



# NOPOOR POLICY BRIEF



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## THE FREE TRADE ZONE OF MANAUS: A MODEL FOR DEVELOPMENT?

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The Free Trade Zone of Manaus (FTZM) was created in 1957 as a policy instrument to generate employment, promote industrialization and enhance regional integration of the Brazilian Amazon, as well as a way to affirm the sovereignty of the Amazonas state on this remote region. This policy brief presents the relative economic and social success of the FTZM for the municipality of Manaus, but also highlights how this industrial strategy has failed to spread its benefits to the entire state of Amazonas. Policy responses are required to promote poverty reduction and to enable the poorest of the poor to draw advantage from the economic dynamism of the FTZM.

### INTRODUCTION

This policy brief highlights the contribution to poverty reduction of the Free Trade Zone of Manaus (FTZM) in the state of Amazonas in the previous decade. The FTZM, located deep in the Amazon forest, was not created for its optimal location and competitiveness. The region's economic difficulties led to set up the FTZM in 1957 as a trading and warehousing district, to promote economic growth and regional development, as well as to assert Brazil's sovereignty over the vast, remote, under populated Amazonian territory. Ten years later, in 1967, the FTZM was reformed to shift towards industrial production through special tax incentives. Since then, new objectives have gradually been advocated: rebalance between the Amazonian East -dominated by Belém- and the Amazonian West; contribution to poverty reduction in an underprivileged region; industrialization as an alternative to deforestation, etc.

The FTZM has been relatively successful over the past decade both in economic and social terms. The zone's longevity, stipulated in the Constitution, has been regularly extended, the last time in 2014 for ... 50 more years. However, its benefits seem to be limited to the capital, Manaus (representing 1.8 million individuals within a state of 3.5 million, and capturing approximately 80% of the state's GDP), and haven't spread much to the entire state yet.

## EVIDENCE AND ANALYSIS

### *Economic performance*

The FTZM, administrated by the Federal Agency SUFRAMA since 1967, benefits from tax and excise incentives justified in terms of offsetting the aforementioned handicaps from which the Amazonian region reportedly suffers. The Manaus industrial district is definitely a processing zone: it is centred on the final stage of the production process for a small number of industrial sectors suitable for component assembly, the finished products of which can be transported by air or river (consumer electronics and IT equipment, motorcycles, etc.). In addition, these industries are using inputs that are now mainly imported. In the 2000-2010 decade, around 50% of inputs were imported from foreign markets and more than 90% of sales were made either to other Brazilian states (the majority) or to the rest of the state of Amazonas. Therefore, the FTZM does not constitute an export-oriented FTZ but an import-processing zone.<sup>1</sup>

In the 2000s, FTZM output and employment soared while Brazil as a whole was hit by a relative decline in the industrial sector. From 2000 to 2010, Amazonas State's manufacturing output, concentrated in the FTZM, rose by a multiple of 3.4. Brazilian growth "driven" by commodity sales associated with the government's development of social programmes, triggered a boom in demand for the consumer goods produced in Manaus, for example mobile phones, wide-screen TVs, motorcycles, etc. The Real's overvaluation also reduced the cost of imported inputs while it added to the zone's international competitiveness problem. Creation of employment in the FTZM went hand in hand with growth in output during the period, tripling from the early 1990s to the present time (for the decade 2000-2010 only, the number of employees rose by 107%, from about 50,000 to almost 104,000). Brazilian census data reports that the manufacturing sector accounted for 17% of employment in the municipality of Manaus in 2010, more than the Brazilian urban area average of 15.2%. The zone also withstood the 2008 crisis and economic slowdown well. Nevertheless, the present stagnation in Brazil could undermine the future FTZM's performances if it were to weigh on household consumer demand.

The success of the FTZM's productive specialisation has come with a certain amount of achievements concerning labour standards. In 2010, hourly wages in the municipality of Manaus were higher than the ones observed on average in the Brazilian urban areas (10 and 9.1 Brazilian Reals respectively), having posted a 38% increase over the decade compared to 23% for urban Brazil. The shift to formal employment observed in Brazil in the 2000s was also at work in Manaus: the increase in the share of formal jobs from 53% in 2000 to 61% in 2010 is quite similar to the global trend in Brazil (53% and 62% respectively). In addition, there are no exemptions granted from labour legislation in the FTZM, and it seems that not many cases concerning overstepping the law have been reported.

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<sup>1</sup> However note that there may well be more to the FTZM's poor export performance than meets the eye. When the Manaus industrial district exports a good to the State of São Paulo, this good may then be re-exported to the United States. Therefore the direct contribution of the Amazonas state (and Manaus, which represents around 80% of its GDP) to Brazilian exports, although weak, is underestimated in current statistics because some of its value added is measured as exports from other Brazilian states (see Yücer et al. 2014).

