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## BRAZIL'S LOCAL CONTENT REQUIREMENTS: EVOLUTION, LESSONS LEARNED & INTERNATIONAL TRADE LIMITATIONS

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### I. Introduction<sup>1</sup>

Local Content Requirements (“LCRs”) in the extractive resource industries have been an alternative source of income for countries looking to improve revenue from their resource-intensive economies and reverse effects from the economic specialization in natural resources – such as the resource curse.<sup>2</sup> This policy is heavily associated with industrial policy advancement, and has been adopted in several oil-producing countries, both developing and developed. Today, Norway and the United Kingdom are deemed as the best cases and inspiration for implementing industrial policy initiatives aiming to add value to local economies in both developed and developing countries.<sup>3</sup>

LCRs have varied widely across countries, in terms of objectives, approach, and scope.<sup>4</sup> They can target the promotion of local people, goods, and services while simultaneously reducing the participation of foreigners, companies, and services. In this regard, these requirements have the noble goal of strengthening local participation, however, if not well implemented, LCRs outcome may limit the key roles of foreign companies in a given sector, thereby reducing the overall benefits to/of an economy. Many criticize their effectiveness in the countries that have implemented them, particularly developing countries that frequently struggle with implementing effective and transparent supply chains.<sup>5</sup> However, these criticisms hinders efforts that add

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1. Eduardo G. Pereira, et al., *Local Content and Sustainable Development in Brazil*, CAMBRIDGE UNIVERSITY PRESS 3 (Damilola S. Olawuyi, ed., 2021) [hereinafter Pereira et al., *Local Content*]; Eduardo G. Pereira et. al, *Local Content Policies in the Petroleum Industry: Lessons Learned*, 4 OIL & GAS, NAT. RESOURCES, AND ENERGY J. 631, 642 (2019) [hereinafter *Lessons Learned*].

2. Isabelle Ramdoo, *Local content policies in mineral-rich Countries: An overview*, EUROPEAN CTR. FOR DEV. POL’Y MGMT. No. 193 (2016).

3. Marie-Claire Aoun & Carole Mathieu, *Local Content Strategies for the Oil and Natural Gas sector: How to Maximize Benefits for Host Communities*, 2012-2015 TRIENNIAL WORK REPORTS 6 (Institut Francias des Relations Internationales 2015), [https://www.ifri.org/sites/default/files/atoms/files/local\\_content\\_tf3\\_igu\\_final\\_may\\_2015.pdf](https://www.ifri.org/sites/default/files/atoms/files/local_content_tf3_igu_final_may_2015.pdf).

4. Berryl Claire Asiago, *Rules of Engagement: A Review of Regulatory Instruments Designed to Promote and Secure Local Content Requirements in the Oil and Gas Sector*, RESOURCES, Sept. 2017, at 1, <https://doi.org/10.3390/resources6030046>.

5. See William Clavijo, *A política de conteúdo local para a indústria do petróleo e gás natural no Brasil durante o período 2003-2014: uma análise qualitativa da sua evolução*, FED. UNIV. OF RIO DE JANEIRO 72 (2016) [hereinafter Clavijo, *Uma Análise Qualitativa*]; Telmo Ghiorzi, *Análise funcional de políticas públicas: o caso da cadeia brasileira de petróleo e gás*, FED. UNIV. OF RIO DE JANEIRO 9, 11 (2017); William Clavijo et al., *Impacts of the review of the Brazilian local content policy on the attractiveness of oil and gas projects*, 12 J. OF WORLD ENERGY L. AND BUS. 449, at 15 (2019) [hereinafter Clavijo et al., *Impacts*];

value to the local economy. LCRs are generally crafted and implemented in a way that downplays the primary objective of competitiveness.<sup>6</sup> In this matter, depending on the objectives, LCRs should be complemented by efforts to build capacities and competencies of/by local companies either by internal company strategies or other public policy tools, including but not limited to incentive-related models.<sup>7</sup>

Thus, globally integrated industries—such as oil and gas—demand the adoption of appropriate approaches that consider the standards of international market competition to avoid additional costs in the supply chain of equipment and services. This could threaten the attractiveness of the oil region, as well as the financial sustainability of an exploration and production (E&P) project.<sup>8</sup> Additionally, this protection provided by the LCRs should have an expiration date, providing a clear periodic mechanism that reserves quota for local firms to achieve the capacity to compete by themselves internally and internationally. And the execution of these policy tools must contemplate the risks related to the characteristic volatility in the behavior of oil prices and its impact on the investment decisions of operators.<sup>9</sup>

The recent experiences in Global South, particularly in Brazil, present an interesting case for analysis due to the evolving legal and structural reforms. Since the opening of the Brazilian oil industry to the private sector, local content has remained part of governmental policies to a greater extent. The Brazilian regulatory framework has exponentially developed over the past decades. This happened simultaneously with the biggest cycle of expansion of oil prices in the history of this industry, as well as the discovery of the Brazilian pre-salt, a new geologic frontier with broad volumes of proved reserves.<sup>10</sup>

Considering the latest discoveries, reforms and globalization, this paper discusses the evolution of LCRs in the Brazilian oil sector, the main results, and the lessons of this experience over more than two decades. To do that, in addition to this introduction, there are three sections. Section II will discuss the evolution of LCRs, paying attention to the Brazilian definition of local content, the policy design, its scope, and the main changes faced between 1999 and 2023. Section III critically evaluates the benefits and negative results of this

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Kasahara & Botelho, *Ideas and Leadership in the Crafting of Alternative Industrial Policies: Local Content Requirements for the Brazilian Oil and Gas Sector*, 51 COMPAR. POL. 385, 390 (2019).

6. Kasahara & Botelho, *supra* note 5.

7. Clavijo et al., *Impacts*, *supra* note 5, at 15.

8. *Id.*

9. Clavijo, *Uma Análise Qualitativa*, *supra* note 5, at 28.

10. See Clavijo et al., *Impacts*, *supra* note 5, at 463.

experience. This section will make recommendations for building a stronger policy for local content promotion. In doing this, the paper discusses Brazil's experience, the experience of other extractive industries locally, concerns of global trade organizations and treaties along with cases examining these issues. Section III is wrapped up with a discussion of LCRs in the coming decades and local, regional, and international influences. Finally, Section IV will conclude the paper.

## *II. Evolution of Local Content Rules in Brazil*

Brazil has a long tradition of implementing industrial development policies for the oil and gas sector, dating back to the creation of Petrobras in 1953. Among the public policy interventions, the Brazilian government, through the state company, adopted LCRs as part of broader efforts to develop supplier companies and solutions aimed at addressing the geological and technological challenges of the national oil industry.<sup>11</sup> LCRs were one of the instruments to develop productive and technological capacity in the refining sector and to produce oil and natural gas in deep waters, especially during the second half of the 20<sup>th</sup> century. This allowed the generation of a complex industrial, science, technology & innovation (CT&I) system in the country.<sup>12</sup>

After opening the upstream sector to other oil companies beyond Petrobras in 1995, the 1997 Brazilian Oil Law established a new regulatory and institutional framework for the oil industry. As part of the reforms, the National Energy Policy Council (CNPE) was created to be an advisory body to the President of the republic to formulate the national energy policy. Also, under the same law, the regulatory function of this industry was assigned to the National Oil, Gas and Biofuels Agency (ANP), an autarchy linked to the Ministry of Mines and Energy (MME), to promote regulation, contract, and inspection of economic activities concerning the oil industry. In this new framework, the concession agreement was adopted.<sup>13</sup>

### *A. History of Brazilian Local Content Requirements*

Petrobras' rights to the existing commercial discoveries were recognized through concession agreements, which later became known as “Round

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11. Edmar de Almeida et al., *Custos e benefícios da atual política de conteúdo local*, COOPERAÇÃO E PESQUISA IBP – UFRJ, Oct. 2016, at 6, [https://www.ibp.org.br/personalizado/uploads/2016/09/2016\\_TD\\_Custos-e-Benef%C3%ADcios-da-Pol%C3%ADtica-Conte%C3%BAdo-Local.pdf](https://www.ibp.org.br/personalizado/uploads/2016/09/2016_TD_Custos-e-Benef%C3%ADcios-da-Pol%C3%ADtica-Conte%C3%BAdo-Local.pdf).

12. Clavijo, *Uma Análise Qualitativa*, *supra* note 5, at 96.

13. LEI No. 9.478, de 6 de Agosto de 1997, PRESIDÊNCIA DA REPÚBLICA (Braz.), [http://www.planalto.gov.br/ccivil\\_03/leis/19478.htm](http://www.planalto.gov.br/ccivil_03/leis/19478.htm).

Zero.”<sup>14</sup> “Round Zero” contained a local preference clause providing for certain general preferences in contracting national goods and services when they were available in similar conditions as in the foreign markets. Under the new conditions, the activities of exploration and production of oil and gas in areas owned by the Federal Union started to be regulated under the concession agreement, and in competitive biddings for their adjudication. Thus, the ANP was responsible for preparing notices, signing contracts, and their corresponding inspection.<sup>15</sup>

In this new context, local content was defined as the portion of the materials, equipment, and systems produced and services rendered in national territory, which the license holder (in exploration and production) acquire from suppliers established in Brazil.<sup>16</sup> Since this moment, LCRs have been set up historically in each Bidding Round Tender Protocol with a clear material connotation, focused on the provision of goods in the form of equipment or parts of the equipment developed on Brazilian soil.<sup>17</sup> Based on this interpretation, the Brazilian LCRs sought to incentivize the achievement of the following goals: i) to increase the participation of local suppliers on a competitive basis; ii) improve local technological development; and iii) generate more rent and employment for the population.<sup>18</sup>

The LCRs varied over the bidding rounds held by ANP, but the final commitment is set up in the concession and production sharing agreements (PSA), signed by the winner concessionaire/consortia of each exploratory block or area at the end of the bidding round. The local investment is usually expressed in terms of percentage, compared to the total volume of investment. The concessionaires supply Local Content Reports annually, with information every quarter. The regulatory agency starts an audit of the local content clause upon confirmation of the flowing triggering events: (i) upon conclusion of the exploration phase; (ii) upon the end of the production and development phases or any other inspection milestone set forth; and (iii) when the exploration block is relinquished, and the concession/production sharing agreement is terminated. The ANP also audits the local content of the onerous assignment contracts. In all cases, the operator of the block must submit to ANP the documents to support its investments in local content. If

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14. Pereira et al., *Local Content*, *supra* note 1, at 302.

