Distributional Impacts of Brazil's Tax Reform: scenarios regarding *Cesta Básica* exemption

Authors: Ricardo Vale, Gabriel Lara Ibarra, Eduardo Fleury, and Kajetan Trzcinski

- A consumption tax reform in Brazil has been recently approved by the House of Representatives, providing a full tax exemption for the yet undefined 'National Basic Basket' of goods (*cesta basica nacional*), alongside a cashback scheme that is yet to be determined.

- This note simulates the distributional impacts of different fiscally neutral scenarios of reduced rates and exemptions.

- We show that the exemption of taxes for food and personal care goods (such as those suggested by Law 10,925) would benefit the most vulnerable.

- Nonetheless, overall expenditures on certain items that are being considered for inclusion in the *cesta* are relatively concentrated on households in the top decile of the income distribution. Thus, a blanket exemption on *Cesta Basica* items may benefit the richest more in absolute terms.

- If the list of items in the exempted *Cesta Basica* is shortened and the equivalent resources of the potential forgone revenues are returned into a targeted cashback scheme, a far less regressive indirect tax system could be achieved.

- A scenario with a flat VAT rate and focalized cashback scheme that reimburses the entire VAT of the families registered in the Cadastro Unico yields a progressive indirect tax system in Brazil.

INTRODUCTION: THE CONSUMPTION TAX REFORM AND A NATIONAL BASIC BASKET FOR BRAZIL

A Proposal of Constitutional Amendment for the Brazilian Consumption Tax Reform has been recently approved by the National House of Representatives. On July 5, 2023, more than three-fifths of the Brazilian Congress voted for a new tax legislation (PEC45/2019) that establishes a dual value-added tax (VAT) system regulated only at the Federal level in place of the current complex system that mixes several charging modes and rules at different levels of the economic chain. Currently, indirect taxes can be applied on the circulation of goods, the provision of services, manufacturing, and corporate revenues. They can be (but aren't always) cumulative and are administered by the three levels of government in the country (federal, 27 members of the federation, 5,568 municipalities), which have their own overlapping rules. Under the current system, it is estimated that the total value of litigation around tax payments involving the federal government was equivalent to 15.9 percent of the GDP in 2019, far above the OECD median of 0.28 percent (INSPER, 2020, 2021).

The tax reform proposes a dual rate VAT system that should reduce the burden on essential services and may exempt a "National Basic Basket". The current version of the proposal sets the guidelines for the new tax system, but leaves open the precise definition of which goods and services will be exempted or will be taxed at a lower rate – these will still have to be determined by law. Before a final version of the reform is implemented, the PEC has yet to pass through the Senate, where it may undergo further amendments. Thus far, it is suggested that health, education, food, culture and public transport will be the main sectors to benefit from a 60 percent reduction on the standard rate, while the rest of the economy would be taxed evenly. Moreover, the law indicates that a *Cesta Básica Nacional* (National Basic Basket, also referred as *Cesta* or CB

henceforth) will be exempted of any tax. There still no clarity on what would in fact compose the *Cesta*, and interest groups are lobbying for more exemptions in their sectors and even for very specific items (Globo Rural, 2023; Estadao, 2023; Fecomercio, 2023). The distributional effects of the reform on the population will depend on the CB definition.

The concept of a basic consumption basket is well established in Brazil, but it has no clear legal effect for the new reform yet. At least since 1938, when the Commissions of the Minimum Wage were enacted, the Brazilian federal government has tried to define what is the basic set of items that a typical Brazilian consumes and that the government should facilitate the population's access to (Law 399/1938). Other definitions have been provided in state legislation, with most states defining a *Cesta Basica* for favorable treatment through reduced ICMS rates (e.g., in the State of Rio de Janeiro, Decree 32,161/2002). At the federal level, the most recent legislation that resembles a *Cesta Basica* definition is the list of food and hygiene items partially exempt of tax by Law 10,925[1]. In practice, however, the commonly used concept of *Cesta Basica* does not appear tied to an official definition, and can be a rather arbitrary set of consumption goods sold for donation purposes at markets, or a set of items that are used to monitor inflation (i.e. DIEESE's Cesta Basica Inflation Index and PROCON-SP's Cesta Basica Inflation Index).

SIMULATED SCENARIOS: ANALYZING CESTA BASICA'S TAX BURDEN

This note studies the distributional impacts of exempting a *Cesta Basica Nacional* of taxes, as well as alternative tax schemes. We compare between three simulated scenarios of potential tax systems that may result from the reform. Our calculations are built upon Lara Ibarra et al. (2021)'s simulation of the current tax system and VAT reforms on data from the national budget survey from 2017/2018 (POF 2017/2018). The POF contains detailed families' expenditure data, and the tax burden in the Status-Quo was estimated taking into account the cumulative nature of taxes across the supply chain based on IBGE's surveys of economic sectors. As our new baseline reform (scenario 0) a flat VAT rate is set to all goods and services at such a level as to replace the tax revenue under the current status quo. As shown in earlier work, a flat VAT set at the suitable level leads to a reduction in inequality[2]. In this exercise the estimated fiscal revenues are kept constant (Table 1). In addition, we simulate two scenarios that are intended to best replicate the forthcoming regulation: (1) incorporate the current proposal of having a reduced VAT for sectors that are considered to provide essential services to population (i.e., health and education), alongside a full exemption to *Cesta Basica Nacional*, which we define based on the current legislation (e.g.: Law 10,925); and (2) we explore an alternative definition of the list of items that would be exempted: the goods in the *Cesta* list whose expenditures by the top 10 percent of the income distribution is more than a half the sum of the bottom 40's expenditures are taxed at a reduced rate, while the rest of *Cesta* is fully exempted. Finally, we include a cashback scheme. The scheme is funded by the difference between the revenues collected when only a reduced set of *Cesta Basica* items are exempted, and the revenues collected when the full *Cesta* is tax exempt. The cashback returns part of the VAT paid by households who are registered in CadUnico[3].

