Performance of the Triple Bottom Line on Brazilian Industrial Production

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Introduction and Objectives

I. Development articulated with Brundland’s report (1987) “Development which meets the requirements from present without compromising the capacity to the futures generations to satisfy its needs”

II. The Solution to the 3BL’s questions (3BL) requires all the facets and the commitment from all of the parts of the society, including government, civil Society and the private industrial sector.
Introduction and Objectives

III. The industrial sector is decisive to the sustainable development.
IV. What factors of Triple Bottom Line act over the Brazilian industrial process?
The main idea to support the paradigm 3BL which the success and the company’s health must not be measured only from traditional production methods, but also by its social dimension and performance (MARKLEY, DAVIS, 2007).

Quinn e Baltes (2007) 45% of the leaders were aware of the 3BL’s concept. The greatest barrier to overcome is the missing comprehension inside the organization.
Management structure and the Productive competitiveness in Brazil

I. According to Kollmann e Stöckmann (2007), the organizations find new problems to keep itself more competitive, and, according to them, the technological Revolution and the increasing globalization are the greatest challenges for the managers.

II. Considerable consequences to the environment.

III. Methodology that ensures the competitive success with sustainable growth.
Management structure and the Productive competitiveness in Brazil

• Tab. 1: —Ranking of Brazil’s industrial competitiveness and economic performance (2010-2015)

<table>
<thead>
<tr>
<th>Year</th>
<th>Ranking Position of Industrial Competitiveness</th>
<th>Ranking Position of Economic Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>38</td>
<td>37</td>
</tr>
<tr>
<td>2011</td>
<td>44</td>
<td>30</td>
</tr>
<tr>
<td>2012</td>
<td>46</td>
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<td>2013</td>
<td>52</td>
<td>42</td>
</tr>
<tr>
<td>2014</td>
<td>54</td>
<td>43</td>
</tr>
<tr>
<td>2015</td>
<td>54</td>
<td>44</td>
</tr>
</tbody>
</table>
Management structure and the Productive competitiveness in Brazil

Fig. 1. Industrial Production between the years 1990-2015 according to the IBGE
Methods of Study

I. Brazilian Institute of Geography and Statistics (IBGE)
II. World Bank (World Bank)
III. International Energy Agency (IEA)
IV. United Nations Development Program (PNUD)
6th International Workshop - Advances in Cleaner Production
São Paulo - Brazil - 24th to 26th, May - 2017
6th International Workshop - Advances in Cleaner Production
São Paulo - Brazil - 24th to 26th, May - 2017

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Academic Work
Methods of Study

Validation Test
I. Multi-colinearity
II. ANOVA TEST
III. Akaike Analyses of Residues

I. Normality test
II. Homoscedasticity test
III. Dependence test.
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Results and Discussion

\[ IP = -46200 + 36500 \text{CO2} + 1100 \text{WF-853HDI} \] (1)
Results and Discussion

WF - workforce x Production
CO2 - CO2

Fig.2: Emission of carbon dioxide in Brazil, in the period between 1990 to 2015
Results and Discussion

Metallurgical

R² = 0.865

Petrochemical

R² = 0.927

Opening of new companies

R² = 0.093
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Academic Work
Conclusions

1. Sixteen factors-3 affect the industrial production:
   HDI, CO2 e WF

2. No economic factor sets in Hybrid Model

3. Not entered into Hybrid model, due to its values-p had not been significant, the factors:
   TR, FI, GDPind, FFB, NRtotals(income), GEGE, EC, TP e PG.

4. The concept of sustainability hasn’t influenced the Industrial Production in Brazil yet, especially because this concept is not even incorporated culturally inside the industries.
References


References

Thank You!

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