15. *Supra* note 13, at 1.

16. SILVANA TORDO ET AL., LOCAL CONTENT POLICIES IN THE OIL AND GAS SECTOR 57 (The World Bank ed., 2013).

17. Clavijo, *Uma Análise Qualitativa*, *supra* note 5.

18. *Id.* at 130.

the operator does not comply with the local content percentage agreed upon in the contract for E&P, the ANP can impose a fine.<sup>19</sup>

Today, "Round Zero" is the only granting instrument in Brazil that does not provide detailed LCRs. From Round 1 (1999) to Round 4 (2002), competitive bidding procedures established a percental commitment of LCRs as one of the two criteria for the proposal, as a scoring factor for the bidder's offers of 15% (see Table 1). Minimum mandatory local content percentages were not required, nor were maximum percentages.<sup>20</sup>

Rounds	Weight in the auction bid	Average LC - Exploration stage (Onshore)	Average LC - Exploration stage (Offshore)	Average LC - Development and production stage (Onshore)	Average LC - Development and production stage (Offshore)
1 (1999)	15%		25%		27%
2 (2000)	15%	49%	35%	66%	33%
3 (2001)	15%	50%	23%	70%	32%
4 (2002)	15%	50%	29%	66%	43%
5 (2003)	40%	93%	65%	93%	74%
6 (2004)	40%	99%	68%	100%	73%
7 (2005)	20%	79%	54%	85%	65%
9 (2007)	20%	80%	55%	85%	66%
10 (2008)	20%	79%		84%	
11 (2013)	20%	75%	38%	84%	62%
12 (2013)	20%	74%		84%	
13 (2015)	20%	75%	37%	81%	55%
14 (2017)		39%		43%	
15 (2018)		18%		90%	
16 (2019)					
17 (2021)					

**Table 1.** Evolution of average Local Content commitments by onshore and offshore blocks over bidding rounds during 1999-2021 (Own elaboration based on ANP data).

19. *Local Content Policy*, DELOITTE, <https://www2.deloitte.com/br/en/pages/energy-and-resources/upstream-guide/articles/local-content.html> (last visited June 5, 2021).

20. *Id.* at 41.

In 2003, a new federal government administration took office, changing the orientations for local content policy to a more aggressive approach aiming at using demand from new goods and services from the oil and gas industry, especially from Petrobras, to boost the reactivation of the local industry, focusing on the shipbuilding industry.<sup>21</sup> The context in which these changes took place was characterized by the beginning of a cycle of oil price increases to unprecedented levels in history. In Brazil, this cycle coincided with the discovery of pre-salt reserves, making it economically feasible to increase investments in E&P in deep and ultra-deep waters.<sup>22</sup>

Rounds 5 (2003) and 6 (2004) introduced minimum LCRs,<sup>23</sup> differentiating onshore and offshore blocks, the latter subdivided into shallow and deep waters,<sup>24</sup> and increased its weight as a scoring factor for the bidder's offers to 40%. The goal here was to create a stronger demand base for equipment and services produced locally in comparison previous auctions.<sup>25</sup> As a result of these changes, local content commitments increased by almost 50% between Round 5 and Round 6 (see table 1). During this round companies focused on winning in auctions, without considering that the commitments acquired did not correspond with the local supply capacity needed for their obligations.<sup>26</sup> For this reason, from the 7<sup>th</sup> round of 2005, the government kept LCRs' weight in the final auction score but incorporated maximum limits in the establishment of commitments by companies.<sup>27</sup>

Simultaneously, the Brazilian Government launched PROMINP (Oil and Natural Gas Industry Mobilization Program) in 2003 to maximize the participation of the national goods and services industry.<sup>28</sup> As part of PROMINP initiatives, a consultation process began in 2004 with the local industry stakeholders aiming at substituting the original declaration rules for a new system for measuring local content compliance with greater detail. The existing methodology was considered too lax to ensure channeling the

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21. *Id.* at 71.

22. *Agenda da Indústria 2017 – Petróleo, Gás e Biocombustíveis*, INSTITUTO BRASILEIRO DE PETRÓLEO E GÁS 20 (July 7, 2017), [https://www.ibp.org.br/personalizado/uploads/2017/07/IBP\\_AGENDA-DA-INDUSTRIA-2017.pdf](https://www.ibp.org.br/personalizado/uploads/2017/07/IBP_AGENDA-DA-INDUSTRIA-2017.pdf).

23. Pereira et al., *Local Content*, *supra* note 1, at 303.

24. *Id.*

25. Clavijo et al., *Impacts*, *supra* note 5, at 4.

26. Clavijo, *Uma Análise Qualitativa*, *supra* note 5, at 76.

27. *A Política Brasileira de Conteúdo Local para o Setor Petróleo e Gás Análise e Sugestões de Aperfeiçoamento*, SINAVAL 9-10 (Jan. 26, 2015), [http://sinaval.org.br/wp-content/uploads/Relatorio\\_Final\\_COnteudo\\_local\\_FIEB-v05-02-2015.pdf](http://sinaval.org.br/wp-content/uploads/Relatorio_Final_COnteudo_local_FIEB-v05-02-2015.pdf).

28. Pereira et al., *Local Content*, *supra* note 1.

demand for equipment and services to the local market.<sup>29</sup> In 2005, the Local Content Booklet was created, establishing definitions, methods, and criteria for local content calculations.

In addition, the contracts began to provide specific local content commitments for certain items and sub-items that make up the investment in each of the stages and are presented in the form of a Table of Content Commitment, attached to the contractual instruments.

Also in 2005, during Round 7, the ANP established both minimum and maximum LCR percentages, concerning the location of the block to the water (onshore, shallow waters - less than 100 m and between 100 and 400 m -, deep waters), in addition to the division of commitments in the item and sub-item, each with a weight indicated by the bidder. The new local content measurement and verification system was introduced in the same year.<sup>30</sup> Later, in Round 9 (2007), a detailed local content manual was issued. It is also observed that from Round 7 (2005) to Round 13 (2015), the criteria by the Brazilian authority had not changed.<sup>31</sup>

In 2014, the end of the super cycle of high oil prices came to an end. In this context, Petrobras, and other concessionary companies, already facing an important burden in terms of increasing costs of complying with LCRs, as well as the deadlines for the payment of fines because of the ANP's inspection progress, had to reform their business plans to reduce their costs and guarantee the financial sustainability of their projects. By Round 13 (2015), the local content system had been subjected to criticisms because of the high costs and complexity thereof.<sup>32</sup> Since 2011, the audit of local content compliance resulted in the imposition of more than 129 fines for values over R\$ 570 million, mainly related to the exploration phase (see Figure 1).<sup>33</sup>

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29. The local content control system was widely criticized by both the local suppliers and the federal government. The main criticism was the lack of precision in measuring the LC index and the possibility of a company by-passing LCR's by focusing on the acquisitions of already competitive equipment (Clavijo et al., *Impacts, supra* note 5, at 4).

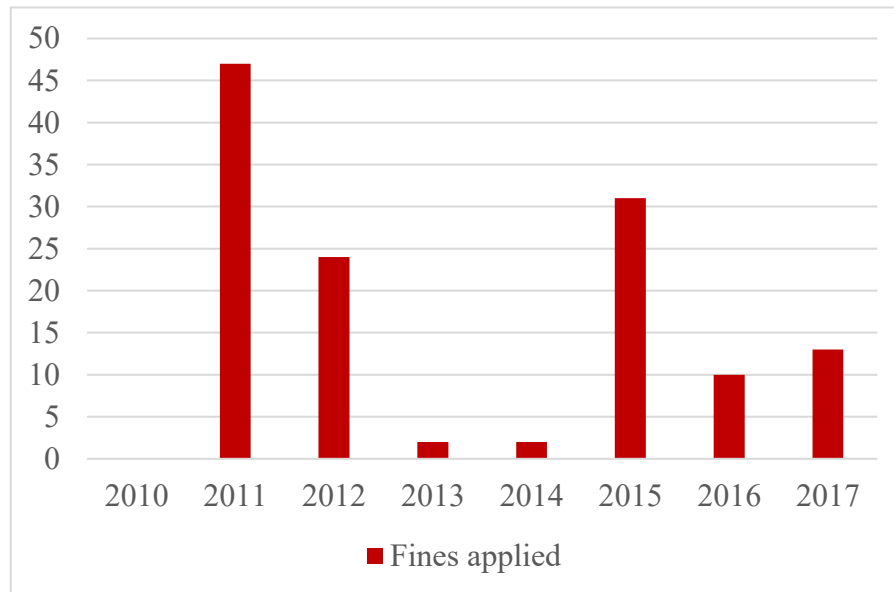
30. Pereira et al., *Local Content, supra* note 1, at 305.

31. *Id.* at 306.

32. Local content requirements have been seen by companies as a cost of doing business in a region. The same is true in Brazil. In Brazil, the cost is historically high and is lovingly, and sometimes frustratingly, known as the "CustoBrasil" (Pereira et al., *Local Content, supra* note 1, at 331).

33. ANP, *Fiscalização do Conteúdo Local*, MINISTÉRIO DE MINAS E ENERGIA (November 11, 2023, 4:23 PM), <https://www.gov.br/anp/pt-br/assuntos/exploracao-e-producao-de-oleo-e-gas/conteudo-local/fiscalizacao-conteudo-local>.