The definition of the "short-list *Cesta*" attempts to identify and set a higher tax on items that are mostly consumed by the rich and leave basic consumption items fully exempted from VAT. Using POF data, we can estimate the share of each decile of the income distribution in the total expenditures per item. From the full

---

[1] Originally, Law 10,925/2004 was intended mainly to exempt agricultural inputs (fertilizers, pesticides, and other agricultural defensive) of PIS-PASEP and CONFINS contributions that incur over imports and domestic trade revenue, but today it serves mostly to define the exemptions on food and personal care consumption items.
[2] Kakwani Index falls from -0.132 to -0.093 (Lara Ibarra et al. 2021).
[3] Cadastro Unico or CadUnico is the Brazilian registry for Brazilian social programs. A family can register if its per capita income is less than a half the minimum wage.

Cesta, we identified items for which the expenditures by the top decile over the expenditure of the bottom 40 is more than 0.5 (Annex B). The reasoning behind this hypothetical scenario is that if these items are exempted of VAT, the benefits gathered by the top 10 percent are at least 50 percent as large as the ones given towards the entire bottom 40 percent – a situation that could contribute to the regressivity of the new VAT. With this in mind, the main items that remain fully exempted in scenario 2 are: rice, beans, flours, pasta, French bread, chicken, margarine, sugar, salt, and sanitary pads. While the reduced *Cesta* is estimated to increase tax revenue by only 2.9 percent, this money may be an important resource for a cashback scheme implementation.

Table 1. Hypothetical VAT tax scenarios for Brazil

Scenario	Taxes	Reduced by 60%	Exemption	Cashback	'Net' Revenue[4]
Status-Quo	Miscellaneous			No	50,273.88
0	Standard VAT	-		No	50,333.97
1	Standard VAT	Health, Education	Cesta Basica	No	50,260.82
2	Standard VAT	Health, Education, Cesta Basica Top 10	Short-list cesta	Yes	50,260.82

Notes: Simulations based VAT rates as estimated in Lara Ibarra et al. (2021) using POF 2017/2018 data. Values in BRL million at January 2018 prices (monthly basis). Results based on a partial equilibrium analysis that assumes cashback is not immediately consumed (and hence does not generate new revenue). Tax revenue in scenario 2 is estimated at BRL 51,711 million, but with a total cashback value of BRL 1,450 million per month, the government's 'net' revenue (revenue minus cashback given as transfers) is equivalent to the status quo. C*esta Basica* Top 10 includes all items that are part of CB and that are found to be consumed in much larger proportion by the top 10 households (see table 2)

Table 2. Exemption definitions

Exemption	Criteria
Cesta Basica	A full set of goods considered as basic consumption items by analogous legislation (e.g.: Law 10,925) or named in the current proposal are exempted (see Appendix A).
Short-list cesta	From the full list above, we remove all the items whose the consumption by the top decile of the income distribution is more than a half the bottom 40%'s consumption (Ratio TOP10/BOTTOM40 > 0.5, see Appendix B)

Notes: Own definition mostly based on Law 10,925 and the current text of the Proposed Constitutional Amendment approved by the House of Representatives of Brazil.

We analyze a cashback scheme that compensates the non-exemption of some items in the *cesta basica*. Using the *cesta basica* short-list definition, less revenue would be forgone at the at the expense the richest. At the same time, low barriers to the access of most essential food and care are preserved. The equivalent amount of money saved by taxing the rest of the *cesta basica* with a reduction of 60 percent of the standard rate can fund the cashback to vulnerable families say, for instance, those registered in the social registry (*Cadastro Unico*). The government could give back up to 41.2 percent of the taxes collected from *Cadastro Unico* families according to our estimates, resulting in an average BRL 116 monthly refund per family at current prices. Finally, it is important to mention that scenarios do not account for potential differences in administrative costs of implementation.

RESULTS

The results suggest that the reduction of tax rates on essential goods and services slightly reduces the share that the poorest pay in taxes. In scenario (1), the share of total taxes paid by households in the two lowest deciles decreases by approximately 0.3 percentage points (p.p.). At the top, the share increases by 1.6 pp, confirming that reductions on essential goods and services may generate a redistributive effect, yet they

---

[4] The tax revenue in our simulation is used only for illustrative purposes and how it would vary across scenarios. Data from POF has several limitations to calculate the actual tax revenue to be collected (see Lara Ibarra et al. 2021).

appear relatively low. Notably, these effects already account for the necessary increase in the VAT rate on non-exempted items in order to maintain the same total revenues from the VAT.

Meanwhile, a targeted cashback may be more effective to alleviate their burden and redistribute income. At the same fiscal cost as scenarios (0) and (1), if the government only exempts the items in a short-list (scenario 2), and instead applies the revenues from the non-exempt part of the *Cesta Basica* to a cashback for families in the *Cadastro Unico*, the share of the poorest decile in total taxes paid decreases by 1.0 pp with respect to scenario (0). Deciles 2 and 3 would benefit more due to their higher consumption, with their share in total taxes reduced by 1.4 pp and 1.1 pp respectively. This is in stark contrast to the 10th decile where the share in taxes would increase by 2.3 pp. Without any additional fiscal cost, a targeted cashback would be the most advantageous system for the vulnerable. Instead of paying 14.2 percent of the total taxes as in the baseline scenario, households in the bottom 40 percent would pay only 10.8 percent after the cashback.

Table 3: Share of the total indirect tax revenue paid by each income decile

Scenario	1	2	3	4	5	6	7	8	9	10
0. Standard VAT	2.2	3.1	4.0	4.9	6.2	7.1	8.8	11.1	15.6	36.9
1. Reductions by 60% and Cesta Basica exemption	1.9	2.8	3.8	4.7	6.0	6.8	8.7	11.1	15.6	38.6
2. Short Cesta and cashback	1.2	1.8	2.9	4.9	6.3	7.1	9.0	11.4	16.1	39.3

Notes: Own calculations based on Lara Ibarra et al. (2021) using POF 2017/2018. Deciles defined by per capita monetary income.

