The Research Output of Academic Economists in Brazil

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Abstract: This paper presents productivity rankings of economics departments and economists in Brazil. The results are: 1) At individual level, only 9 out of 506 economists managed to publish at least one paper in the top journals of economics, and 52 economists published at least one paper in a wide list of international journals; 2) The areas in which Brazilian research is most internationally successful are: Development economics, mathematical economics, and post Keynesian economics; 3) There is a remarkable difference in academic quality among the departments; 4) The performance of departments strongly depends on the individual excellence of a very small number of people. These findings suggest that academic productivity in Brazil is poor when evaluated by international criteria. As a policy prescription it is recommended that economics departments in Brazil should establish international publications as a target for their members.

JEL Classification Numbers: A11; D29; I29

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Address for Correspondence: School of Finance and Economics, University of Technology, Sydney, PO Box 123, Broadway, NSW 2007, Australia. Phone:+61-2-9514 7782, fax: +61-2-9514 7711. E-mail: Joao.Faria@uts.edu.au. The Data Base used in this study is available at: http://www.geocities.com/CollegePark/Hall/9643/Index.htm.
The research output of academic economists in Brazil

1. Introduction

The evaluation of academic research is an important tool to monitor and motivate scholars. It provides valuable information about the actual status of academic work, its figures and quality standards, allowing to assess academic productivity. This information is useful to improve work conditions in academia [Faria, 1998]. It is also useful to formulate policies aimed at enhancing scholars' efficiency, as well as assuring fairness in both evaluation and reward of academic achievements [Hamermesh et al., 1982; Carmichael, 1988]. Therefore, it is a step forward to set a meritocratic environment.

This paper analyses the research output of academic economists in Brazil. Over the last decades, academic economists have been quite influential in Brazil. They have occupied major positions in government\(^1\), and implemented radical economic policies, some of them with disastrous results [e.g., the Cruzado Plan]. However, their share of power, social importance, and political influence appear to have no match with their output as scholars. One of the objectives of this study is to investigate the profile of academic economists in Brazil according to international criteria. By inspecting their output with widely used international criteria, we can assess their importance as academics, which could be used to dispute the amount of power they have enjoyed for a long time.

\(^{1}\) See the study of Loureiro (1997).
The graduate studies in economics in Brazil, organized by ANPEC [National association of graduate courses in economics], are funded by government grants, no matter if the universities are public or private. This study compares the major economics departments in Brazil, and furnishes a departmental ranking based on publications. Rankings of departments are useful to allocate public grants among the departments. Furthermore, it gives helpful information for prospective students, since their graduate degree carries the reputation of the department [Graves et al, 1982].

In the same vein, the government finances many researches carried out by academic economists. This paper ranks academic economists by their international publications. Their productivity and achievements are an essential instrument to rank them in terms of objective criteria. The rankings of economists provide a meritocratic way to evaluate and reward them. That is, on the one hand, it decreases monitoring costs, and on the other hand, it increases efficiency and fairness.

The paper is structured as follows. The next section explains the methodological procedures used in data collection. Section three shows the rankings of departments. Section four presents the rankings of economists. Section five discusses some issues related to the rankings and, finally, the concluding remarks appear in section six.

2. Methodology

In order to construct rankings of economics departments and academic economists based on publications we must pay attention to three important problems. The first is to select a reliable source of information. The second is the selection of a set of
journals upon which the rankings will be based. The third is to identify correctly each scholar's publications [see Conroy et al, 1995].

There are several bibliographical sources to obtain data from publications. The most often used and widely accepted dataset in economics is the one elaborated by the *Journal of Economic Literature* [JEL]. The main information used in this paper was collected through the *EconLit-AEA* database CD, which is an expanded version of the JEL bibliographic database. The period covered in this study spans for 15 years, the EconLit CD is the one of 1984-1999/06. It is important to stress that this period covers publications recorded from [approximately] 1983 until early 1999.