**Figure 1.** Local Content oversight (Own elaboration based on ANP data).

The situation, in a context of national economic recession, forced the federal government to begin a process of reviewing the policy in the terms in which it had been carried out to guarantee the financial attractiveness of the Brazilian upstream, as well as the financial sustainability of E&P the projects in progress.<sup>34</sup>

In 2016, then-President Dilma Rousseff implemented the Program to Stimulate Competitiveness in the Production Chain, Development and Improvement of Suppliers in the Oil and Natural Gas Sector (in Portuguese, PEDEFOR) with the main objective of raising the competitiveness of the supplier production chain by making the LCRs more flexible. However, after her impeachment and the inauguration of Michel Temer as president, adjustments were made to PEDEFOR to make the process even more flexible, to increase the attractiveness of international companies.<sup>35</sup>

Among the changes, the requirement of minimum commitments from LCRs as a criterion for speeding up the bidding rounds under the concession

34. Clavijo et al., *Impacts*, *supra* note 5, at 4.

35. Decreto No. 8.637, de 15 de Janeiro de 2016, PRESIDÊNCIA DA REPÚBLICA (Braz.), [http://www.planalto.gov.br/ccivil\\_03/\\_Ato2015-2018/2016/Decreto/D8637.htm](http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8637.htm).

agreement was withdrawn. Since the 14th round, LCRs commitments were defined by the National Energy Policy Council (CNPE) and pre-established in the contract.<sup>36</sup> LCRs were divided by global index, varying according to the concession area and the stage of the project's life cycle, according to CNPE Resolution No. 11/2017 (see Table 2).

		Rounds								
		PSA1 (2013)	C15 (2017)	PSA2 (2017)	PSA3 (2017)	PSA4 (2017)	PSA5 (2018)	C16 (2019)	PSA6 (2019)	C17 (2021)
Onshore blocks										
Global index for the exploration phase			50%							
Development			50%							
Offshore blocks										
Exploration	Blocks with water depths above 100 (one hundred) meters		18%	35%	18%	18%	55%	18%	18%	18%
Development	Well construction		25%	30%	25%	25%	65%	25%	25%	25%
	Production Collection and Flow System		40%		40%	40%		40%	40%	40%
	Stationary Production Unit		25%		25%	25%		25%	25%	

**Table 2.** Local Content commitments pre-established by CNPE for Concession and Product Sharing Agreements contracts (source: own elaboration from ANP data).

Aiming to change the approach from penalties to incentives, and looking to find a solution to ensure the sustainability of this industrial policy tool, in 2016, the PEDEFOR introduced a bonus system through the “Local Content Units (LCU).” This was done primarily to encourage the supply companies in the country. The measure placed higher value in terms of a percentage of local content than what was achieved by the companies, in the case of goods, services, and systems considered strategic. Accordingly, the following benefits were achieved: a) engineering developed locally; b) development

36. Resolução No. 17, de 6 de Julho de 2017, Diário Oficial da União [D.O.U.] (Braz.), <http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=1&data=06/07/2017>.

and technological innovation carried out in the country; c) high potential for generating qualified jobs; and d) export promotion.<sup>37</sup> With the introduction of these incentives, the policy substantially changed the physical and material connotation that had characterized the concept of local content in Brazil until that time. After the incentives, efforts to develop technological and engineering capabilities were highly valued, along with improving the competitiveness of the oil industry on the national level and generating employment and income for the country.

The PEDEFOR also established other ways to obtain LCU to reduce the risks of non-compliance with local content commitments. LCUs were also defined by the decree as the equivalent amount of the investments made, expressed in monetary value, which could be used by companies or consortia as proof of compliance with local content with the ANP. Thus, the bonus would be granted to those companies that carried out E&P activities and that promoted the following activities in the country: i) contracts that enable the installation of new suppliers in the country; ii) investments to increase the productive capacity of suppliers; iii) investments in the technological training of suppliers; and iv) local purchases to service operations abroad.<sup>38</sup> However, such mechanisms were never regulated, and in 2019, during Jair Bolsonaro's government, the Decree that created PEDEFOR was revoked by Decree No 10,087/2019.

In 2018, the ANP approved the regulation of contractual exemption mechanisms (waiver), as well as the possibility of adjustment and transfer of local content commitments established in the contracts in force from the 7th to the 13th Concession Rounds, in the contracts of the Onerous assignment, and, in the contracts of the 1st and 2nd Production Sharing Rounds. The measure was allowed for contracts in force, with effect for the phases that have not been closed yet, through amendments to the contracts, in the case of the reduction of the local content indexes.<sup>39</sup>

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37. Clavijo et al., *Impacts*, *supra* note 5, at 1.

38. *Id.*

39. Resolução ANP No. 726, de 11 de Abril de 2018, Agência Nacional Do Petróleo, Gás Natural E Biocombustíveis [ANP], (Braz.).

Segment	Phase			% 7 <sup>th</sup> – 13 <sup>th</sup> Concession Rounds	14 <sup>th</sup> – 17 <sup>th</sup> Concession Rounds	
Onshore	Development			50%	50%	
	Production			50%	50%	
Offshore	Exploration			18%	18%	
	Development	Well construction		25%	25%	
		Collection and flow systems		40%	40%	
		Stationary Units of Production (platforms)	Engineering		40%	25%
			Machines and equipment		40%	
Construction, integration and mounting			40%			

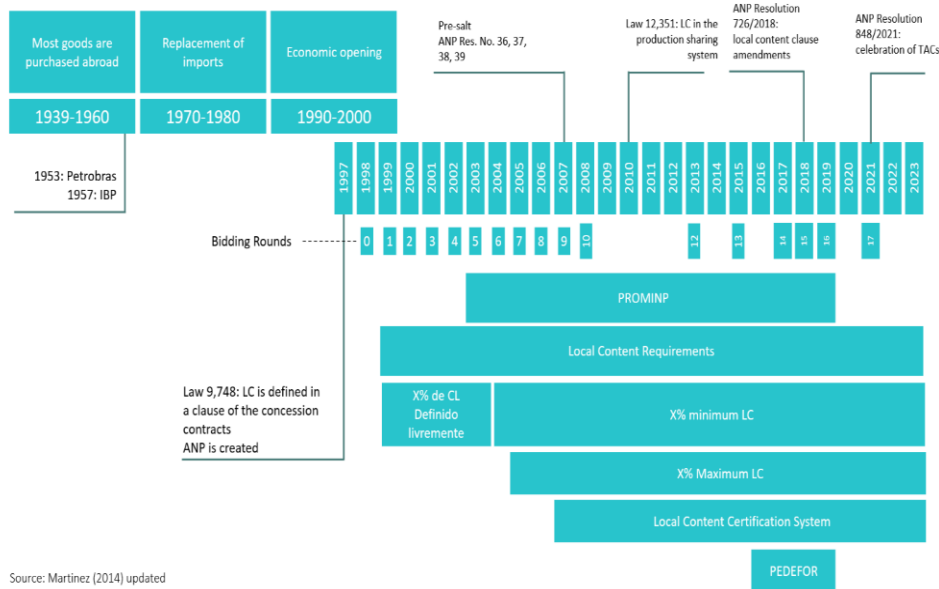
**Table 3.** Percentages of LC established in the proposed amendment to contracts in force, under ANP resolution n. 726/2018 (Source: own elaboration from ANP data).

In October, 2019, ANP began hosting a public hearing to simplify current mechanisms to verify the local content in imported products. These public hearings will likely result in efficiency gains, control, and auditing of the local content reports.

In 2020, due to the COVID-19 pandemic, the 17th Concession Bid Round was temporarily suspended, and was resumed by the ANP after a decision of CNPE in Resolution No. 07/2020 to hold the bid round in 2021. The 92 blocks in the Campos, Pelotas Potiguar, and Santos Basin are partially located beyond the 200 nautical mile limit from the Brazilian baseline and may contain deposits located beyond this limit. The bidders had to: 1) fill out the electronic registration form; 2) submit the registration documents required by the Draft Tender Protocol, such as the company's corporate documents, the evidence of powers of its legal representatives or attorneys-in-fact, and confidentiality agreement; and 3) pay the participation fee for the specific sector of interest, where the technical data package is accessed by an electronic mechanism system named Electronic Information System (SEI) available on the ANP website.<sup>40</sup>

40. Bruno Triani Belchior et al., *Brazil: 17th Concession Bid Round – Tender Protocol and Concession Contract Drafts*, TAUIL & CHEQUER ADVOGADOS (Dec. 4, 2020), <https://www.tauilchequer.com.br/en/perspectives-events/publications/2020/12/brazil-17th-concession-bid-round-tender-protocol-and-concession-contract-drafts>.

The image below represents a timeline with important milestones in the evolution of LC:



**Figure 2.** Timeline of the Brazilian LC policy implementation (Source: adapted from Martinez, 2014, and Almeida et al., 2016).

ANP Resolution No. 848/2021 regulates the celebration of the TAC regarding the sanctioned processes by the disagreement of the Local Content Requirements in contracts that cannot be postponed by ANP Resolution 726/2018. In these cases, the companies cannot require the substitution of goods and national services, in a way to stimulate the Brazilian industry.<sup>41</sup>

Among those clarifications, stands out the time limit of 180 days, which suspended the sanctioned processes already in course, started on July 15<sup>th</sup>, 2021 – the date of the resolution publication. The interested companies must present the requirement for celebration and the TAC proposal within 180 days from July 15<sup>th</sup>.<sup>42</sup>

For the sanctioned processes generated from the resolution's publication date, the deadlines for the TAC requirements and suspension of the processes previewed in Section I, Chapter II of the Normative Act will be applied. The

41. *Id.*

42. *Id.*

requirement can be presented at any moment, from the emission of the ANP's auto infraction until (1) the duration till the time limit for the recourse against the decision of the first resort which determines the application of penalty and fine, if not presented the recourse; or (2) the res judicata of the decision which judges the administrative recourse against the decision of first resort who determines the application of penalty and fine.<sup>43</sup>

The Local Content Requirements are assumed by the companies, in the agreements of exploration and production of oil and gas, of agreement of a minimum of goods and national services.<sup>44</sup>

#### *B. Local Content Penalties/Fines vs. Incentives*

Law 9,847/1999 sets out the penalties to be imposed by the ANP for non-compliance with the rules applicable to the import, export, marketing, refining, processing, transport, distribution, resale, and storage of oil and natural gas.<sup>45</sup>

ANP Ordinance 234/2003 imposes penalties for breaching the provisions of bidding tender protocols and concession contracts. The penalties include: i) fines; ii) forfeiture; iii) discarding of seized goods; iv) cancellation of relevant registrations with the ANP; v) suspension of goods supply and operations; vi) suspension of the right to participate in future bids and contract with the ANP; and vii) termination of the concession contract.<sup>46</sup>

Failure to comply was subject to penalties. Rounds 1 and 2 set a penalty of 200% of the non-fulfilled amounts, while Rounds 3 and 4 adopted a sliding scale summarized in Table 5.<sup>47</sup>

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43. *Id.*

44. *Id.*

45. Paula Valois Pires et al., *Oil and gas regulation in Brazil: overview*, THOMSON REUTERS PRAC. L. (Oct. 1, 2020), <https://anzlaw.thomsonreuters.com/2-524-2451?transitionType=Default&contextData=%28sc.Default%29>.