With the proper targeting, small increases in the proportional tax burden for families in the top deciles can translate to significant savings for the bottom three deciles. Even accounting for the necessary rate increase to maintain fiscal neutrality, relative to a flat VAT (0), by reducing the rates on essential services and making the full *Cesta Basica* exempt (1) the bottom decile would see a reduction in their VAT burden as a proportion of income by 8.4 pp (Figure 1). Moreover, all nine deciles would benefit, with the full cost directed to the top decile (0.5 pp increase in proportional VAT burden). Moving to a shorter *Cesta Basica* and a targeted cashback, the three bottom deciles would benefit even further, with a reduction 26.3 pp, 11.3 pp, and 6.6 pp in their tax burden as a proportion of income. Only the top four deciles would bear any cost, with the 10th decile paying 0.8 pp more in taxes relative to their income.

Figure 1. VAT as a proportion of income
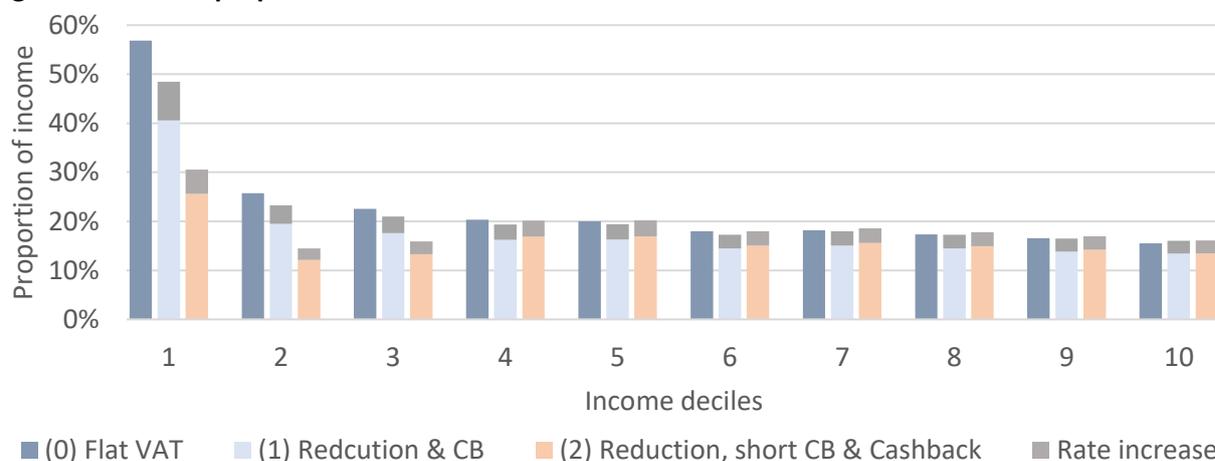
Notes: Own calculations based on Lara Ibarra et al. (2021) using POF 2017/2018. Deciles defined by per capita monetary income.

Indirect taxes may continue impacting negatively the most vulnerable in Brazil, but a better designed tax system may help to mitigate this issue.[5] Our results suggest that, even after the reform, indirect taxes would be *less* concentrated on the richest than total income is. In other words, keeping within the boundaries of the current legislative debate, consumption taxation in Brazil will continue to be relatively regressive (Figure 2). Regressivity holds even with exemptions to the *cesta basica*, as indicated by the Kakwani Index. Nonetheless, comparing across the different scenarios, limiting the list of items that are fully exempted and establishing a cashback comes closest to a neutral system with respect to income distribution.

Figure 2. The Kakwani progressivity index for the different tax designs
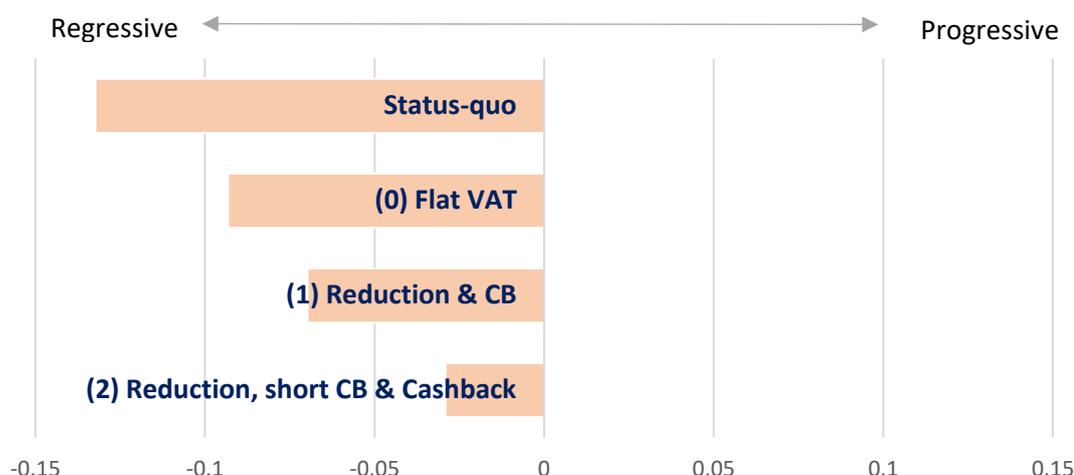
Notes: Own calculations based on Lara Ibarra et al. (2021) using POF 2017/2018. Concentration coefficients were ranked by monetary per capita income.

CAN A PROGRESSIVE INDIRECT TAX SYSTEM BE IMPLEMENTED?