As any other source, this database has some problems. For example, many journals are not catalogued in *EconLit-AEA*, while other journals have incomplete records and citations. In order to address these shortcomings we cross-verify the economists' records in EconLit-AEA with the departmental and scholars' web pages whenever available. Actually, when the web pages are complete, they provide more detailed information about publications. Unfortunately just a small number of the departments studied have unabridged home pages.

Citations Index [Liebowitz and Palmer, 1984]. The second list considered in this paper is more flexible and wider than the blue ribbon, and consists of a combination of Fox and Milbourne (1999) list, the list in Table A2 of Laband and Piete (1994), and many high-quality new "specialty" journals. The list used here is shown in the appendix.

In relation to the identification of scholars' productivity, some caveats are necessary. Firstly, Brazilian names are generally too long, it is not unusual for an author to have two surnames and two given names. There are even cases of three or more surnames. Another important issue is that the surnames are put together with some linking words like de, da, e. Therefore, the search for names in the EconLit-AEA becomes complex. There are cases in which one author appears under three or four different ways, depending on the surnames, link words, and the given names. One illustration can be, Sergio Ribeiro da Costa Werlang, which appears as: Werlang,-Sergio-Ribeiro-da-Costa; da-Costa-Werlang,-Sergio-Ribeiro; Werlang-Sergio. It is easy to see that this is an important source of errors.

The affiliation of the authors is given by the list of departmental members appeared in November [1999] web pages of the departments. The departments investigated are those that participate in the Anpec Selection Exam of 2000. In total, 20 departments were evaluated: Universidade Federal do Ceará [UFC], Universidade Federal de Minas Gerais [UFMG], Fundação Getúlio Vargas-Rio de Janeiro [FGV-RJ], Fundação Getúlio Vargas-São Paulo [FGV-SP], Universidade de Campinas [Unicamp], Universidade Federal do Rio Grande do Sul [UFRGS], Universidade de São Paulo [USP], Universidade Federal do Pará [UFPA], Universidade Federal de Pernambuco [UFPE].

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2 As the results of this paper are highly sensitive to missing data. I apologize, in advance, for any inconvenience the results may cause.
Pontifícia Universidade Católica do Rio de Janeiro [PUC-RJ], Pontifícia Universidade Católica de São Paulo [PUC-SP], Universidade Estadual de Maringá [UEM], Universidade Federal da Bahia [UFBA], Universidade Federal da Paraíba [UFPB], Universidade Federal Fluminense [UFF], Universidade Federal do Paraná [UFPR], Universidade Federal do Rio de Janeiro [UFRJ], Universidade de Brasília [UnB], Universidade Federal do Espírito Santo [UFES], and Universidade Federal de Santa Catarina [UFSC]. Only 7 centers have relatively complete information about the publications of their members available in their home pages: FGV-RJ, UFC, UFMG, Unicamp, UnB, UFRGS, and UFSC.

3. Rankings of Departments

The ranking of economic departments appears in Table 1. The departments are listed in the order of productivity in terms of international publications in the wide list of journals [see the list in the appendix]. The first column after the names of the schools gives the number of academic staff for each department. The next column gives total number of papers published by members of the department in the wide list of international journals. This number takes into account co-authorship inside the department. For example, if one paper is published by two co-authors from the same department, to avoid double counting we controlled for co-authorship\(^3\), and just one paper is recorded. The fourth column is the relative productivity per member of the department, it is calculated by dividing the number of international publications by the number of members of the academic staff. The following column shows the number of publications

\(^3\) When the co-authors are from different departments, the same paper is counted as a paper for each department.
in the Blue Ribbon journals. Finally, the last column is the departmental productivity in relation to the Blue Ribbon journals.