46. *Id.*

47. Pereira et al., *Local Content*, *supra* note 1, at 303.

Local content Range (%)		Achieved (up to, %)	Penalty Penalty (progressive and cumulative)
0	30	30	200% of the difference until 30%
30	40	40	160% of the difference until 40%
40	50	50	120% of the difference until 50%
50	60	60	80% of the difference until 60%
60	100	100	50% of the difference until 70%

**Table 5.** *Non-compliance penalties in Rounds 3 and 4 (Source: Pereira et al.).*

In Rounds 5 and 6, the penalties changed to a 50% penalty over the difference until the minimum required percentage, and a 20% penalty over the difference until the offered percentage was above the minimum.<sup>48</sup>

The multi-item judgment criteria, the large weight of, and the change in the penalty mechanism created confusion as well as a possibility of exaggerated commitments in scenarios where paying the penalty was more cost-efficient than buying locally. Particularly in cases where it was strategically important to acquire the area.<sup>49</sup>

During Round 7, the penalties changed again. If the non-performed local content percentage (NR%) was under 65%, the penalty (M) would be 60% of the value of the non-performed local content. If the non-performed local content percentage was equal to or greater than 65%, the penalty would escalate from 60% to 100% when the non-performed local content was equal to 100%.<sup>50</sup> Local content accounted for 20% of the final bid score, with 5% in the exploration phase and 15% in the development phase.<sup>51</sup>

On December 21, 2020, Law No. 9,148/2020 was published to create a penalty that shall be applied to E&P companies in cases of non-compliance with the thresholds of local content in the State of Rio de Janeiro.<sup>52</sup>

48. *Id.*

49. *Id.*

50. Mathematically: If  $0 < NR(\%) < 65\% \Rightarrow M(\%) = 60\%$ ; If  $NR(\%) \geq 65\% \Rightarrow M(\%) = 1,143 NR(\%) - 14,285$ .

51. *Id.*

52. Carolina M. Bottino & Diana Castro, *State Law No. 9,148/2020: Penalty for Non-compliance with Local Content Requirement in State of Rio de Janeiro*, TAUIL & CHEQUER ADVOGADOS (Dec. 28, 2020), <https://www.tauilchequer.com.br/en/perspectives-events/publications/2020/12/state-law-no-9148-2020-penalty-for--noncompliance-with-local-content-requirements-in-state-of-rio-de-janeiro>.

Such indemnity will be due to the State of Rio de Janeiro by companies that have the rights to explore and produce oil and natural gas and operate in areas in the State of Rio de Janeiro in the Campos and Santos basins.<sup>53</sup> The amount to be paid will correspond to the difference between the ICMS rate defined in item I of Article 14 of Law No. 2,657/1996 (18%) and the ICMS rate defined in Article 1 of Law No. 8,890/2020 (3%), focusing on the minimum mandatory percentage of local content of the Stationary Production Units (UEP), not fulfilled, according to local content certification under the terms of ANP regulations.<sup>54</sup>

The verification of compliance with the minimum mandatory percentage of local content of goods or services under the terms of Law No. 8,890/2020 will consider several items. These include value of the percentage in the certificate of local content of the Stationary Production Units (UEP) for the execution of production activities in concession contracts, transfer of rights or production sharing, and the minimum mandatory percentage of local established for the exploration and production contract in which the good or service was used.<sup>55</sup>

If the goods or services are used in more than one exploration and production contract with mandatory minimum percentages of different local content, the portion of the good or service should be allocated to each contract in the proportion in which they were used in each contract.<sup>56</sup> Such verification will be carried out regardless of the end of the period for calculating the local content commitment established in the exploration and production contracts.<sup>57</sup> The measure authorizes the Executive Branch to sign an agreement with the ANP so that the certification of local content is issued within one year after the production module goes into operation.<sup>58</sup>

As for incentives, increases are proposed for the valuation of the local content obtained by suppliers. This includes systems, goods or services which develop local engineering, develop technological innovation within Brazil; have a high potential to generate skilled jobs; or promote exports.<sup>59</sup>

For bonuses, Local Content Units (UCLs) are proposed, which would be granted to a company or consortium that promotes one or more of the

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53. *Id.*

54. *Id.*

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.*

59. *Reforms to Brazilian Local Content Policy*, CMS LAW-NOW (Jan. 2, 2016), <https://www.cms-lawnow.com/ealerts/2016/02/reforms-to-brazilian-local-content-policy>.



following, in Brazil: i) the entering into of contracts for the purchase of goods, services or systems which enable the creation of new suppliers in Brazil; ii) direct investment in the expansion of production capacity of Brazilian suppliers; iii) direct investment in the process of technology innovation of Brazilian suppliers; iv) the purchase of goods and systems in Brazil, with local content, for use outside Brazil; and v) the acquisition of goods or systems of a pioneering nature, developed in Brazil.<sup>60</sup>

These UCLs can then be applied against local content targets for a particular block to make up for any shortfall on that particular project. This should enable more flexible contracting, making it easier for oil and gas companies to select the most suitable contractors for projects, with foreign contractors not necessarily being excluded for lack of local content.<sup>61</sup>

### III. Lesson Learned

The Brazilian experience in the adoption of LCRs since the end of the 1990 decade shows important lessons and contributions in the debate of economic development based on natural resources-intensive industries.

As a public policy tool, LCRs were a useful complementary instrument in industrial policy efforts for the Brazilian oil and gas sector since 1999. Implemented in parallel with the rising E&P investments that took place between 1999 and 2014, mainly by Petrobras, LCRs had a positive impact on channeling the demand for equipment and services for the local market. This combination of measures encouraged the expansion of national production capacity in certain capital goods (fabrication, machinery, equipment, metallurgy, subsea equipment, control systems, etc.) by national and foreign companies interested in working and learning with Petrobras, due to its expertise in deepwater production, in the context of the development of Pre-salt reserves.<sup>62 63 64</sup>

According to an estimation from FIESP (2017), the gross value of industrial production in the oil and gas sector rose from R\$ 22.6 billion in

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60. *Id.*

61. *Id.*

62. N. N. Filho, *Brazil's Oil & Gas Local Content Policy: Lessons Learned*, INST. OF THE AMERICAS 3 (Sept. 2017).

63. The number of suppliers to Petrobras increased from 1,800 firms at the end of the 1990s to 3,400 by 2009. S. Borschiver & G. R. Freitas, *Políticas de Conteúdo Local na Indústria de Oleo e Gas*, RIO OIL AND GAS CONF. PROC. (2016).

64. Frederico Rocha, *Recursos Naturais como Alternativa para Inovação Tecnológica: Petróleo e Gás no Brasil*, COORDINACIÓN DE ESTUDIOS PARA AMÉRICA LATINA 43 (2015), <https://scioteca.caf.com/handle/123456789/774>.

1999 (at 2015 prices) to R\$ 63.3 billion in 2015, representing a real growth of 180.8%. Furthermore, the gross value of the industrial production of the entire manufacturing industry had a growth in real terms of 854% during the same period.<sup>65</sup>

The channeling of investments in the Brazilian offshore upstream to the local market also had an important impact on the shipbuilding industry. During the period between 2000 and 2013, the naval sector experienced an average annual growth of 19.5%.<sup>66</sup> This growth resulted in the construction of 605 vessels by 2016 and the creation of over 80,000 direct jobs and 400,000 indirect jobs by 2014.<sup>67</sup>

However, after 2014, there was a drastic reduction in these numbers, reaching below 20,000 in 2022.<sup>68</sup> This reduction was a result of Operation Lava Jato, which led to the loss of more than 2 million direct and indirect jobs in the construction and industrial sectors. With the aim of cutting costs, equipment was bought from other countries instead of locally.<sup>69</sup>

Data from Sinaval (National Union of the Naval and Offshore Construction and Repair Industry) indicates that in 2014, the Brazilian naval industry totaled approximately R\$9.5 billion in contracted projects, and in 2021, this value was R\$570 million. Faced with this new scenario, Sinaval hopes that Petrobras will resume or reformulate old programs to promote the sector, such as the Petrobras Maritime Support Fleet Renewal Program (Prorefam) and the Transpetro Fleet Modernization and Expansion Program (Promef) aiming to increase the demand for construction services for support vessels and cargo transport vessels in Brazil.

In any case, an increase in the investment amounts of the Brazilian oil and gas industry is expected in the coming years. The sector might offer more than 500,000 new jobs by 2025. Only Rio de Janeiro, because of the Campos Basin, can receive more than R\$ 110 billion in investments for the natural gas sector, according to estimates from Firjan (2022). The state will be home to 85% of the new production platforms that will come into operation in the

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65. *Id.*

66. Clavijo, *Uma Análise Qualitativa*, *supra* note 5.

67. *Panorama Naval no Rio de Janeiro*, FIRJAN 24 (2018), <https://www.firjan.com.br/publicacoes/publicacoes-de-economia/panorama-naval-no-rio-de-janeiro-2016-1.htm#pubAlign>.

68. *Panorama Naval do Rio de Janeiro*, FIRJAN 8 (2022), <https://www.firjan.com.br/o-sistema-firjan/setores-de-atuacao/construcao-naval/panorama-naval/default.htm>.

69. *Em audiência pública na Câmara dos Deputados, Sindipetro-Ba defende a reabertura do Canteiro de São Roque do Paraguaçu*, BLOG DO TRABALHADOR (Apr. 27, 2023), <https://www.blogdotrabalhador.com.br/noticia/em-audiencia-publica-na-camara-dos-deputados-sindipetro-ba-defende-a-reabertura-do-canteiro-de-sao-roque-do-paraguacu>.

country over the next three years, which could generate around 10,000 new direct and indirect jobs.