What would be a more efficient way to redistribute the tax burden of the VAT away from vulnerable families? Brazil has limited room to decrease its fiscal revenue, but even within the constraints of fiscal neutrality a more progressive system is possible. Despite the distributional benefits each of the above scenarios brings relative to the Status-quo, reductions and exemptions are not the best tools for alleviating the tax burden of most vulnerable households. When the tax rate on particular goods and services are reduced all consumers of those items benefit, regardless of their material conditions. Even when selecting the "Short" *Cesta Basica*, intended to identify items which are concentrated among the most vulnerable consumers, the tax burden of the richest is reduced. Typically, VAT reductions and exemptions are costly it terms of forgone revenue and benefit the richest most in absolute terms, while reinvesting those revenues into targeted transfers is better at reducing poverty and inequality (Warwick et al. 2022). Thus, as an alternative, we simulate a different approach: a flat tax with a full cashback of VAT to families in the *Cadastro Unico*. Under this scenario distortions in the VAT are eliminated, and any fiscal cost of redistribution is targeted directly to the poorest households. Interestingly, this alternative may yield a lower VAT rate than scenarios (1) and (2), since the (fiscally) costly reductions and exemptions are removed.

---

[5] Brazilian poverty rates are particularly impacted by accounting consumption taxes. Lara Ibarra et al. (2023) estimate that an additional 6.2 percent of Brazilians are found in poverty after indirect taxes are subtracted from their disposable income.

The cashback appears to be the most effective mechanism for increasing the progressivity of the indirect tax system. A combination of reductions and a cashback is significantly less regressive than a system with reductions and exemptions alone (Figure 2). Thus, be eliminating any expensive reductions and investing fully in a cashback, a system that works better for the bottom deciles with a lower VAT is possible to imagine. Compared to a flat tax (Scenario 0), reimbursing the entirety of the VAT to families in the *Cadastro Unico* would only increase the VAT burden as a proportion of income for deciles four through ten by 1.6 to 1.2pp, while dramatically improving the material conditions of the households in the bottom three deciles (figure 3). This design of the cashback would recover more than half of the monetary income of the first decile, equivalent to an average transfer of R$ 318 (2017 prices) to each family in the *Cadastro Unico*. Furthermore, it is a design which is progressive (Kakwani Index of 0.037) with respect to the income distribution, without any additional fiscal cost to the Brazilian state.

Figure 3. VAT Taxes as a share of income under a flat VAT and a focused cashback scenario that yields the same net revenue, by income decile
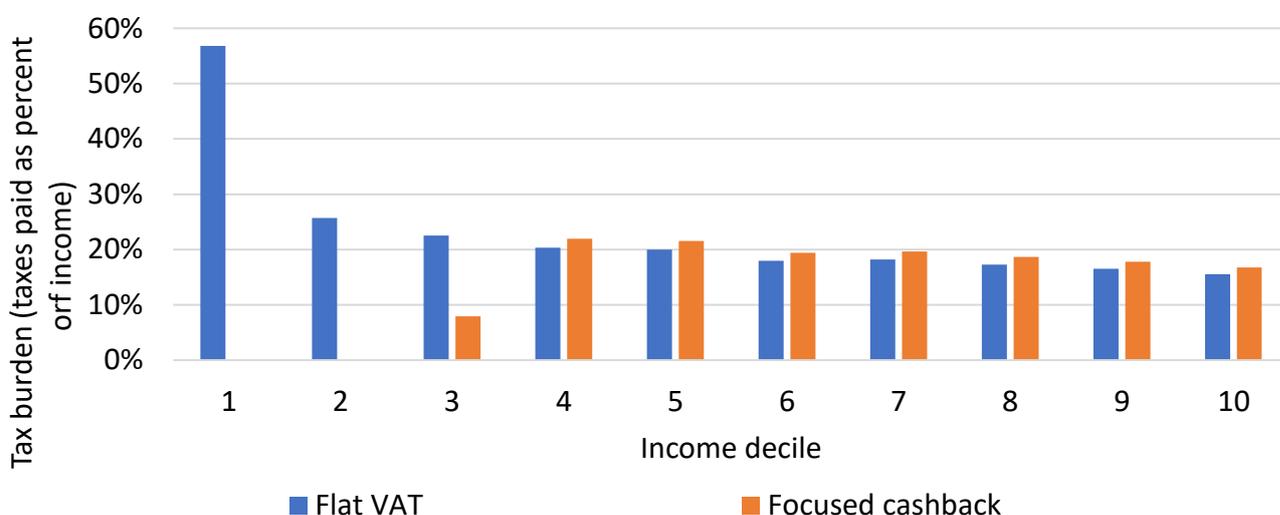
Notes: Own calculations based on Lara Ibarra et al. (2021) using POF 2017/2018. Deciles defined by per capita monetary income.

CONCLUSIONS

The new tax system design may be optimized in favor of the most vulnerable, even in the presence of strong fiscal constraints. While people in the poorest decile of the income distribution spend 20.4 percent of their expenditures on items that belong to what we call here the *Cesta Basica*, people in the top decile spend only 6.7 percent. Supporters of redistributive policies may be sympathetic to the idea of exempting a big list of items classified for basic consumption of Brazilian citizens. However, given the fiscal constraints posed for a government, it is not advisable to set exemptions on a broad set of items. Despite the share of the *Cesta* being higher in the bottom decile's consumption, the *absolute volume of expenditures* of the rich is much bigger. Thus, instead of adopting blanket exemptions that may disproportionately benefit the rich, the GoB may consider implementing a more redistributive solution that can direct resources to the poor. A more concise *Cesta Basica Nacional* exempted of any VAT may provide the means to decrease the prices to access essential goods, and at the same time it can open fiscal space for more effectively redistributive policies.