TABLE 1

<table>
<thead>
<tr>
<th>Dept.</th>
<th>Staff</th>
<th>Publications</th>
<th>Publ/Staff</th>
<th>Blue Ribbon</th>
<th>B.R./Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGV-RJ</td>
<td>23</td>
<td>48</td>
<td>2.08</td>
<td>13</td>
<td>0.56</td>
</tr>
<tr>
<td>PUC-RJ</td>
<td>13</td>
<td>15</td>
<td>1.15</td>
<td>1</td>
<td>0.08</td>
</tr>
<tr>
<td>UnB</td>
<td>34</td>
<td>23</td>
<td>0.67</td>
<td>2</td>
<td>0.06</td>
</tr>
<tr>
<td>UFSC</td>
<td>19</td>
<td>4</td>
<td>0.21</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFRJ</td>
<td>85</td>
<td>17</td>
<td>0.20</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>FGV-SP</td>
<td>21</td>
<td>4</td>
<td>0.19</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFF</td>
<td>21</td>
<td>3</td>
<td>0.14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>USP</td>
<td>51</td>
<td>7</td>
<td>0.14</td>
<td>1</td>
<td>0.02</td>
</tr>
<tr>
<td>CAEN</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFMG</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UNICAMP</td>
<td>74</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFRGS</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFPA</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFPE</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PUC-SP</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFPR</td>
<td>22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UEM</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFES</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFBA</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UFPB</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The results in Table 1 are quite appealing. First, it shows that the members of 12 out of 20 departments in Brazil did not publish, over the past 15 years, any paper in the wide list of international academic journals in economics. Second, there is a remarkable difference in quality between the departments. Actually, one can classify the Brazilian departments in five different levels.

The first level is occupied by FGV-RJ alone. By far it is the most productive department in Brazil. Its average international productivity [considering the wide list] is 80% higher than the second best positioned department, which is PUC-RJ. When one considers the productivity related to the Blue Ribbon list of journals the average productivity of FGV-RJ is 7 times bigger than PUC-RJ. The second level is occupied by
the group of departments that have international publications in both lists: PUC-RJ, UnB, and USP. The departments in the third level have international publications in the wide list, but not in the Blue Ribbon Journals: UFSC, UFRJ, FGV-SP, and UFF. The fourth category of departments is the one whose members published papers in international journals that do not appear in the wide list. Finally, the last type of departments is the one whose members have no international publications at all during the period studied.

One should see this classification with caution. By any international standards the profile of FGV-RJ is rather poor if compared with the leading departments in the USA, Canada and Europe. Taking into account the full-time members of FGV-RJ, the average number of years one holds a Ph.D. is 8.8. So, contrasting the average of 2.08 papers with the average number of years from the Ph.D. degree gives 0.24 paper per year. This number drops to 0.06 if one considers the blue ribbon journals.

Another issue has to be stressed here. The evaluation of the departments is highly sensitive to individual members. For example, if the three economists that have published in blue ribbon journals from USP, PUC-RJ, and UnB leave their departments, these departments drop from the second level to the third. The same holds true in relation to the departments in levels three and four. That is, the academic performance of economic departments in Brazil strongly depends on the individual performance as well as on the excellence of a very small number of people.

An interesting picture emerges when one considers the proportion of academic staff that has published in the journals of the wide list. It is a good proxy for the academic synergy inside a department. The motive is simple, when fellows of the same department publish in international journals it generates a healthy internal competition for
achievements. It also shows how committed a department is to publications. Finally, it
gives an idea of the critic mass available in a department. When many people are trying
to publish, a good environment for research and discussion\textsuperscript{4} would probably emerge.

The second column of Table 2 depicts the number of academic staff, while the
third column shows the number of academic staff that published at least one paper in the
journals of the wide list. The fourth column gives the proportion of the academic staff in
the department that published in the journals of the wide list. The table contains only the
departments in the three higher levels. As seem in Table 2, the proportion of the
academic staff publishing in journals of the wide list is above 50\% for just two
departments, PUC-RJ and FGV-RJ. At the bottom level this number drops below 10\%.
This is indicative of the low commitment of the departments as a whole with quality
research.

\begin{table}
\centering
\begin{tabular}{|l|c|c|c|}
\hline
Dept. & Staff & St.Pub. & St.Pub./Staff \\
\hline
PUC-RJ & 13 & 9 & 0.69 \\
FGV & 23 & 12 & 0.52 \\
UnB & 34 & 9 & 0.26 \\
UFSC & 19 & 4 & 0.21 \\
UFRJ & 85 & 9 & 0.11 \\
FGV-SP & 21 & 2 & 0.095 \\
UFF & 21 & 2 & 0.095 \\
USP & 51 & 4 & 0.078 \\
\hline
\end{tabular}
\caption{Table 2}
\end{table}