Regarding the local industry competitiveness, in 2010, only 24% of local supplier companies exported their goods and services, and, of this group, 80% of them export the equivalent of less than 10% of their revenues. In that sense, around 90% of its revenues came from sales to the Brazilian market, mainly from sales to Petrobras.<sup>70 71</sup>

In this sense, the changes made to the LCRs from 2003, as part of a more aggressive industrial policy, also created obstacles to the achievement of the objectives and the effectiveness of the policy. First, because the evolution of LCRs lacked a correct assessment of the capacity to supply equipment and services that could be achieved competitively. By placing local content commitments within the auctions, operators, aiming to win the bid, offered very high commitments that did not correspond to the real local supply capacity.<sup>72</sup> When oil prices dropped, the excessive level of LCRs put at risk the financial sustainability of the E&P project, the key to justify the implementation of industrial policies aiming at incentivizing local supply capacity.<sup>73</sup>

Additionally, the design of LCRs did not correctly delineate those sectors of the supply chain that were already competitive, or which could reach the capacity to supply competitively both in the local market and in other petroleum provinces. The local industry should approach the cost structure offered by foreign suppliers, and not based on a pattern of competition in the national market. In this sense, neither were considered promising sectors, which, incidentally, also had the potential to increase the generation of employment and income for the country sustainably in the long term.<sup>74</sup>

On the other hand, the introduction of the local content measurement system, which was effectively adopted in 2007, started to impose higher costs for operators to comply with their commitments since they had to bear the costs of certification, which the ANP could not do.<sup>75</sup>

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70. Clavijo, *Uma Análise Qualitativa*, *supra* note 5, at 163.

71. Considering the weight of Petrobras in the Brazilian oil industry (between 8% and 13% of Gross Fixed Capital Formation (GFCF) and about 2% of GDP), the industry that supplies equipment and services to the P&G sector is excessively dependent on the state-owned company and is subject to the behaviour of that company's investments. *Id.*

72. *Id.* at 168.

73. Clavijo et al., *Impacts*, *supra* note 5, at 15.

74. Almeida et al., *supra* note 11, at 41.

75. Clavijo, *Uma Análise Qualitativa*, *supra* note 5, at 227.

Another obstacle to obtaining more effective results from the LCRs was the lack of expiration dates. Regulation of the waiver mechanism only took place in 2018, in the context of policy flexibilization, when government guidelines for the oil and gas sector were focused on ensuring the financial sustainability of E&P projects, including the need to get Petrobras out of bankruptcy, and the attractiveness of the upstream offshore for private investors.<sup>76</sup> Accordingly, companies in the supply chain did not receive proper signals to accelerate their efforts to build new productive and dynamic capacities. The design of LCRs since 2003 showed that government policies were more oriented towards the protection of local industry than competitiveness.<sup>77</sup>

During the time frame, the CL policy was confused with the industrial policy in general, causing an expectation that, by itself, this instrument would give local companies enough incentive to reach higher levels of competitiveness. However competitiveness is highly dependent on the efforts of companies to improve their productive capacities, and build dynamic capacities through research, development, and innovation (RD&I) efforts, working in knowledge networks, among other strategies. Oliveira (2010), after analyzing 18 productive segments of the supply chain, pointed out that the main cause of these unsustainable results was found in the low technological dynamism of the oil industry, emphasizing three fundamental factors:

- (i) domestic industry R&D investments are very low; (ii) the domestic industry cooperative ties with the national science and technology system are tenuous and unstructured; (iii) domestic engineering, both from suppliers and from companies that provide engineering services for O&G, is very fragile.<sup>78 79</sup>

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76. Giorgio Schrutte, *A economia política do conteúdo local no setor petrolífero de Lula a Temer*, 30 *ECONOMIA E SOCIEDADE* 115, 131 (2021).

77. Kasahara & Botelho, *supra* note 5, at 21.

78. Adilson Oliveira, *Indústria Para-Petrolífera Brasileira Competitividade, Desafios e Oportunidades*, UNIVERSIDADE FEDERAL DO RIO DE JANEIRO, RELATÓRIO DE PESQUISA IE/UFRJ/PROMINP 83 (2010).

79. The sectors analysed by Adilson Oliveira were: Steel, Pipes, Fittings and Flanges, Boiler work, Rods, and Pumping Units, Subsea, Pumps, Compressors, Gas, and Diesel Engines, Turbines, Cranes and Winches, Valves, Instrumentation, Engineering, and Construction Services and Assembly.

### A. Negative Experiences

In addition to the low efforts of the local industry in terms of RD&I, the design of the LCRs, mainly based on the certification system, also ended up generating other effects contrary to the objectives of industrial development in terms of incentives for innovation. This is because the design of the LCRs defined a strict direction for the construction of equipment, parts, and certain pieces. Otherwise, local content commitments may not be measured based on what is established in the table. This situation ended up discouraging the generation of innovations, since, if the new product could not be fitted according to the terms of the booklet, it could not be counted as local content and, therefore, would leave operators exposed to penalties.<sup>80</sup> Additionally, the material connotation for LCRs, which lasted until the creation of PEDEFOR, excluded fundamental efforts to generate competencies to innovate – such as investments in RD&I and development of engineering capacity, among other initiatives.

The lack of coordination and coherence between local content requirements and other industrial policy tools implemented during the same period points out an institutional fragmentation of the policy governance process. The great diversity of public institutions involved in the different phases of the LCRs made it difficult for the emergence of institutional leadership that could lead this process.<sup>81</sup> Regarding LCRs, there was a lack of consensus between ANP and the Ministry of Mines and Energy about the evolution of this tool when fines for non-compliance began to show up, attesting to the impossibility of local industry to satisfy the demand for equipment and services in the way it grew.<sup>82</sup>

LCRs oblige operators of oil and gas blocks to procure a certain level of goods and services from Brazilian sources as a condition of their concession or production sharing agreements. Since the first competitive bid round in 1999, one of the bid criteria for Brazilian concession awards has been the minimum percentage of local content that the bidder commits to achieve. If they fail to achieve that percentage, they are subject to steep fines, although the Brazilian Petroleum Regulator (ANP) may waive the requirement in certain circumstances. This was removed later as it could create the “wrong” incentives as a bid factor for unrealistic bids. There have been various evolutions in the rules over the years, but the trend has been towards ever more complex and stricter requirements, with increasing minimum

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80. Ghiorzi, *supra* note 5, at 189-190.

81. Almeida et al., *supra* note 11, at 38.

82. Clavijo, *Uma Análise Qualitativa*, *supra* note 5, at 253.

percentages, the creation of around 90 different categories of services and equipment, each with different requirements, and the requirement for certification by accredited agencies.<sup>83</sup>

Over recent years, these requirements have been widely criticized for their complexity and the additional costs they have imposed on the industry. The mechanism has been politically motivated to protect sectors of Brazilian industry from competition, which has resulted in local content being associated with a hefty premium over international prices. Operators have been forced to try to anticipate the levels of local content that they will be able to secure in the development of a field at the bidding stage, when they do not know what kind of reservoir they may discover, nor what technology will be available, nor what capacity local suppliers will have at that time, which may be five to ten years after bidding.<sup>84</sup>

These difficulties have become increasingly clear in the wake of the “Lava Jato” corruption scandal and the resulting financial crisis for much of the oil and gas supply chain. These factors have led to delays and cost overruns in many Brazilian projects, particularly in offshore construction. Many operators have accepted that they will not be able to achieve their local content commitments, paying fines or applying for waivers from the ANP. One Minister suggested that the potential value of fines is between R\$ 60bn and R\$ 80bn (c. £15bn - £20bn), but the ANP has yet to give clear guidance on how requests for waiver will be assessed, and claims have been piling up.<sup>85</sup>

In terms of increased participation of the domestic companies in all areas of the supply chain, the process has not been smooth leading to several decisions being met with resistance from the industry. Some of the decisions ultimately served to undermine the original tenets of the local content policy, which led to fierce criticism of the policy itself and the strong revisions the industry has overseen over the last two years. The policy execution lacked a central strategic plan to gradually implement the reforms in accordance with the country’s supply chain reality. The policy’s general objectives were quickly imposed without focused targets, and from the beginning it lacked advanced metrics or indicators that could accurately measure its results, apart from higher investment (which mainly came from government subsidies).<sup>86</sup>

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83. Ted Rhodes, *Brazil proposes relaxation of local content requirements*, CMS LAW NOW (Feb. 27, 2017), <https://cms-lawnow.com/en/ealerts/2017/02/brazil-proposes-relaxation-of-local-content-requirements>.

84. *Id.*

85. *Id.*

86. Filho, *supra* note 62.

ANP has varied the procedures, requirements, and monitoring of local content throughout the bidding rounds. The adoption of the long and detailed Local Content Table and the new methodology, imposed by the government, from the 7th Round until the 13th Round proved to be bureaucratic, demanding, and complex for the industry to follow.<sup>87</sup>

The excessive levels of local content percentage requirements did not take into account the actual installed capacity in the country at the time they were defined, which in the case of many items generated insurmountable targets that were impossible to achieve and did not reflect market reality. This resulted in project execution delays and heavy fines for both the operators and the suppliers. Besides that, some requirements granted a level of protectionism to some goods and services that resulted in expensive prices and longer delivery times, higher than those on the international market. This was not what the local content policy stood for – as it harmed competitiveness and did not improve domestic companies' efficiency.<sup>88</sup>

Another negative consideration concerned the length and inflexibility of the Local Content Table. The Table featured over 90 items, each one carrying commitments, and it was too detailed. The need to determine local content requirements for activities that would occur six, eight, or even ten years in the future was an impossible exercise that brought the effectiveness of the local content model into question. It ignored relevant market variants, such as macroeconomic conditions, oil prices, or the advent of new technologies.<sup>89</sup>

The ensuing struggle to follow the Table's requirements resulted in an excessive level of penalties for operators who could not meet local content requirements agreed upon, which in turn were usually transferred, at least in part, to the supply chain. The policy acquired a punitive nature over time, yet the fines quickly became counterproductive as they affected both the operators and the supply chain.<sup>90</sup>