REFERENCES

Estadão. 2023. "Reforma tributária: associação de supermercados sugere 38 itens da cesta básica para terem isenção". Written by Talita Nascimento. https://www.estadao.com.br/economia/pec-45-reforma-tributaria-supermercados-cesta-basica-lista-para-isencao-nprei/

Fecomercio. 2023. "Reforma Tributária: FecomercioSP e sindicatos vão intensificar atuação no Senado em defesa dos setores de serviços e comércio". https://www.fecomercio.com.br/noticia/reforma-tributaria-fecomerciosp-e-sindicatos-vao-intensificar-atuacao-no-senado-em-defesa-dos-setores-de-servicos-e-comercio

Globo Rural. 2023. "Veja 12 pontos da reforma tributária que o agro quer mudar no Senado". Written by Rafael Walendorff. Brasília-DF, Brasil. https://globorural.globo.com/noticia/2023/08/veja-12-pontos-da-reforma-tributria-que-o-agro-quer-mudar-no-senado.ghtml

Lara Ibarra, Gabriel; Rubiao, Rafael Macedo; Fleury, Eduardo. 2021. "Indirect Tax Incidence in Brazil : Assessing the Distributional Effects of Potential Tax Reforms". Policy Research Working Paper; No. 9891. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/36783 License: CC BY 3.0 IGO.

Insper, Núcleo de Tributação do. 2021. "Contencioso Tributário no Brasil. Relatório 2020, ano de referência 2019". São Paulo, jan. 2021. Available at: https://www.insper.edu.br/wp-content/uploads/2021/01/Contencioso_tributario_relatorio2020_vf10.pdf.

Insper, Núcleo de Tributação do . 2020. "Contencioso Tributário no Brasil. Relatório 2019, ano de referência 2018". São Paulo, jul. 2020. Available at: https://www.insper.edu.br/wp-content/uploads/2020/07/Contencioso_tributario_Relatorio2019_092020_v2.pdf

Warwick, Ross, et al. 2022. "The redistributive power of cash transfers vs VAT exemptions: A multi-country study." World Development, 151, 105742. Available at: https://ifs.org.uk/journals/redistributive-power-cash-transfers-vs-vat-exemptions-multi-country-study

World Bank. 2023. "Food Insecurity and Food Inflation in Brazil". Washington DC. https://www.worldbank.org/en/country/brazil/publication/brazil-food-insecurity-and-food-inflation

APPENDIX A. GOODS LISTED FOR THE POTENTIAL BASIC BASKET DEFINITION

	Item	Observations:	Number of items in POF registry
Food	Coffee and mate tea	Includes coffee and mate tea, from raw to packaged (e.g.: Coffee powder, soluble coffee, coffee capsule)	25
	Rice	Varieties of raw rice	50
	Beans	Varieties of raw rice	208
	Flours	Varieties of flours for cooking	124
	Pasta	Mostly composed of wheat pasta, but also includes manioc and oats pasta.	83
	French bread and similar	Includes baked bread in general that are freshly made in Brazilian bakeries	49
	Eggs	Raw eggs	11
	Chicken meat	Raw chicken meat in general	99
	Poultry meat (except chicken)	Raw poultry meat in general, except for chicken	69
	Beef	Raw beef meat in general	210
	Pork	Raw pork meat in general	70
	Goat and Sheep Meat	Raw goat and sheep meat in general	19
	Fish	Raw fish meat in general	1,717
	Other seafood	Includes raw marine food in general (e.g.: crab, lobster, squid, octopus, turtle)	118
	Dairy	Includes raw, fresh milk but also powder, skimmed, and long-life milk.	78
	Cheese	Varieties of cheese.	137
	Dairy Beverages	Includes dairy processed beverages (e.g.: yogurt, curd, vitamins)	93
	Dairy Products (other)	Other dairy (e.g.: Cream, condensed milk, whipped cream)	42
	Butter		15
	Lard and animal oils	Varieties of animal oil that can be used in the cooking process.	11
	Margarine		33
	Vegetable oils	Varieties of vegetable oil that can be used in the cooking process	54
	Fruits	All types of fruits registered in POF	606
	Vegetables	All types of vegetables registered in POF	437
	Sugar		31
	Salt		13
Hygiene and personal care	Soap		8
	Toothpaste		5
	Oral hygiene others	Includes toothbrush, dental floss and antiseptic mouthwash varieties.	7
	Toilet paper		1
	Sanitary pad		3

Notes: Own defined list and items identified in POF based on Law 10,925 and the tax reform text (PEC 45/2019).