## Poverty dynamics

The monetary poverty measurement indicators (proportion of poor and poverty gap<sup>2</sup>), calculated from the household monthly income data, show the downturn in poverty in both Manaus and the rest of the state of Amazonas. However, the study of poverty levels points out a striking difference between the Manaus capital and the rest of the state. In 2010, over half of the population in the rest of Amazonas still had a monthly income below the R\$140 threshold<sup>3</sup> (approximately US\$70), whereas no more than 20% of the population had such a low income level in the municipality of Manaus. As concerns living conditions, the disparities are once again considerable between the Manaus capital and the rest of the state. Though over 75% of the population of Manaus had access to a municipal water supply in 2010, this was the case for less than 50% of the population in the rest of the state. In terms of sanitation, over 80% of the population in the rest of Amazonas had no access to either a public facility or a septic tank (compared with less than 40% in Manaus). The range of goods owned by households in the following list – refrigerator, washing machine, telephone, computer, television and car – illustrates as well the gaps in living conditions in the state: 2.9% of the population in Manaus had none or only one of these goods as opposed to 37.8% in the rest of the state.<sup>4</sup> Nevertheless, income inequality has narrowed in Amazonas State in the 2000s, likewise for the rest of the country.

**Table 1. Summary of poverty decomposition results**

	Manaus		Amazonas excluding Manaus	
	Headcount	Poverty gap	Headcount	Poverty gap
Poverty in 2000	32.0	16.4	74.4	46.4
Poverty in 2010	18.1	10.5	53.9	33.5
<i>Total change 2000-2010</i>	<i>-13.8</i>	<i>-5.9</i>	<i>-20.5</i>	<i>-12.9</i>
<b>1st Decomposition:</b> growth versus redistribution				
<i>Growth component</i>	<i>-8.6</i>	<i>-3.7</i>	<i>-17.4</i>	<i>-11.7</i>
<i>Redistribution component</i>	<i>-5.2</i>	<i>-2.2</i>	<i>-3.2</i>	<i>-1.2</i>
<b>2nd Decomposition:</b> demographics versus income sources				
<i>Share of adults per household</i>	14.6	10.8	21.0	19.4
<i>Share of occupied adults per household</i>	15.9	5.4	21.7	12.2
<i>Labour income</i>	43.6	42.9	25.8	14.3
<i>Non-labour income</i>	25.9	40.9	31.4	54.2
<i>Total change</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Note: Authors' calculations from 2000 and 2010 Brazilian Census microdata and a R\$140 poverty threshold. See Castilho, Menéndez and Sztulman (2015) for a complete set of results and Azevedo et al. (2013) and Datt and Ravallion (1992) for a description of methodologies.

We use two decomposition methods to look more deeply into the link between the FTZM's economic buoyancy and poverty trends in the region (see Castilho M., Menéndez M. and Sztulman A. (2015) and Table 1 for a summary of results). The first technique is designed to evaluate the respective weights of the contributions of growth and redistribution in the temporal variation of poverty. The

<sup>2</sup> This second indicator covers the intensity of poverty, i.e. the distance from individual income to the poverty line.

<sup>3</sup> Brazil has no official poverty line, but the threshold of R\$140 per month is often used in practice (R\$70 for extreme poverty). These figures correspond to the thresholds used to qualify for welfare programmes such as Bolsa Família.

<sup>4</sup> Data from the last two censuses (2000 and 2010). Note that the chosen period corresponds to a decade in which the FTZM's economic performances were particularly good.

second method seeks to disentangle and measure the influence of different factors on the dynamics of poverty, i.e. demographic change, employment trends and variations in income from different sources (labour and non-labour income). The findings show the dominant role played by income growth – rather than redistribution – in poverty reduction throughout the state of Amazonas. However, there are clear differences between the capital of Manaus and the rest of the state when it comes to the drivers of poverty reduction. Labour income played a major role in Manaus, whereas the determinants in the rest of Amazonas were changes in income other than labour income.<sup>5</sup>

### ***Is the FTZM a model of success?***

Labour market buoyancy in the municipality of Manaus over the last decade is closely associated with the FTZM's economic success and its direct and indirect creation of relatively highly paid jobs. Employment rose and job quality improved, with growth in the proportion of adult workers in the households, an upturn in hourly labour income and a downturn in the number of hours worked. The results of the micro-decompositions show that these trends made a significant contribution to the reduction in poverty in the state capital. Notwithstanding, the contrasting findings between the capital of Manaus and the rest of the state illustrate both the positive effects and limitations of the FTZM. Indeed, in the rest of Amazonas, where poverty and income inequality levels remained high in 2010 – and much more marked than in Manaus –, the lesser impact of changes in labour income could be due to the poor having problems finding work. In addition, non-labour income may well have made a major contribution to poverty reduction there, but it is also rather bothersome to find that this type of income - non-labour income - appears to contribute less to poverty reduction in the rest of the state of Amazonas than in Brazil as a whole (where it contributes up to 61% with the poverty gap while only up to 54% in the rest of the state of Amazonas). This could be due in part to the problems that welfare programmes have reaching the poor living in remote areas of Amazonas state.