Despite the relevance of the exemption mechanism (waiver) for the Local Content System, ANP has yet to formally rule on standard and isonomic procedures for this matter. Moreover, ANP received a great deal of criticism surrounding the timing and its responsiveness to the request from operators, which hindered the industry's investment decisions.<sup>91</sup>

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87. *Id.*

88. *Id.*

89. *Id.*

90. *Id.*

91. *Id.*

*B. Positive Experiences*

The Local Content policy has had a great effect on supporting industries. From the start of the Brazilian Bidding Rounds in 1999 until the beginning of the Brazilian economic crisis in 2013, the policy achieved significant results in promoting domestic companies in the oil and gas sector and improving employability in many segments within the supply chain.<sup>92</sup>

The Brazilian naval industry experienced a revitalization period from the early 2000s until the first part of the current decade, based on funds granted by government programs and increased demand from local content commitments. As a consequence, the number of employees in the sector jumped from less than 3,000 in 2003 to over 70,000 in 2013.<sup>93</sup>

Several other sectors improved in performance and expanded their capacity across the country, mainly due to the effects of the local content policy. Despite different levels of prioritization, the capital goods industry, the fabrication segment (pressure vessels, tanks, heat exchangers, metal structures, accessories, and pipes), machinery and equipment, metallurgical industry, modules and topsides (engineering, manufacturing and installation), subsea equipment, high technology machines and drilling and completion equipment, control systems and umbilicals, all demonstrated considerable growth.<sup>94</sup>

The modules manufacturing segment gained several new players, including Brazilian companies that offered this type of service. In the subsea segment, most of the relevant global Original Equipment Manufacturers (OEMs), who had already been in the country, substantially increased their investments in the country over the last 20 years. This allowed Brazil to produce subsea equipment at high local content levels. The OEMs also invested in national research and development, setting up Research and Development Centers in Brazil.<sup>95 96</sup>

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92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. Rocha, *supra* note 64.



To better understand the impact local content policy has had in the exploration and production sector, it is important to look at the investment growth. In the year 2000, the exploration and production chain received investments on the order of US\$4 billion. By 2013, these figures had grown to US\$40 billion. Petrobras contracted large quantities of goods and services, at rates far above the supply chain's production capacity. It led to the expansion of several suppliers' delivery capacity, followed by significant increases in prices and deadlines, saturating the market. This sizeable growth brought both positive and negative effects to the industry, because not a single industry in the world would be able to cope with this substantial growth in such a short period of time.<sup>97 98</sup>

According to PROMINP' because of the government-induced programs to boost local capacity in the country, the participation of national industry in the oil & gas sector increased from 57% in 2003 to 75% in the first half of 2010. This growth represented an additional value of US\$21.5 billion worth of goods and services contracted in the domestic market and the generate of more than 875,000 jobs during this period.<sup>99</sup>

The LCRs show good results, as we have many companies interested in Brazilian oil and gas. This interest contributes to the development of the sector, increases competitiveness in some segments of local supply-chain, and increases job offers.<sup>100</sup>

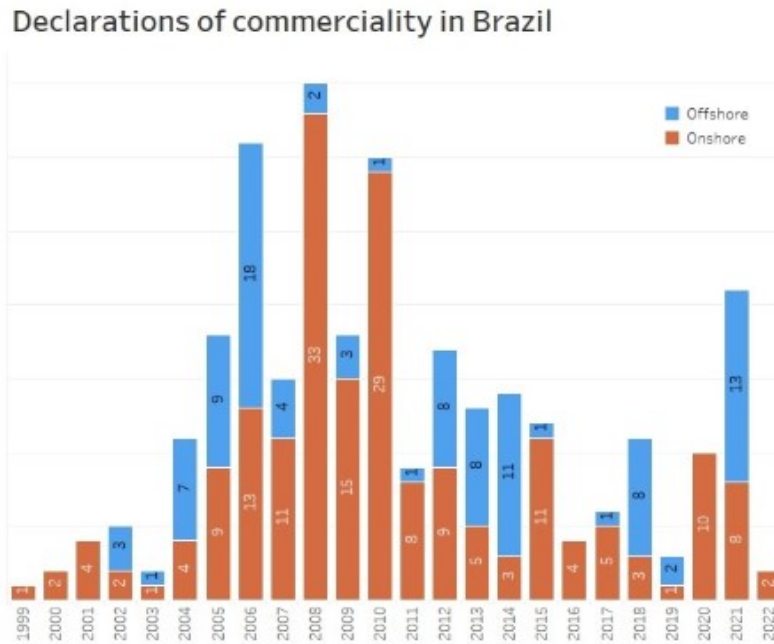
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97. *Id.*

98. *Study of the Potential for Diversification of the Brazilian Chemical Industry*, BAIN & COMPANY (May 28, 2015), <https://www.bain.com/insights/potential-for-diversification-of-the-brazilian-chemical-industry/>

99. *Id.*

100. *The Local Content Regulation for Concession Agreements*, ANP, <http://www.argenteraoilgas.com/ANP-Brazil-local-contents.pdf> (last visited June 5, 2021).



**Figure 7.** Declaration of Commerciality of blocks in Brazil (Source: BNamericas based on ANP data).

There are some challenges that LCRs may have in the future: i) increasing the volume of local investments (certification); ii) informing the market about the certification process and its rules; and iii) expanding the dialog and interaction with the industry, building a strong relationship capable of facing controversial issues.<sup>101</sup>

Some suggestions by ANP to increase the LCRs are as follows: i) making partnerships and cooperation with local companies; ii) setting production units in Brazil; iii) increasing the participation of local labor on services; and iv) obtaining local content certification on goods and services.<sup>102</sup>

#### *IV. Policy Recommendations & The Future Of LCRs*

##### *A. Areas for improvement within LCRs in Brazil*

Local Content Requirements in the Brazilian hydrocarbon sector have evolved over time to address different economic conditions of the nation, industry challenges, and associated costs of producing oil and gas resources.

101. *Id.*

102. *Id.*

Changing LCRs should never be just for the sake of changing them. The government must always seek sustainable long-term growth in the economy, not just a short-term protectionist boom that in the long term cripples the industry or the larger economy. The goal of sustainable growth is not an easy puzzle to solve. There are many factors to consider – such as national political stability, regional and global markets of the resource, and the state of the local economy. When steering LCR policy, these factors must be taken into account to ensure that there is a balance between incentives for companies to develop the resources and the country's economic development goals. Simply stated, the policy rules should be dynamic and weighted by factors from both the investors and wider Brazilian stakeholders' perspectives.<sup>103</sup>

Brazil has seen some success in the use of LCRs. Between bid rounds 5 and 10, Brazil's local content policies boosted involvement by the national industry from 57% in 2003 to 75% by the first half of 2010.<sup>104</sup> Some examples include the revitalization of its naval industry<sup>105</sup> in the early 2000s, along with expansion in capacity in certain capital goods, fabrication, machinery, equipment, metallurgy, subsea equipment, and control systems.<sup>106</sup> The number of suppliers to Petrobras increased from 1,800 firms by the end of the 1990s to 3,400 by 2009.<sup>107</sup> The increased employment of local citizens is also a key indicator of the success of local content policies both politically and economically.<sup>108</sup> With LCRs implemented, Brazil saw the generation of 875,000 jobs during this same period.<sup>109</sup>

While the numbers above show success in the LCRs, critics would argue this is a short boom and is actually preventing sustainable growth long-term through incrementally increased exposure to international competition.<sup>110</sup> In Brazil, it has been argued that the government's overprotective LCRs and highly punitive means for enforcing have reduced incentives for companies to participate in exploration and production, and ultimately slowing the absorption of vital technology and techniques by Brazilian industry.<sup>111</sup> For

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103. *Lessons Learned*, *supra* note 1, at 642.

104. Program for Mobilization of the National Oil and Gas Industry (PROMINP).

105. The number of industry workers increased from around 3,000 employees to 70,000 employees from 2003 to 2013.

106. Filho, *supra* note 62, at 3.

107. Borschiver & Freitas, *supra* note 63.

108. Filho, *supra* note 62, at 3.

109. *Id.*

110. *Lessons Learned*, *supra* note 1.

111. *Id.*

example, there are several different requirements, percentages, and conditions to meet local content requirements. But what happens if the relevant investor exceeds such conditions? Are there direct economic benefits from the Brazilian government in order to encourage such a mentality? In Indonesia, local content is one of the key parameters to define the profit split. So the higher local content participation, the higher the profit split might be.<sup>112</sup>

Another relevant point is to create an international hub with flexible local content rules. So, for example, a product produced in Brazil but used in another country might be counted as part of their LCRs in Brazil – as it was developed in Brazil. Such flexible rules might encourage further investments in the country as they could be used as a base for domestic and international operations.

Finally, as a BRIC<sup>113</sup> country with vast quantities of oil and gas, Brazilian local content will be at the forefront of LCR debates about natural resources. This “Custo Brasil” is and has been a significant expense for IOCs wishing to operate in the country. Further, Brazilian leaders have not been afraid to publicly voice extreme local content requirements, sometimes as much as 90%.<sup>114</sup> With these barriers in place or threatened to be in place, there are interested parties that wish to see them torn down.

#### *B. International Trade Law Influencing Brazil’s LCR*

Local content rules and requirements are not unique to Brazil. These requirements have been used across industries and regions of the world at various points. With the introduction of the TRIMs Agreement, local content appeared to be fading away.<sup>115</sup> However, a 2015 report by the Organization for Economic Cooperation and Development documented 146 LCR measures across 39 countries, illustrating a resurgence in the measures.<sup>116</sup>

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112. Michelle Limenta & Lili Yan Ing, *Indonesia’s Local Content Requirements: Assessment with WTO Rules*, 414 ERIA DISCUSSION PAPER SERIES 1 (2022).

113. The BRIC countries (originally Brazil, Russia, India, China) operate as an organization that seeks to further economic cooperation amongst member nations and increase their economic and political standing in the world.

114. Holger Hestermeyer & Laura Nielsen, *The Legality of Local Content Measures under WTO Law*, KING’S COLL. LONDON LAW SCH. RSCH. PAPER NO. 2015-22; 48(3) J. OF WORLD TRADE 553, 556 (2014).