APPENDIX B. DECILE SHARE (%) IN THE NATIONAL EXPENDITURE ON AN ITEM AND TOP 10-BOTTOM 40 RATIOS

Item	1	2	3	4	5	6	7	8	9	10	Ratio T10 / B40
Coffee and mate	6.1	6.6	7.4	8.6	8.8	10.8	11.0	10.8	13.2	16.6	0.6
Rice	9.9	9.7	10.0	10.5	10.8	11.0	9.9	9.2	10.9	8.1	0.2
Beans	9.1	8.9	9.6	10.1	9.6	11.8	10.0	9.7	11.3	9.9	0.3
Flours	9.6	10.4	9.3	9.1	9.5	11.0	9.5	8.8	10.9	11.9	0.3
Pasta	7.6	9.4	12.3	10.8	8.7	10.4	9.2	10.0	11.2	10.4	0.3
French bread and similar	6.1	7.5	8.7	9.7	10.4	10.4	11.0	11.4	12.4	12.5	0.4
Eggs	5.7	7.3	7.5	8.4	8.6	9.4	10.0	10.4	13.7	18.9	0.7
Chicken meat	7.9	8.5	9.1	9.5	9.9	10.5	9.9	9.9	11.5	13.2	0.4
Poultry meat (except chicken)	1.0	3.4	3.3	5.5	3.9	4.6	7.6	10.5	20.6	39.6	3.0
Beef	4.1	5.3	6.0	6.7	8.0	10.0	10.9	12.9	15.7	20.4	0.9
Pork	4.5	6.5	6.7	8.6	9.6	10.9	11.8	13.8	12.6	15.0	0.6
Goat and Sheep Meat	5.2	8.2	6.9	12.6	7.7	16.4	11.0	9.5	9.8	12.6	0.4
Fish	7.6	7.6	7.6	6.7	9.5	9.3	9.2	10.4	12.1	20.0	0.7
Other fished meat	4.6	3.9	3.9	5.4	7.3	5.9	9.2	14.9	14.3	30.4	1.7
Dairy	5.2	7.2	8.1	7.9	10.0	10.1	10.6	11.5	13.8	15.6	0.5
Cheese	1.6	2.4	3.4	4.4	6.4	7.2	8.6	12.0	20.6	33.3	2.8
Dairy Beverages	3.0	3.6	5.1	6.0	7.6	8.1	10.1	11.2	17.1	28.2	1.6
Dairy Products (other)	2.0	4.6	4.8	7.0	9.5	9.2	11.1	12.6	16.4	22.7	1.2
Butter	2.6	2.4	3.3	3.5	5.1	5.9	7.8	10.5	16.2	42.8	3.6
Lard and animal oils	2.1	5.7	5.6	7.4	13.4	13.1	12.7	13.1	15.0	11.8	0.6
Margarine	6.1	8.4	8.8	9.0	10.3	10.0	11.2	11.9	13.4	10.9	0.3
Vegetable oils	5.7	6.2	6.7	7.4	8.2	9.8	10.2	10.3	15.0	20.4	0.8
Fruits	2.9	4.0	4.6	5.8	7.0	9.2	9.2	12.2	17.4	27.7	1.6
Vegetables	3.7	5.2	5.8	6.6	7.9	9.7	9.9	11.3	15.3	24.5	1.1
Sugar	8.9	9.1	9.5	10.2	10.0	11.9	10.1	9.8	10.9	9.7	0.3
Salt	6.9	7.7	7.8	9.1	9.2	11.2	12.0	10.8	12.6	12.7	0.4
Soap	4.9	6.6	7.6	8.0	9.3	10.1	11.0	12.2	13.7	16.6	0.6
Toothpaste	5.6	7.0	8.1	8.8	9.5	10.3	11.2	11.7	13.0	14.9	0.5
Oral hygiene others	4.8	5.3	7.0	7.6	9.2	8.9	11.0	13.0	14.1	19.2	0.8
Toilet paper	3.4	4.6	6.0	6.0	8.4	9.3	10.8	11.9	17.8	21.8	1.1
Sanitary pad	8.0	9.3	9.8	9.5	10.5	8.4	10.1	10.7	12.2	11.5	0.3

Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income.

APPENDIX C1. AVERAGE SHARE (%) OF AN ITEM IN FAMILY'S TAXABLE MONETARY EXPENDITURES BY DECILE OF THE INCOME DISTRIBUTION

Item	1	2	3	4	5	6	7	8	9	10	Overall
Coffee and mate	1.0	0.7	0.7	0.7	0.6	0.7	0.5	0.4	0.4	0.3	0.6
Rice	1.6	1.2	0.9	0.8	0.7	0.7	0.5	0.4	0.3	0.2	0.7
Beans	0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.3
Flours	1.0	0.8	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.4
Pasta	0.6	0.5	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.3
French bread and similar	1.9	1.7	1.5	1.4	1.3	1.2	0.9	0.8	0.7	0.4	1.1
Eggs	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3
Chicken meat	2.6	2.0	1.7	1.5	1.3	1.3	1.0	0.8	0.7	0.4	1.2
Poultry meat (except chicken)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beef	2.0	2.0	1.8	1.8	1.8	2.0	1.7	1.6	1.5	1.1	1.7
Pork	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.3	0.2	0.4
Goat and Sheep Meat	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fish	0.8	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.4
Other fish meat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dairy	1.3	1.2	1.1	1.0	0.9	1.0	0.8	0.7	0.7	0.4	0.9
Cheese	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3
Dairy Beverages	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Dairy Products (other)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Butter	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Lard and animal oils	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Margarine	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1
Vegetable oils	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
Fruits	0.8	0.9	0.8	0.8	0.8	1.1	0.8	0.9	0.9	0.8	0.9
Vegetables	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.7
Sugar	0.7	0.5	0.4	0.4	0.3	0.4	0.2	0.2	0.2	0.1	0.3
Salt	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Food	**18.1**	**15.5**	**13.7**	**12.7**	**11.8**	**12.5**	**10.1**	**9.1**	**8.5**	**6.1**	**11.3**
Soap	0.8	0.7	0.7	0.6	0.5	0.6	0.5	0.4	0.3	0.2	0.5
Toothpaste	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.3
Oral hygiene others	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Toilet paper	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Sanitary pads	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2
Total Personal Care	**2.3**	**2.0**	**1.8**	**1.5**	**1.4**	**1.3**	**1.2**	**1.1**	**0.9**	**0.6**	**1.4**
Total Basic Basket	**20.4**	**17.5**	**15.5**	**14.2**	**13.2**	**13.9**	**11.3**	**10.1**	**9.4**	**6.7**	**12.7**

Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income. Cells show the average share that households in each decile spend in the item listed in the row, out of their total expenditure.

APPENDIX C2. AVERAGE SHARE (%) OF AN ITEM IN FAMILY'S BASIC BASKET TAXABLE MONETARY EXPENDITURES BY DECILE OF THE INCOME DISTRIBUTION