In order to classify the remaining 11 departments in the levels fourth and fifth, we
considered publications in international journals that do not appear in the wide list. The
third column in Table 3 depicts the number of international publications in journals that
do not appear in the wide list. The majority of these journals are Latin American journals

\textsuperscript{4} See the interview with Clive Granger (1997) on the importance of academic synergy.
such as *Desarrollo Económico*, *Pensamiento Iberoamericano*, and *El Trimestre Económico*. The last column shows the average productivity of the department in relation to these international publications. The departments classified in the fourth level are: CAEN, UFPE, UFPR, Unicamp, UFPB, UFMG, and UFBA.

**TABLE 3**

<table>
<thead>
<tr>
<th>Department</th>
<th>Staff</th>
<th>Int</th>
<th>Int/staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAEN</td>
<td>13</td>
<td>5</td>
<td>0.38</td>
</tr>
<tr>
<td>UFPE</td>
<td>21</td>
<td>5</td>
<td>0.24</td>
</tr>
<tr>
<td>UFPR</td>
<td>22</td>
<td>5</td>
<td>0.23</td>
</tr>
<tr>
<td>UNICAMP</td>
<td>74</td>
<td>13</td>
<td>0.18</td>
</tr>
<tr>
<td>UFPB</td>
<td>10</td>
<td>2</td>
<td>0.20</td>
</tr>
<tr>
<td>UFMG</td>
<td>11</td>
<td>2</td>
<td>0.18</td>
</tr>
<tr>
<td>UFBA</td>
<td>19</td>
<td>1</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Finally, Table 4 presents the departments whose members did not publish any international paper during the period considered. In order to classify them we considered the publications in the main economic journals in Brazil: *Revista Brasileira de Economia*, *Pesquisa e Planejamento Economico*, *Revista de Econometria*, *Revista de Economia Politica*, and *Estudos Economicos*. Notice, however, that the records of these journals in Econ-Lit are not complete.

**TABLE 4**

<table>
<thead>
<tr>
<th>Dept.</th>
<th>Staff</th>
<th>Nat</th>
<th>Nat/staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUC-SP</td>
<td>14</td>
<td>8</td>
<td>0.57</td>
</tr>
<tr>
<td>UFRGS</td>
<td>17</td>
<td>9</td>
<td>0.53</td>
</tr>
<tr>
<td>UEM</td>
<td>14</td>
<td>3</td>
<td>0.21</td>
</tr>
<tr>
<td>UFES</td>
<td>9</td>
<td>1</td>
<td>0.11</td>
</tr>
<tr>
<td>UFPA</td>
<td>14</td>
<td>1</td>
<td>0.07</td>
</tr>
</tbody>
</table>

One can note that on the top levels of academic productivity [levels one and two] there are 2 private schools [FGV-RJ and PUC-RJ], one state university [USP] and one federal university [UnB]. On the bottom level [level five] there is one private university
[PUC-SP], one state university [UEM] and three federal universities [UFRGS, UFES, and UFPA].

4. Rankings of Economists

The literature generally classifies researchers in economics and econometrics by the impact of their work, captured through citations of their works in academic journals [see Medoff, 1989; Hall, 1990; and for Brazil see Azzoni, 1998]. The rankings presented below are productivity rankings. The economists are classified according to their productivity, not by the impact of their work.

Table 5 below presents the ranking of the Brazilian economists actually working in one of the 20 departments analysed that have published in the Blue Ribbon journals. The total number of academic economists considered in this paper is 506, and only 9 economists have published papers in these top journals. That is, less than 2% of Brazilian academic economists published in the Blue Ribbon journals over the last 15 years.