The FTZM's spillover effects on the rest of the state of Amazonas may still appear minor. Nevertheless the social and environmental situation would probably have been worse had the zone not existed. The Manaus region has been left relatively unscathed by deforestation. The Amazonas state, which covers 31% of the Amazonian territory, was responsible for just 4% of the deforestation from 2007 to 2013 (source: INPE – Instituto Nacional de Pesquisas Espaciais). This places Amazonas bottom of the list of Amazonian states responsible for deforestation and plant harvesting. These positive environmental outcomes are often associated with the attractiveness of the FTZM, which has concentrated the population and economic activity in the state capital (Rivas et al., 2012). Ecological arguments aside, the creation of the FTZM is also seen as a successful regional development strategy that has contributed to the spatial decentralisation of Brazilian industrial activities (Saboia and Kubrusly, 2015).

## **POLICY IMPLICATIONS**

The case of the FTZM shows that although “processing zones” have certain similarities, they are also based on specific national development strategies. Nowadays, the FTZM's main challenge is to guarantee that the positive effects that it has shown to have in the municipality of Manaus can continue and be extended to other parts of the Amazon region. This however may be a hard task<sup>6</sup> and will need the active role of government social programs. This policy brief highlights that poverty

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<sup>5</sup> These other income sources include different types of income that cannot be distinguished in the census data: public transfers (pensions and other social security benefits and welfare programmes), capital income (rents, interest and dividends) and other private remittances.

<sup>6</sup> The federal government's decision to prolong the advantages granted through to 2073 promises more good times ahead for the FTZM. Yet its economic success is uncertain considering the less propitious Brazilian environment today with its sluggish growth and strong social pressure.

could be rolled back in the Amazon region by improving the targeting of welfare policies and eventually encouraging training courses for the poor. On the one hand, the way social programs - including cash transfer programs such as Bolsa Familia - are targeted in isolated regions outside of Manaus needs to be improved, to allow social measures to more easily reach poor people in remote locations. On the other hand, training programs could be directed to the poorest of the poor, both in Manaus and in the rest of the region, in order to enhance their “employability” and to allow them to reap benefits from the good performance of the labour market around the FTZM.

## RESEARCH PARAMETERS

Data used in this research project come from the two latest censuses of 2000 and 2010, the Free Trade Zone of Manaus Authority (SUFRAMA), and the annual industrial survey (Pesquisa Industrial Anual, PIA) conducted by the Brazilian statistics institute (Instituto Brasileiro de Geografia e Estatística, IBGE). Two statistical decomposition methods were used to better understand the link between the economic dynamism of the FTZM and observed changes in poverty indicators. The first method - a Shapley-Shorrocks estimate of the standard Datt-Ravallion decomposition method - aimed at identifying the respective contributions of growth and redistribution in the temporal variation of poverty. The second decomposition method was applied in order to gauge which sources of income or household characteristics have been important in the poverty changes observed, that is the role of changes in demographics, employment, labour and non-labour income sources.

## FURTHER READINGS

### **This policy brief is based on:**

Castilho, M., Menéndez, M., and Sztulman, A. (2015). “Poverty and Inequality Dynamics in Manaus: Legacy of a Free Trade Zone?”. Document de travail DIAL, N°2015-18.

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## PROJECT IDENTITY

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<b>CONSORTIUM</b>	CDD The Ghana Center for Democratic Development – Accra, Ghana CDE Centre for Development Economics – Delhi, India CNRS (India Unit) Centre de Sciences Humaines – New Delhi, India CRES Consortium pour la Recherche Économique et Sociale – Dakar, Senegal GIGA German Institute of Global and Area Studies – Hamburg, Germany GRADE Grupo de Análisis para el Desarrollo – Lima, Peru IfW Kiel Institute for the World Economy – Kiel, Germany IRD Institut de Recherche pour le Développement – Paris, France ITESM Instituto Tecnológico y de Estudios Superiores de Monterrey – Monterrey, Mexico LISER Luxemburg Institute of Socio-Economic Research – Esch-sur-Alzette, Luxemburg OIKODROM - The Vienna Institute for Urban Sustainability – Vienna, Austria UA-CEE Université d'Antananarivo – Antananarivo, Madagascar UAM Universidad Autónoma de Madrid – Madrid, Spain UCHILE Universidad de Chile – Santiago de Chile, Chile UCT–SALDRU University of Cape Town – Cape Town, South Africa UFRJ Universidade Federal do Rio de Janeiro – Rio de Janeiro, Brazil UNAMUR Université de Namur – Namur, Belgium UOXF-CSAE University of Oxford, Centre for the Study of African Economies – Oxford, United Kingdom VASS Vietnamese Academy of Social Sciences – Hanoi, Vietnam
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