115. *Id.* at 555.

116. Cathleen Cimino-Isaacs & Jan Zilinski, *Local Content Requirements: Backdoor Protectionism Spreading Under the Radar*, PETERSON INST. FOR INT’L ECON. (July 22, 2016), <https://www.piie.com/blogs/trade-investment-policy-watch/local-content-requirements-backdoor-protectionism-spreading>.

These protections are in place not only for the oil industry, but also the wireless technology sector, the automotive sector, and even in some cases, nationwide (e.g. “Buy American” laws).<sup>117</sup> It is not only the oil industry that has been subject to LCRs in various countries. There has been significant debate and lessons learned in the extractive and renewable energy sector as well.<sup>118</sup> The fact that LCRs are used so widely and are not industry or country-specific shows just how important this tool is internationally. While LCR policy in general has been developed into books and doctoral theses, we have chosen a few interesting and relevant industry-specific international cases and international experiences that affect the future of Brazilian LCRs. After a general overview of international trade law and agreements, we will look at Norway’s experience and discuss some important recent LCR cases in depth and Brazil’s involvement in them.

International trade organizations and agreements generally seek to limit trade barriers such as local content requirements. However, the World Trade Organization does not outright ban local content requirements.<sup>119</sup> This is problematic for companies that wish to expand into the high-growth BRIC (Brazil, Russia, India and China) countries.<sup>120</sup> For Example, in Brazil, this cost is known as the “Custo Brasil.”<sup>121</sup> There are agreements such as Trade-Related Investment Measures (TRIMs), General Agreement on Trade in

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117. *Id.*

118. Jan-Christoph Kuntze & Tom Moerenhout, *Local Content Requirements and the Renewable Energy Industry - A Good Match?*, SSRN ELECTRONIC J. (Sept. 2012), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2188607](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2188607).

119. Hestermeyer & Nielsen, *supra* note 114, at 566.

120. *Id.* at 554.

121. “CustoBrasil” refers to the increase in operational costs associated with doing business in Brazil, making Brazilian goods and services more expensive when compared to other countries. There are several factors that contribute to the extra costs, including high levels of public deficits; inefficiency of public services; maintenance of high interest rates; exaggerated net interest spread of financial institutions (among the highest in the world); excessive bureaucracy for imports and exports, creating difficulties for foreign trade; low education levels and lack of qualified labour; excessive layers of bureaucracy (e.g. starting a company in Brazil takes at least 120 days); high levels of corruption within the public sector; high tax burden; expensive labour costs; high social security costs; complex and inefficient fiscal legislation; economic instability; high electricity costs; legal uncertainty; among others.

Services (GATS),<sup>122</sup> and Agreement on Government Procurement (GPA)<sup>123</sup> along with regional and Bilateral Investment Treaties in place throughout the globe. These can significantly affect a country's LCR policy presently and in the future.

It is important to note that Brazil is not yet a party of the GPA, allowing it to continue its LCRs concerning procurement (for now).<sup>124</sup> In May 2020, Brazil submitted its application for accession to GPA 2012 (Article XXII:2), but negotiations continue as of 2023.<sup>125</sup> However, Brazil has been a member of GATT since July 1948 and a WTO member since January 1995.<sup>126</sup> The relevant GATT provision for our discussion is Article III: 4 regarding "National Treatment on Internal Taxation and Regulation" which provides:

The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment *no less favorable than that accorded to like products of national origin* in respect of all laws, regulations and requirements

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122. GATS cover investment measures such as LCRs related to services such as 1) requirements to use domestic service suppliers; 2) limits on the number of service suppliers; 3) limits on the total value of service transactions or assets; 4) limits on the total number of service operations or quantity of service output; 5) Limits on the total number of natural persons permitted; 6) restrictions on or requirements for certain types of legal entities (e.g., joint venture requirements).

TRIMs cover the

1) discrimination between goods of domestic and imported origin; 2) limiting the amount of imported products that an enterprise may purchase or use depending on the volume or value of local products that the enterprise exports; 3) restricting foreign exchange necessary to import (e.g., restricting the importation by an enterprise of products used in local production by restricting its access to foreign exchange); 4) and restricting exports.

Jia S, et al., *Local Content: Norway-Petroleum*, COLUMBIA CENTER ON SUSTAINABLE DEV. (2020).

123. GPA is a WTO plurality agreement (not binding on all members) that attempts to open government contracts to international competition. Currently there are 21 members that have agreed to open, fair and transparent conditions of competition in procurement. To implement this each party agrees to a procurement schedule. These schedules cover procurement activities that are carried out by covered entities purchasing listed goods, services, or construction services of an amount exceeding a certain threshold value. *Agreement on Government Procurement*, WORLD TRADE ORG., [https://www.wto.org/english/tratop\\_e/gproc\\_e/gp\\_gpa\\_e.htm](https://www.wto.org/english/tratop_e/gproc_e/gp_gpa_e.htm) (last visited May 4, 2020).

124. Hestermeyer & Nielsen, *supra* note 114, at 556.

125. Jia S, et al., *supra* note 122.

126. *Brazil and the WTO*, WORLD TRADE ORG., [https://www.wto.org/english/thewto\\_e/countries\\_e/brazil\\_e.htm](https://www.wto.org/english/thewto_e/countries_e/brazil_e.htm) (last visited May 20, 2020).

affecting their internal sale, offering for sale, purchase, transportation, distribution, or use. (Emphasis added).<sup>127</sup>

This provision was added to ensure that foreign goods that are “like” domestic goods are treated no less fairly than the domestic goods. However, there is a significant carve out to this requirement that allows governments to establish local content, GATT Article III:8(a). This article provides: “The provisions of this Article shall not apply to laws, regulations or requirements governing the procurement by governmental agencies of products purchased for governmental purposes and not with a view to commercial resale or with a view to use in the production of goods for commercial sale.”<sup>128</sup>

The text of this article establishes three requirements in order for a government to use this provision to enact local content. First, the measure needs to be “a law, regulation, or requirement governing procurement.”<sup>129</sup> Second, the measure needs to involve “procurement by governmental agencies.”<sup>130</sup> Lastly, the procurement needs to be undertaken “for governmental purposes and not with a view to commercial resale.”<sup>131</sup> If these are not met, a country would only be left with making arguments that it would normally make under Article III: 4.

This has allowed Brazil and other countries to argue that host granting instruments that incorporate local content percent requirements are exempt from GATT Article III: 4 using Article III:8(a). As mentioned above, Brazil is not a member of the WTO’s Government Procurement Agreement (GPA) and therefore has not in essence voluntarily subjected its government procurements to Article 4.<sup>132</sup>

However, both the *Canada – Renewable Energy*<sup>133</sup> and *India – Solar Cells*<sup>134</sup> decisions may have laid the groundwork for future restrictions on

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127. Gatt, *Article III – National Treatment on Internal Taxation and Regulation*, WORLD TRADE ORG. 122, [https://www.wto.org/english/res\\_e/booksp\\_e/gatt\\_ai\\_e/art3\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/gatt_ai_e/art3_e.pdf).

128. *Id.*

129. Mandy Meng Fang, *Shades of Green: Mapping the Parameters of the GATT Article III:8(a) Government Procurement Derogation in the Renewable Energy Transition*, NUS L. WORKING PAPER SERIES 2019/009; J. OF WORLD INV. AND TRADE (2019).

130. *Id.*

131. *Id.*

132. Hestermeyer & Nielsen, *supra* note 114.

133. Appellate Body Report, *Canada: Certain Measures Affecting the Renewable Energy Generation Sector*; *Canada – Measures Relating to the Feed-In Tariff Program*, WTO DOC. WT/DS412/AB/R; WT/DS426/AB/R (adopted May 6, 2013).

134. Appellate Body Report, *India: Certain Measures Relating to Solar Cells and Solar Modules*, WTO DOC. WT/DS456/AB/R (adopted Sept. 16, 2016) [hereinafter *India: Certain Measures Relating to Solar Cells and Solar Modules*].

Brazil's LCR policy choices in relation to what is considered "government procurement." Both cases critically analyzed GATT's Article III: 8(a)'s government procurement derogation and found that government procurement activities to be narrower than argued by Canada and India. While these cases concern the renewable energy sector, this may have brought a rarely discussed trade provision to life and given it teeth to bite countries seeking to develop their extractive resources using local content rules under the protection of Article III: 8(a).<sup>135</sup>

*Canada – Renewable Energy* was the first instance in which Article III: 8(a) was disputed.<sup>136</sup> In this case, Canada enacted a program known as the FIT (Feed-in Tariff) Program for renewable energy generation facilities. What made this government program attractive was the fact that the purchase price power was guaranteed for at least twenty years. However, to get access to this scheme, companies had to agree to contracts that were conditioned on meeting certain LCRs. Namely, the LCRs required that a certain percentage of the power-generation equipment be of domestic origin. In response to this, Japan and the EU took action claiming that this was a violation of the national treatment article mentioned above. Canada took the position that this program satisfied the requirements of Article III: 8(a).<sup>137</sup> However, both the original panel and the Appellate Body did not agree with Canada's broad interpretation of this article.

Not surprisingly, Brazil joined this dispute via third-party submission. Brazil conceded in its submission that not all purchases of goods by the government qualify as a "government purpose."<sup>138</sup> Instead, Brazil posited that the appropriate analysis under Article III:8(a) "requires comparing the overall design, structure, and architecture of a procurement program with the legal and regulatory framework of the responding Member to determine on a case-by-case basis whether the purchase of goods under scrutiny genuinely pertains to a governmental function in the specific sector of that Member's economy, in light of the legitimate policy objectives within that State's society."<sup>139</sup>

In the end, the Appellate Body found that to avail oneself of the derogation article, the product of foreign origin being discriminated against must be in a

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135. Hestermeyer & Nielsen, *supra* note 114, at 556.

136. Fang, *supra* note 129.

137. Hestermeyer & Nielsen, *supra* note 114, at 15.

138. *Id.* at 25.