TABLE 5

<table>
<thead>
<tr>
<th>Name</th>
<th>Dept.</th>
<th>B.R.</th>
<th>Journals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aloisio Pessoa de Araujo</td>
<td>FGV-RJ</td>
<td>5</td>
<td>3 Econometrica, 2 JET</td>
</tr>
<tr>
<td>Sergio R. da Costa Werlang</td>
<td>FGV-RJ</td>
<td>5</td>
<td>4 JET, 1 Econometrica</td>
</tr>
<tr>
<td>Marilda Sotomayor (*)</td>
<td>UFRJ and USP</td>
<td>4</td>
<td>JPE, 2 JET, Econometrica</td>
</tr>
<tr>
<td>Carlos Martins Filho</td>
<td>FGV-RJ</td>
<td>2</td>
<td>Int. Econ. Review</td>
</tr>
<tr>
<td>Paulo Cesar Coutinho</td>
<td>UnB</td>
<td>2</td>
<td>1 JET, 1 Rev. Econ. Studies</td>
</tr>
<tr>
<td>Paulo Klinger Monteiro</td>
<td>FGV-RJ</td>
<td>2</td>
<td>2 JET</td>
</tr>
<tr>
<td>Ilan Goldfajn</td>
<td>PUC-RJ</td>
<td>1</td>
<td>QJE</td>
</tr>
<tr>
<td>Juan Hersztajn Moldau</td>
<td>USP</td>
<td>1</td>
<td>JET</td>
</tr>
<tr>
<td>Maria C. T. Terra</td>
<td>FGV-RJ</td>
<td>1</td>
<td>QJE</td>
</tr>
</tbody>
</table>

If we include more leading journals in this Blue Ribbon list, such as *Rand Journal of Economics, Journal of Monetary Economics, Economic Journal, Journal of Finance*
and *Journal of Econometrics*, just more three economists will join the list: João Victor Issler [FGV-RJ], that published one paper in the *Journal of Monetary Economics* and Naércio Menezes Filho [USP] and Gustavo Franco [PUC-RJ] that published one paper each in the *Economic Journal*. It is evident that this ranking would be modified by the inclusion or exclusion of journals on the list. Scott and Mitias (1996), for example, have considered a set of 36 journals, and a core list of just five journals. If we have followed their procedure the rankings presented here would be totally distinct.

One important characteristic of table 5 is that 10 out of the 21 papers [there are two papers in which P.K. Monteiro and A. Araujo are co-authors] - that is 47% - were published in *Journal of Economic Theory*, and 5 in *Econometrica*, that is 23%. 14 papers were produced with co-authors, 11 with at least one foreigner ⁶ co-author. There are 17 papers on Mathematical Economics and Microeconomics; 2 papers on Macroeconomics, and 2 papers on Econometrics. Another remarkable characteristic of this production is that there are no papers in the *American Economic Review*.

From the 9 economists in Table 5, 5 obtained their Ph.D. in a top American University: MIT, Berkeley, Pennsylvania, with one, and Princeton with 2. Other two also graduated in the U.S. [Vanderbilt and Tennessee], and two in Brazil [IMPA]. From these top economists, A. Araújo has a Ph.D. in Statistics, M. Sotomayor has a Ph.D. in Mathematics, and Paulo K. Monteiro a Ph.D. in Mathematical Economics. A total of 52 academic economists in Brazil published at least one paper in the journals of the wide list. It is approximately 10% of Brazilian economists considered in our sample. The

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⁵ The output of Marilda Sotomayor was not considered in the output of UFRJ or USP. Actually her name does not appear in the Web pages of the economics departments of UFRJ or USP.

⁶ Foreigners working at the Brazilian economics departments were considered "Brazilian" economists as well. So, a foreign author in the present context means someone working outside Brazil.
journals in the wide list that published most of the Brazilian economists' papers are: *Journal of Mathematical Economics, Journal of Development Economics* [JDE], *Journal of Post Keynesian Economics* [JPKE], and *World Development* [each one with more than 8 papers of Brazilian authors]. These publications are highly indicative of what type of research academic Brazilian economists are more likely to supply internationally: Mathematical economics, development economics and post Keynesian economics.

