity between the Brazilian, Russian and Chinese governments in the granting of scholarships and research funding is noted. This reciprocity does not occur with the Indian government, which has only received benefits from Brazil and the South African government, since Brazil has invested to attract students and researchers. At the institutional level, Brazilian educational institutions have more agreements with Russian, Chinese and South African institutions, and there are not many agreements with Indian institutions.

All the bilateral agreements celebrated during the Lula government anticipated reciprocity, which was not perceived during the Dilma government. In the latter, the following relations of Brazil with the other BRICS member countries were identified:
a) with Russia, it maintained the reciprocity for internationalization of higher education.

b) with India, there was multinational relations of higher education by influence of India in Brazil, which was identified through the courses offered by Indians to Brazilian officials.

c) with China, maintained the reciprocity relationship, but the strengthening of the Chinese presence in Brazil, notably through the large number of cooperation with Brazilian institutions, can become multinationalization of higher education, with China's influence on Brazil.

d) with South Africa, it can be said that there is influence of Brazil, that is, there is multinationalization of higher education, the which was identified by South Africa's inclusion in the PEC-G.

A academic cooperation program, under Lula's rule, occurred in reciprocity, which was clearly explicit in bilateral agreements between countries. Under the government of Dilma, academic cooperation occurred in reciprocity with Russia and China through the Science without Borders Program and programs of the Russian (Global Education Program) and Chinese (China Scholarship Council) governments. India receives Brazilian students from the Science without Borders Program and provides training to Brazilian officials in India or by Indian teachers in Brazil. Brazil can send students to South Africa through the Science without Borders Program, but it has mainly hosted students through the PEC-G and PEC-PG programs.

The academic and technological cooperation occurred in distinct areas between Brazil and each BRICS member country, but was also different in the priority areas when compared Lula and Dilma governments. In relation to Russia, Lula prioritized the security issue in cooperation agreements, while Dilma introduced sports themes and major events, due to the FIFA World Cup and the Olympic Games, which took place in Brazil and the World Cup will take place in Russia in 2018. Regarding India, Lula has entered into agreements in different areas and Dilma has focused on biotechnology, including addressing university internationalization actions in this area. In relation to China, both governments have entered into a number of cooperation agreements, most of them dealing with trade issues. In relation to South Africa, Lula signed agreements in different areas and Dilma focused on the environment.

The actions of university internationalization occurred in the Lula and Dilma governments were the following: granting scholarships by the government for studies and research in the other country; conducting research projects with foreign institutions; participation in consortia and international research networks; and development of international patent projects. It is possible to notice that Brazil, in general, despite maintaining agreements of academic cooperation with the educational institutions of the other
member countries and to participate jointly of the Network University of BRICS, does not maintain international patent projects and double courses with the other members of the group. Therefore, the policy of internationalization with the other BRICS countries, also being recent, is not yet institutionalized enough to allow the development of new academic and scientific knowledge among the countries of the group.

Conclusions

As a result of this research, it can be said that Brazil, during the Lula government, maintained symmetrical relations with the BRICS member countries, since the agreements signed foresaw a reciprocal relationship. In the Dilma government, mainly due to the Science without Borders Program, which did not provide reciprocity in academic mobility, it was noted that academic relations remained symmetrical with Russia and China. Brazil started to explore new opportunities in South Africa, with the establishment of a Brazilian Culture Center in Pretoria, and there were episodes of training of Brazilian officials by Indians, without a reciprocal exchange of course and a financial part of the Indians. The ideal would be for the five nations to maintain reciprocal academic relations in order to maintain cooperation in a reciprocal way, with a win-win relationship, which would strengthen the group as a whole.