| Item	1	2	3	4	5	6	7	8	9	10	Overall
Coffee and mate	4.8	4.3	4.4	4.6	4.6	5.1	4.5	4.4	4.6	4.2	4.6
Rice	8.0	6.8	6.1	5.8	5.4	5.0	4.6	4.0	3.7	2.2	5.4
Beans	3.1	2.6	2.3	2.4	2.1	2.4	1.9	1.7	1.5	1.2	2.2
Flours	4.8	4.3	3.8	3.4	3.0	3.2	2.7	2.3	2.3	2.1	3.3
Pasta	2.8	2.7	3.6	2.7	2.2	2.3	2.1	2.0	1.9	1.4	2.4
French bread and similar	9.5	9.9	9.8	9.9	9.5	8.4	8.4	7.8	7.1	5.5	8.7
Eggs	2.7	2.7	2.5	2.5	2.6	2.2	2.4	2.3	2.1	2.5	2.5
Chicken meat	13.0	11.7	11.1	10.8	9.9	9.4	8.8	7.5	7.5	6.2	9.9
Poultry meat (except chicken)	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.7	0.2
Beef	9.9	11.2	11.7	12.3	13.3	14.3	15.1	16.2	16.2	16.2	13.4
Pork	2.3	2.9	2.7	3.3	3.1	3.3	3.4	3.6	2.7	2.3	3.0
Goat and Sheep Meat	0.2	0.2	0.3	0.4	0.3	0.4	0.2	0.2	0.2	0.1	0.3
Fish	3.7	3.2	3.1	2.7	3.2	2.9	2.6	2.6	2.6	3.1	3.0
Other fish meat	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1
Dairy	6.6	7.0	7.3	6.9	7.0	7.1	7.1	6.9	7.0	6.0	6.9
Cheese	0.8	1.0	1.5	1.8	2.3	2.4	2.8	3.6	4.7	6.3	2.5
Dairy Beverages	0.8	0.9	1.0	1.1	1.3	1.1	1.5	1.6	1.9	2.7	1.3
Dairy Products (other)	0.3	0.6	0.5	0.8	0.9	0.7	1.0	1.0	1.1	1.2	0.8
Butter	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.7	0.7	1.6	0.5
Lard and animal oils	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Margarine	1.0	1.1	1.0	1.1	1.0	0.9	1.0	1.0	0.9	0.7	1.0
Vegetable oils	2.5	2.2	2.1	2.2	2.1	2.3	2.4	2.2	2.6	2.7	2.3
Fruits	3.8	4.9	5.2	5.8	6.3	7.6	7.3	8.7	9.7	12.2	6.8
Vegetables	4.1	4.9	5.0	5.3	5.7	6.0	6.3	6.4	6.5	8.0	5.7
Sugar	3.2	2.7	2.4	2.6	2.3	2.6	2.1	1.9	1.7	1.2	2.4
Salt	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
Total Food	**88.6**	**88.5**	**88.4**	**89.3**	**89.1**	**90.3**	**89.4**	**89.2**	**90.1**	**90.7**	**89.3**
Soap	4.0	4.2	4.3	4.0	4.0	4.1	4.1	4.2	3.7	3.4	4.0
Toothpaste	2.9	3.0	2.9	2.7	2.7	2.5	2.5	2.4	2.2	1.9	2.6
Oral hygiene others	0.9	0.8	0.9	0.9	1.0	0.7	0.9	1.0	0.9	0.9	0.9
Toilet paper	1.0	1.3	1.5	1.5	1.6	1.6	1.9	2.1	2.2	2.4	1.7
Sanitary pad	2.5	2.2	1.9	1.7	1.5	0.8	1.1	1.1	0.9	0.8	1.5
Total Personal Care	**11.4**	**11.5**	**11.6**	**10.7**	**10.9**	**9.7**	**10.6**	**10.8**	**9.9**	**9.3**	**10.7**
Total Basic Basket	100.0	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income.

APPENDIX D1. SHARE OF THE TOTAL INDIRECT TAX REVENUE PAID

Scenario	Income decile										Total
	1	2	3	4	5	6	7	8	9	10	
(0) Flat VAT	2	3	4	5	6	7	9	11	16	37	100
(1) Reduction & CB	2	3	4	5	6	7	9	11	16	39	100
(2) Reduction, short CB & Cashback	1	2	3	5	6	7	9	11	16	39	100
(3) Focused cashback	-	-	2	5	7	8	10	12	17	40	100

Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income.