Table 6 presents the ranking of the 24 more productive Brazilian academic economists actually working in one of the 20 departments analysed; it accounts the ones that published at least more than one paper in the journals of the wide list. It should be stressed that the weight of the journals is the same. This is a controversial assumption, however, in this ranking we are measuring just quantity and not quality of the publications. Any other ranking with different journals' weights would produce a quite different picture.

Looking at the top 11 economists of the list, the average number of years they took the Ph.D. degree is 11. The average number of international papers published by the top 11 is above 6, so the average number of papers per year after the Ph.D. is above 0.5. Therefore, in average, these economists have managed to publish a paper in one of the international journals of the wide list every two years.

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7 Notice that mathematical economics is strongly influenced by Paulo K. Monteiro's production, while at the Post-Keynesian front Fernando Cardim de Carvalho is the leading economist. Only in development economics we find a more even distribution of authors.
8 Notice that there is a number of productive economists outside the 20 departments studied. In particular they are linked to department of statistics of some universities.
9 See, for example, Cribari-Neto et al (1999) where the publications are adjusted for the quality of journals. In their case just 11 journals were considered.
The affiliation of the top 11 economists is: 5 from FGV-RJ, 3 from UnB, one from PUC-RJ, and one from UFRJ. 6 out of these 11 economists graduated in the U.S., 3 in England and two in Brazil. Among the top 11, 3 graduated in top American Universities [Princeton, Berkeley and MIT], and one in a top British University [Cambridge]. IMPA and the University of Kent in England have two former graduate students each in the top eleven economists. One noticeable absence from the rankings is that there is no economist graduated in Harvard or Yale, and no economist graduated outside the U.S., Brazil and England as well.

TABLE 6

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Paulo Klinger Monteiro</td>
<td>FGV-RJ</td>
<td>IMPA</td>
<td>Brazil</td>
<td>17</td>
</tr>
<tr>
<td>Aloisio Pessoa de Araujo</td>
<td>FGV-RJ</td>
<td>Berkeley</td>
<td>USA</td>
<td>10</td>
</tr>
<tr>
<td>Sergio R. da Costa Werlang</td>
<td>FGV-RJ</td>
<td>Princeton</td>
<td>USA</td>
<td>9</td>
</tr>
<tr>
<td>Fernando Cardim de Carvalho</td>
<td>UFRJ</td>
<td>Rutgers</td>
<td>USA</td>
<td>7</td>
</tr>
<tr>
<td>Marilda Sotomayor</td>
<td>UFRJ-USP</td>
<td>IMPA</td>
<td>Brazil</td>
<td>6</td>
</tr>
<tr>
<td>Carlos Martins Filho</td>
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<td>Tennessee</td>
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10 Actually, FGV-RJ has hired many of their productive members over the last couple of years. Araújo and Monteiro used to be at IMPA, and many other young members of FGV-RJ staff have been “repatriated” from all over the world. In relation to M. Sotomayor, see footnote 5.
Finally, there are 79 women among the 506 economists analysed, 15% of the total. There are two women in the 9 economists that published in the Blue Ribbon journals, that is 22 %, so women are over-represented among these economists. There is one woman among the 11 most productive economists [9 %], and 3 women among the top 24 most productive economists [12.5%], i.e., women are under-represented among the most productive economists.

5. Discussion

There is always controversy around rankings. The rankings presented and analysed in this paper are not free of criticisms. It is relatively uncontroversial in economics research that only refereed publications be included in measures of research output, and that there is a strong quality hierarchy in journal publications. However, on the border of the journals' lists there is always room for discussion of what journals must be taken into consideration. Therefore, the list used here should be seen as a tentative one, further discussion is necessary to set a consensual list.

This paper makes a strong case for the setting of objective standards to evaluate and reward the research output of Brazilian academic economists. From the rankings shown above there is an important lesson to be learned: The academic research output of the main Brazilian departments of economics is pretty low when international criteria are taken into account. It is important to note that we have considered only the departments that have graduate studies in economics. That is, the top departments in Brazil. The
graduate courses in these departments are bounded and ruled by ANPEC, an association that has set high standards to select graduate students of economics.