While in the Lula government the idea of reciprocity between countries was confirmed and clearly discussed in the bilateral agreements, in the Dilma government the following results were obtained: a) In relation to Russia, academic cooperation relations in reciprocity occurred mainly between public education institutions. This confirmation is also credited with the fact that the vast majority of Russian HEIs are public; b) Regarding India, although countries maintain diplomatic relations, there is no emphasis on the development of academic cooperation actions between educational institutions, but there are episodes of multinationalization of higher education with influence of India in Brazil; c) China was the BRICS country which Brazil increased its academic cooperation relations, boosted by commercial and business interests both by the Chinese in Brazil and by Brazilians in China, which could generate a multinationalisation part of China in Brazil; d) in relation to South Africa, Brazil maintained a relationship of multinationalisation/transnationalization of higher education teaching in attracting South African students, but in the context of English language teaching and learning, Brazilian students go to South Africa to learn the language.

In scientific and technological cooperation, differences were also found when compared the Lula and Dilma governments: different areas and different priorities were found between Brazil and each BRICS member country. In relation to Russia, Lula prioritized the security issue in cooperation agreements, while Dilma introduced sports themes and major events due to the FIFA World Cup and Olympic Games, which take place in both countries. Regarding India, Lula signed agreements in different areas, and Dilma focused on biotechnology, including university internationalization actions in this area. In relation to
China, both governments have entered into a number of cooperation agreements, most of them dealing with trade issues. In relation to South Africa, Lula celebrated agreements in different areas and Dilma focused on the environment.

There was a paradox in the Dilma government: there was the initiative to create a unified policy of internationalization of higher education with the BRICS member countries, confirmed by the analysis of agreements of scientific and technological cooperation and proposal of creation of the Network University of the BRICS and the League of BRICS Universities. In addition, the BRICS Ministers of Education and Science and Technology began holding their own meetings apart from the leadership summit, which allowed the establishment of policies and actions at a more tactical and operational than only with strategic political interest among presidents or government representatives. However, this effort was overshadowed by Science without Borders, which became central during the Dilma government.

In the relations between BRICS countries, in general, the conditions of each country and the gains of each were taken into account. With all of them outside the rich countries’ zone, there would be common points of interest in which joint research could be developed in health, new drugs and sustainable energy, as well as new solutions in transportation and environmental preservation. However, as these agreements have not yet been realized, what is noticed are the individual actions. Significant numbers of South African students were found going to India, as well as Indian and Chinese students going to Russia. Only Brazil did not present this academic mobility with other BRICS member countries.

On the other hand, it should be remembered that the actions of university cooperation and internationalization of the BRICS group started in 2015, the same year that Brazil began to face a strong political, economic and financial crisis. Therefore, it should be noted that perhaps the proposals were not bad, but that it might not be the right moment for the operationalization in Brazil of the activities proposed by the declarations and agreements signed between the five countries. In addition, the fact that the proposals for joint university internationalization actions among the BRICS member countries are recent does not allow an evaluation of the results of the proposals to establish whether or not there will be an institutionalization of the university internationalization process among the BRICS.

The conclusion of this article, finally, is focused on the dilemma between a policy of state and government. Since university internationalization is a time-consuming policy, given the time it takes to build and sign agreements, Brazil would need its political elite to transcend party rivalries and choose education and the level of knowledge creation as noninterchangeable currencies. The difficulties are numerous, starting with the strength of the Presidency of the Republic and the natural weakness of civil society. As it was seen, the policies of university internationalization were coupled with the weight of the Presidency and the person of the president. How to protect education from circumstances and conjunctures? Perhaps a possible response is to the domestic level, with greater participation and intervention of the organized population, besides the involvement and engagement of higher
education institutions at the national level, and not only as a differential in the ranking among universities.

Thus, corroborating and concluding with what was said by prof. Laplane, "it is time to review agreements and seek strategic partners for international collaboration in search of scientific and technological development, seeking solutions to problems in our local reality." In this sense, it is not necessary to return, once again, only to cooperations with countries of the north, be it the United States or European countries. It is necessary to pay attention to countries that are developing economically and socially, such as China and India, and which have potential for future development.

Due to the conclusion of this article, other questions relevant to future research have arisen, among them: how the university internationalization policy influences the development of each country? what time would be needed to build a university internationalization policy? In all these issues is also the idea of thinking about new forms of academic and scientific cooperation among emerging countries, such as through distance learning, to reduce logistics costs, and funding for these actions of university internationalization and research development together.

References


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