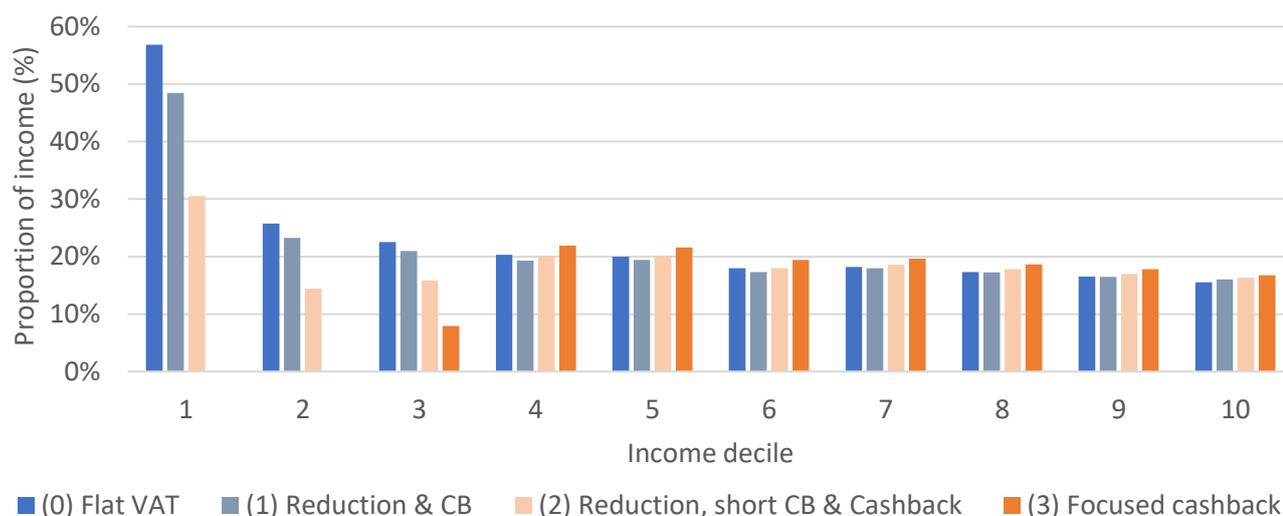## FIGURE D1. SHARE OF THE TOTAL INDIRECT TAX REVENUE PAID BY EACH INCOME DECILE
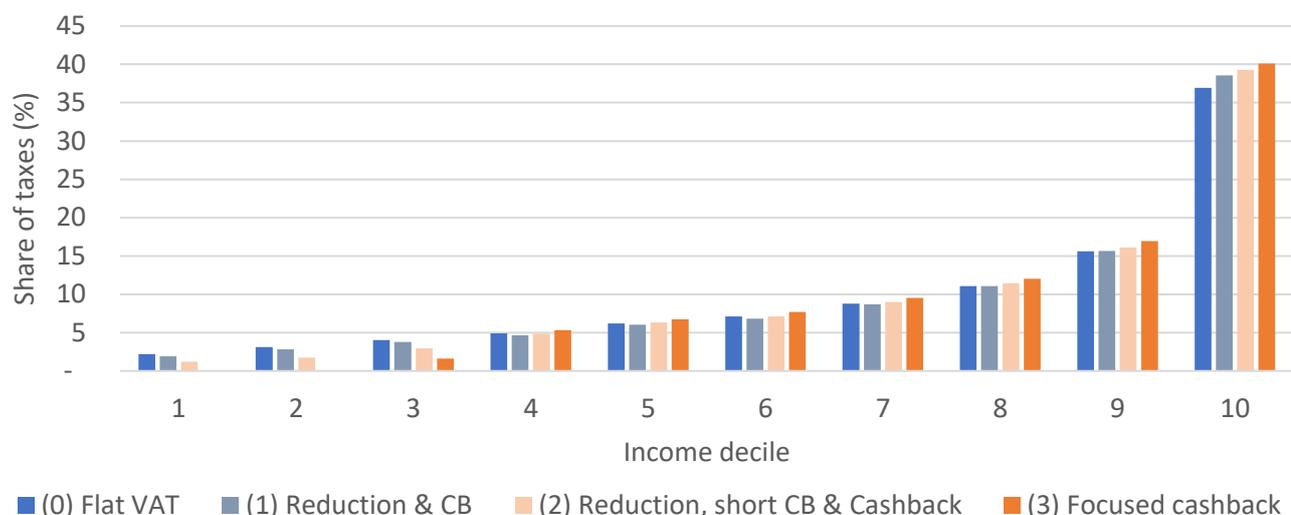
Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income.

APPENDIX D2. VAT AS A PROPORTION OF INCOME (%)

Scenario	Income decile									
	1	2	3	4	5	6	7	8	9	10
(0) Flat VAT	57%	26%	23%	20%	20%	18%	18%	17%	17%	16%
(1) Reduction & CB	48%	23%	21%	19%	19%	17%	18%	17%	16%	16%
(2) Reduction, short CB & Cashback	31%	14%	16%	20%	20%	18%	19%	18%	17%	16%
(3) Focused cashback	0%	0%	8%	22%	22%	19%	20%	19%	18%	17%

Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income.

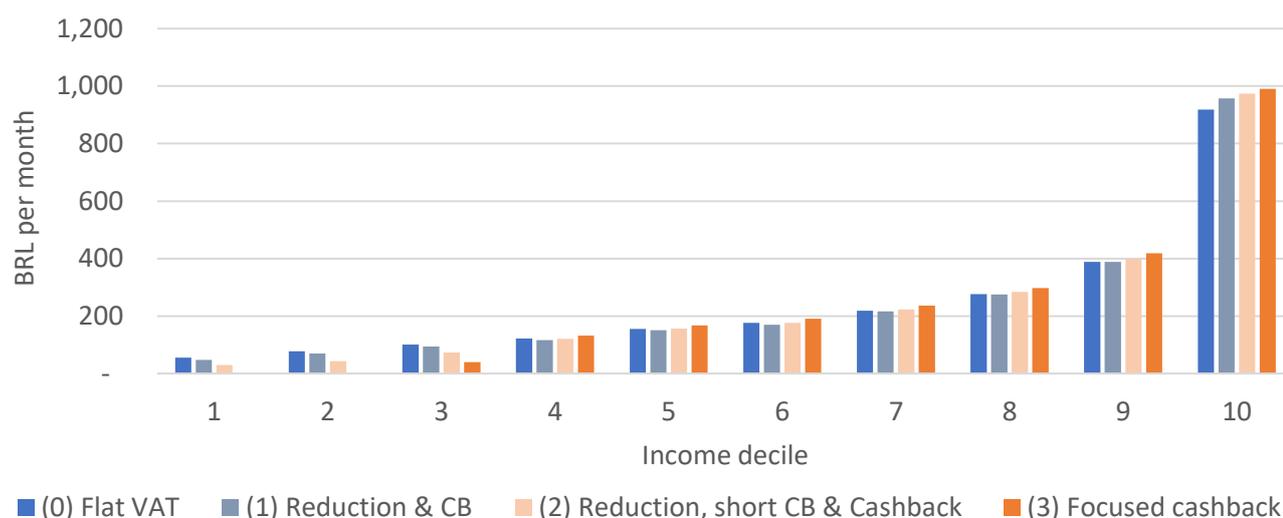## FIGURE D2. VAT AS A PROPORTION OF INCOME (%)

Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income.

APPENDIX D3. AVERAGE VAT PER CAPITA, BRL PER MONTH

Scenario	Income decile									
	1	2	3	4	5	6	7	8	9	10
(0) Flat VAT	55	77	101	122	155	177	219	276	388	918
(1) Reduction & CB	48	70	94	116	150	170	216	275	388	958
(2) Reduction, short CB & Cashback	30	43	73	121	156	177	223	284	399	974
(3) Focused cashback	-	-	40	132	167	191	236	297	419	990

Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income. All values in 2017 prices.

FIGURE D3. AVERAGE VAT PER CAPITA, BRL PER MONTH

Notes: Own calculations based on POF 2017/2018. Deciles defined by per capita monetary income. All values in 2017 prices.