There are many causes to blame for this poor performance. Here we discuss two types of causes. One related to the peculiarities of the Brazilian research output, and its access to the international arena, and another set of issues related to the institutional incentives to do research in Brazil.

Many might argue that, in Brazil, academic economists engage themselves in applied work pertaining to the country's specific characteristics rather than theoretical contributions, which may have little relevance to the developing countries. Another line of argumentation is that many economists in Brazil do not follow the mainstream in economics and, therefore, their research is less likely to be accepted and published in international journals. According to both views, there is an incentive for Brazilian authors to publish their research in domestic journals or Latin American journals.

This argument looses some of its strength when we consider that there are many international journals available on applied, development and non-mainstream economics [in the journals' list below there are 20 journals, 15% of total, that publish this kind of research]. Furthermore, an international journal published in English has a much wider audience and penetration, and is relatively free from club effects. In a small academic world, social networks and personal contacts are valuable assets to guarantee publication. In this vein, an international journal is more likely to evaluate a contribution on pure meritocratic and objective way than a domestic journal.¹¹

¹¹ However, there are exceptions, given that some papers published by Brazilian authors in the journals considered were invited papers. By definition an invited paper, even when refereed, does not go through the same procedures used for ordinary papers.
Another sort of argument stresses the weak network links between Brazilian authors and the leading journals. To improve the chances of papers being accepted and published in an international leading journal, it is necessary to present and discuss them widely around the world, mainly in the top economics departments in the world and prestigious economics meetings. In order to publish in the leading journals, as the argument goes, it is necessary a wide network with editorial boards of the journals, leading international departments and presence in the main international meetings in economics. In general, the Brazilian presence in the international stage is meagre. In fact, the absence of Brazilian economists in the editorial boards of the main international journals is noticeable. In this sense, brain drain of Brazilian economists by the main centers of economics in the U.S. and Europe may contribute to decrease this gap and build new networks.

One could argue that the opportunity cost of an academic economist in Brazil is extremely high. As a country relatively poor in human capital, a Ph.D. in economics has plenty of opportunities to make money out of the academy. This is correct, moreover when we think about the way academic salaries are established. Most of the departments considered here are in public universities, 12 in federal and 3 in state universities. In public universities academic salaries are set according to the position and not to the researcher. There is no individual negotiation, so there are no financial incentives to reward research according to academic productivity. The main way to get promotion in a public university career in Brazil is through seniority. One solution to this problem would be the flexibilization of the academic market in Brazil. The end of wage isonomy

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12 Just recently USP has been rewarding international publications. In the case of private institutions, FGV-RJ and PUC-RJ, have also given monetary incentives to foster international publications.
among public universities and the establishment of negotiable salaries in an individual basis.

Another problem that plagues economics departments in Brazil is the rent seeking behavior of some of its members. Many economists follow a university career to get access to public and private consultancies, given the reputation that is attached to a university position. On the one hand consultancies can decrease research output because it trades-off the time available to do research with that devoted to do consultancy. On the other hand, however, consultancies can have a positive spillover effect on research by providing new problems and suggesting new methods, techniques and ideas. The implementation of objective academic standards to evaluate research output and the demand for international quality of this research are in general useful to fight against the rent seeking behavior in academia [Faria, 1999].

The policy prescriptions suggested here are very simple, and can be summarized in a nutshell: Economics departments in Brazil should establish international publications as a target for their members. This rule is able to increase the productivity of the department as a whole and, at the same time, force all members to increase their individual output in terms of quantity and quality. If this rule is implemented it will certainly decrease the distance among departments, and, inside each department, the relative distance among peers. Furthermore, it will bring some homogeneity in quality among academic economists in Brazil. The final goal is to decrease the disparities at departmental and individual levels identified in this study.
6. Concluding remarks

This paper has shown rankings of academic departments and economists for Brazil. The rankings were built considering the research published in international refereed journals. 20 of the most prestigious academic departments were evaluated, and the production of 506 economists was assessed through the EconLit-AEA database over the last 15 years, from approximately 1983 to early 1999.