139. *Id.*



“competitive relationship” with the product purchased by the government.<sup>140</sup> For example, in this case, the Appellate Body determined that the product being procured by the government was electricity, and the product that was subject to discrimination was the generation equipment.<sup>141</sup> Therefore, the Appellate Body held that the discrimination relating to foreign-generation equipment was not covered by Article III: 8(a)'s derogation provision. In other words, the government could discriminate against foreign electricity, but not the “inputs”- i.e., solar and wind components- that go into making the electricity.

In *India – Solar Cells* the government of India had a similar program as the one found in *Canada – Renewable Energy*. Under India's Jawaharlal Nehru National Solar Mission (JNNSM), the government would enter into 25-year power purchase agreement with favorable terms on the condition that certain amounts of solar-powered generation equipment were purchased from local providers. This time however, the United States sought to end this practice under the same theory from *Canada – Renewable Energy* – that this practice violated Article III: 4. Not surprisingly, the Appellate Body followed its report in *Canada – Renewable Energy*. It found that electricity, which was the product being procured, was not in a “competitive relationship” with the solar panels, the product being discriminated against. Thus India could not shield its program using Article III: 8(a).<sup>142</sup>

Brazil again asked for its voice to be heard on the matter through a third submission. Brazil argued that this “competitive relationship test” announced in *Canada – Renewable Energy* should not be used in all cases.<sup>143</sup> Further, Brazil wanted a more expansive view of what constitutes the final product (i.e., electricity). Brazil posited that the purchase of inputs to be assembled into a final product might amount to the purchase of the final good. In this case, Brazil argued that the solar modules, cells, and other components *necessary* to produce solar electricity should fall under Article III: 8(a).<sup>144</sup>

Even though the Appellate Body affirmed the “competitive relationship test,” the Appellate Body wrote that “inputs and process of production” considerations are meritorious.<sup>145</sup> However, according to the decision, the

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140. Dispute Settlement: One-Page Case Summaries, *Canada – Renewable Energy/Canada – Feed-In Tariff Program*, WTO Doc. DS412, 426 (1995–2016).

141. *Id.*

142. *India: Certain Measures Relating to Solar Cells and Solar Modules*, *supra* note 134.

143. Fang, *supra* note 129.

144. *Id.*

145. *India: Certain Measures Relating to Solar Cells and Solar Modules*, *supra* note 134, at 5.40.

“question of whether the cover of Article III: 8(a) may also extend to discrimination relating to inputs and processes of production used in respect of products purchased *arises only after* the product purchased has been found to be in a competitive relationship with the product subject to discrimination.”<sup>146</sup>

After the decisions of these two cases, we know that the previously broadly interpreted Article III: 8(a) is narrowed to cases that can pass the “competitive relationship test” with the possibility of extending to “inputs and processes of production” once that test is satisfied. It is possible that long gone are the days when governments camouflage protectionist LCRs by claiming government procurement.<sup>147</sup> Again, these are renewable energy cases, but as the precedent develops, it may be extended to the extractive industries sector. This is why countries should reassess the potential impact between international commitments and internal policies.

### *C. Future of LCR in Brazil*

Could the future of LCR in Brazil be similar to the Norwegian case? While many have been quick to criticize LCRs, advocates of LCRs have pointed to Norway’s LCR success from the 1970s until the 1990s.<sup>148</sup> It was Norway’s stated strategy to use its resources for the betterment of its people and diversify its economy.<sup>149</sup> In fact, some argue that Norway is a prime example of why certain trade restrictions, particularly allowing for rules against domestic sourcing of ancillary services, are inappropriate for natural resources.<sup>150</sup> The premise of the argument is that in low-income countries where one industry dominates the economy, limiting the government’s ability to grow other areas of the economy, would be a form of Dutch disease. While the government has other options, such as lowering the cost base for labor-intensive exports to foster ancillary employment and industry, critics argue the government should not be able to make this choice for the people.<sup>151</sup>

The downfall of LCRs was not the policy itself, but Norway’s desire to join the European Economic Area which disfavors trade barriers within its trade zone. During the era of local content, the Norwegian government used its power to grant licenses as the conduit for requiring companies to transfer

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146. *Id.* (emphasis added)

147. Fang, *supra* note 129.

148. Jia et al., *supra* note 122.

149. Paul Collier & Anthony Venables, *International Rules for Trade in Natural Resources*, WTO Doc. ERSD-2010-06 2, 11 (Jan. 2010).

150. *Id.*

151. *Id.*

technology, procure goods from Norwegians, and employ and train Norwegians.<sup>152</sup> For example, companies operating in Norway were required to enter into agreements on the training of personnel<sup>153</sup> and research and development.<sup>154</sup> Norway, like many other countries, chose to enforce these rules retaining a right to supervise activities and using fines and license revocation if necessary.<sup>155</sup> The Norwegian government created adequate conditions to develop national technology and a world-class oil and gas hub which allowed Norwegian companies to compete nationally and internationally.

Norway's ability to implement these LCRs was limited in 1994 when Norway joined the European Economic Area. The EC Directive 94/22/EC of 30 May 1994 on the Conditions for Granting and Using Authorisations for the Prospection, Exploration and Production of Hydrocarbons (1994), required Norway to modify its petroleum laws to conform to the EEA policy of promoting free movement of goods, services, persons, and capital in a non-discriminatory manner. As a result of these new requirement, Act 29 November 1996 No.72 Relating to Petroleum Activities was passed to repeal the previous petroleum act to make Norway comply with its international obligations. Norway also joined the World Trade Organization's TRIMMs and GATS and is a signatory to several Bilateral Investment Treaties.<sup>156</sup> Because these were entered into after Norway changed its local content rules, it is hard to say how Norway would have approached local content pre-EEA and pre-WTO requirements. Arguably, Norway's success with LCR cannot be easily replicated in today's world as more and more countries implement

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152. Jia et al., *supra* note 122.

153. 1974 License, Sec. 11:

The licensees, their contractors, and subcontractors, shall during their work on the continental shelf assist in qualifying Norwegian personnel on relevant levels by engaging a suitable number of trainees. ...Further provisions relating to the engagement of personnel shall be agreed upon between the licensees, their contractors, subcontractors and The County Labour Division.

154. 1979 License, Sec. 23:

Research and Development Activity. "At least 50% of research and development activities undertaken in connection with the activity on the license area under this PL [Petroleum License] shall be performed in Norway. The obligation for the licensees will be further defined in an agreement entered into between the Ministry and the operator of the license area under this P.L. not later than 30 days after this license has been granted.

155. See § 45 of 1972 Royal Decree; § 51 of 1985 Petroleum Act; See also, §§ 57 and 59 of the 1972 Royal Decree; §§ 58, 62 and 66 of the 1985 Petroleum Act.

156. Jia et al., *supra* note 122.

trade treaties that generally seek to reduce protectionist measures. Secondly, Norway chose to join the EEA knowing that it would not be able to keep its local content rules in place. It is conceivable that joining the EEA was a better economic decision as a whole than being able to keep its local content rules in place to continue to build ancillary services. We would posit that a lesson to take from Norway is at some point in development, LCRs take a back seat to larger trade deals and the larger economy. Countries should develop their LCRs to create companies that will be able to compete on their own domestically and internationally at some point in time.

In the case of Brazil, it is clear that over the years there have been several developments with regard to LCRs policies. In the early 2000s until 2015, the government's priority was to stimulate the transformation of oil wealth into something that could go beyond production itself and contribute to the productive development of the country.

Throughout 2015 and early 2016, it was possible to notice a movement towards identifying mistakes and successes during the process, taking into account, for example, the potential for international competitiveness. At the end of 2016, it became a priority for the government to loosen measures to make Brazil more attractive to foreign investments. Since then, the concern to improve policies to continue developing national production, but without hindering the entry of investments in the country, is still on the agenda.

The Norwegian experience, an important tool for us to continue developing LCRs in the country, considering the similarity of instruments and rules between the countries, reveals the importance of policy continuity, with corrections of errors and improvement of successes based on clear objectives to be achieved.

#### *V. Concluding Remarks*

Brazil has extensive experience in implementing local content policies. These policies entered a new phase in 1999 under the regulatory control of ANP. The increasing investments in exploration and production were seen as an opportunity to boost local suppliers. However, the supply capacity was insufficient to competitively meet the growing demand for equipment and services in the national oil industry in terms of scale, price, deadline, and quality.

Initially, the focus was on incentivizing the development of a competitive local supply industry. However, the policy often lost its focus due to political and/or market pressures. The increase in the number of fines for non-compliance revealed that local content policies were undermining the

competitiveness of exploration and production projects in the Brazilian oil sector. This situation justified the reforms initiated since 2016, which reduced the previously committed local content obligations and established lower rates in subsequent bidding rounds.

Nevertheless, the data showed some positive results. There was an increase in labor hiring, generating thousands of direct and indirect jobs, as well as stimulating the purchase of machinery and vessels for the local industry.

Considering the above, the analysis of the Brazilian experience highlights the importance of considering the actual capacities of the domestic industry when formulating LCRs. In certain circumstances, the objectives of the industrial policy to boost industrial production from national oil wealth can compromise the profitability of the core business – i.e., oil production activities.

For these policies to be successful, it is essential to have a strategic vision, adequate planning, gradual progression, and an approach that takes into account the current and potential capacity of the installed supplier base in the country. In this regard, it is also crucial to consider local content policies within a broader package of industrial and innovation policies, with appropriate instruments to incentivize local companies to improve their production capabilities and develop the technological capacity necessary to compete in a globally integrated industry. To achieve increasingly positive responses from the industry regarding LCRs, it is important to strike a balance between established rules and participant feedback, allowing Brazil to remain economically attractive and appealing as an option for foreign capital.

On the other hand, it is important to recognize that international, regional, or bilateral trade commitments may limit the application of local content policies. At a certain point, countries may even decide to forego these policies, replacing them with other benefits for the local economy, as was the case in Norway.

In summary, this study highlights the complexity and challenges involved in implementing local content policies in the Brazilian oil sector. A strategic, flexible, and realistic approach is recommended – one that recognizes the current and potential capacity of the local supplier chain, as well as the implications of this type of industrial policy instrument on the viability and competitiveness of the upstream segment. By doing so, the Brazilian state could identify windows of opportunity to enhance its local content policies and drive national socioeconomic development.

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