Some important results emerge from this study. At the individual level, only 9 out of 506 economists actually working in an economics department in Brazil have managed to publish at least one paper in the top journals of economics. Considering the wide list of international journals, a total of 52 academic economists published at least one paper in these journals. The areas in which Brazilian research is most internationally successful are: Development economics, mathematical economics, and post Keynesian economics.

At the departmental level, the academic performance of economic departments in Brazil depends strongly on the individual performance and excellence of a very small number of people. Second, there is a remarkable difference in academic quality among the departments. We can divide 5 different levels of excelency. On the top of productivity level is Fundação Getúlio Vargas of Rio de Janeiro. In the second level comes: PUC-RJ, UnB and USP. While UFSC, UFRJ, FGV-SP and UFF occupy the third level.

Overall, the figures showed in this study suggest that academic productivity in Brazil is poor when evaluated by international criteria. The policy prescription suggested here is that economics departments in Brazil should establish international publications as a target for their members.
References


APPENDIX

LIST OF JOURNALS

American Economic Review
American Journal of Agricultural Economics
Annals of Regional Science
Applied Economics
Australian Economic Papers
Brookings Papers on Economic Activity
Bulletin of Economic Research
Cambridge Journal of Economics
Canadian Journal of Economics
Carnegie-Rochester Conference Series on Public Policy
Computational Economics
Constitutional Political Economy
Econometrica
Econometric Reviews
Econometrics Journal (*)
Econometric Theory
Econometría
Economic Development and Cultural Change
Economic History Review
Economic Inquiry
Economic Journal
Economic Modelling
Economic Record
Economics Letters
Economic Theory
Empirica
Energy Journal
European Economic Review
European Journal of Political Economy
European Journal of the History of Economic Thought
Explorations in Economic History
Fiscal Studies
Games and Economic Behavior
Geneva Papers on Risk and Insurance Theory
History of Political Economy
IMF Staff Papers
Industrial and Labor Relations Review
International Economic Review
International Game Theory Review (*)
International Journal of Game Theory
International Journal of Industrial Organization
Japanese Economic Review
Journal of American Statistical Association
Journal of Applied Economics
Journal of Applied Econometrics
Journal of Banking and Finance
Journal of Business
Journal of Business and Econ. Statistic
Journal of Comparative Economics

Journal of Economic Education
Journal of Environmental Economics and Management
Journal of Finance
Journal of Financial and Quantitative Analysis
Journal of Financial Economics
Journal of Health Economics
Journal of Human Resources
Journal of Industrial Economics
Journal of Institutional and Theoretical Economics
Journal of International Economics
Journal of International Money and Finance
Journal of Labor Economics
Journal of Labor Research
Journal of Law and Economics
Journal of Macroeconomics
Journal of Mathematical Economics
Journal of Monetary Economics
Journal of Money Credit and Banking
Journal of Political Economy
Journal of Policy Modeling
Journal of Post Keynesian Economics
Journal of Productivity Analysis
Journal of Public Economics
Journal of Public Economic Theory (*)
Journal of Risk and Uncertainty
Journal of the American Statistical Association
Journal of the Royal Statistical Society (All Series)
Journal of Urban Economics
Kyklos
Labour Economics
Land Economics
Macroeconomics Dynamics
Manchester School
Mathematical Finance
Mathematical Social Sciences
Metroeconomica
National Tax Journal
NBER Macroeconomics Annual
Oxford Bulletin of Economics and Statistics
Oxford Economics Papers
Public Choice
Quarterly Journal of Economics
Rand/Bell Journal of Economics
Review of Income and Wealth
Regional Science and Urban Economics
Research in Economics
Review of Development Economics
Review of Economic Design
Review of Economic Dynamics (*)
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<td>Journal of Economic Perspectives</td>
<td>Studies in Nonlinear Dynamics and Econometrics</td>
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<td>Weltwirtschaftliches Archiv</td>
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<td>Journal of Economic Theory</td>
<td>World Development</td>
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(*) Brand new journals, not recorded yet in the EconLit-AEA.