

Is the Poverty of the Country a Consequence of the Structure of the Mexican Economy?

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Abstract

As has been observed for decades, poverty alleviation programs have not ended this generational social debt. Isolated policies such as the per capita wage increase sound attractive but do not greatly benefit households with incomes below the minimum welfare line. Also, the most powerful industry in this country is the manufacture of petroleum and coal products, it does not help solve the increase in the number of people living in poverty. It is the wholesale trade in groceries and food that impacts both on the change in the poverty index and on its depth and intensity. This explains how households with incomes between the first and fifth decile of income remain within the informal trade.

Keywords: Social accounting matrix; Decomposition of multipliers; Poverty index

Introduction

The concepts and opinions expressed in this document represent only the point of view of the authors; Do not necessarily reflect the vision of the institution to which they belong. Much has been said about poverty in Mexico and its causes, but for many years we have been in recurrent crises that do not allow for its decline [1-3]. The objective of this paper is to present the multiplier decomposition method [4,5] applied to a social accounting matrix (SAM-MX120 [6,7] built for 2012 and to focus it on the analysis of poverty alleviation using the Foster-Greer-Thorbecke index [8]. The SAM-MX12 is based on the Mexican System of National Accounts (SCNM-MX) and includes the input-output matrix (IOT-MX12) as intermediate consumption [6,9] and the tariff databases were coupled with the North America Industrial Classification System, NAICS 2007 code [10-12].

More information on the construction of SAM can be found in the previous papers [13,14].

In the Official Journal of the Federation dated 16 of 2010, the general guidelines and criteria for the definition, identification and measurement of poverty are established. National Council for Evaluation of Social Development Policy (CONEVAL) defines that a person is in multidimensional poverty when he is not guaranteed the exercise of at least one of his rights for social development, and if his income is insufficient to acquire the goods and services that he needs to satisfy his needs. Regarding economic well-being, only per capita current income is taken into account. While social rights are used for social rights related to education, health, social security, food, housing and services [15]. Here the economic welfare line will be taken and as the upper limit the welfare line denoted as \bar{z} , and if it is the minimum welfare line will be z .

Brief State of the Art

Thorbecke and Jung [8] apply the poverty indicator proposed by Foster-Greer-Thorbecke to Indonesia's economy with 76 economic sectors including 23 categories for rural and urban areas. Households are subdivided into eight groups depending on their average income and companies linked to 24 productive activities. Kim [16] does the same for South Africa by distinguishing between sex and skilled and unskilled workers. It uses the same social accounting matrix structure

proposed by Defourny and Thorbecke in 1984 [5]. For both analyzes, it was necessary to have additional information on elasticities for rural and urban areas of poverty for different groups of employees in different sectors.

During the 50s, Antonio Ortiz Mena [1] argued that resolving the situation of the lower income population, especially in rural areas, was crucial for the true stabilizing development of the Nation. Many decades of this have passed and this inequality still persists and the gap between the poor and the rich has widened. Taking the historical data and definitions of poverty in the different periods, the following graphs, Figures 1a-1c which show what has been said [2].

Alcides Lasa and Deuda [3] points out that over time the national real wage index or simply the real wage shows the increase in poverty. Resuming what indicated in ref. [2] calculates the current equivalent salary with Instituto Nacional de Estadística y Geografía (National Institute of Statistic and Geography, INEGI) data of the minimum wage of 1935-2015, Figure 2 shows that the minimum wage in 1938 was higher than the current one and that controlled inflation is not determinant in the wage increase.

The false wage increase during Luis Echeverría's tenure with uncontrolled inflation led to a brutal decline in purchasing power over the next four years. But before Echeverría, the wage increase by presidential decree had worked during the mandates of Adolfo López Mateos and Gustavo Díaz Ordaz with controlled inflation, 2b. That is, if inflation is not controlled, the wage increase is risky because it depends on many other factors such as the production of crude oil and its derivatives, the domestic market, the interest rate, the trade balance and the peso-dollar exchange rate. All this impacts on what Mexicans are

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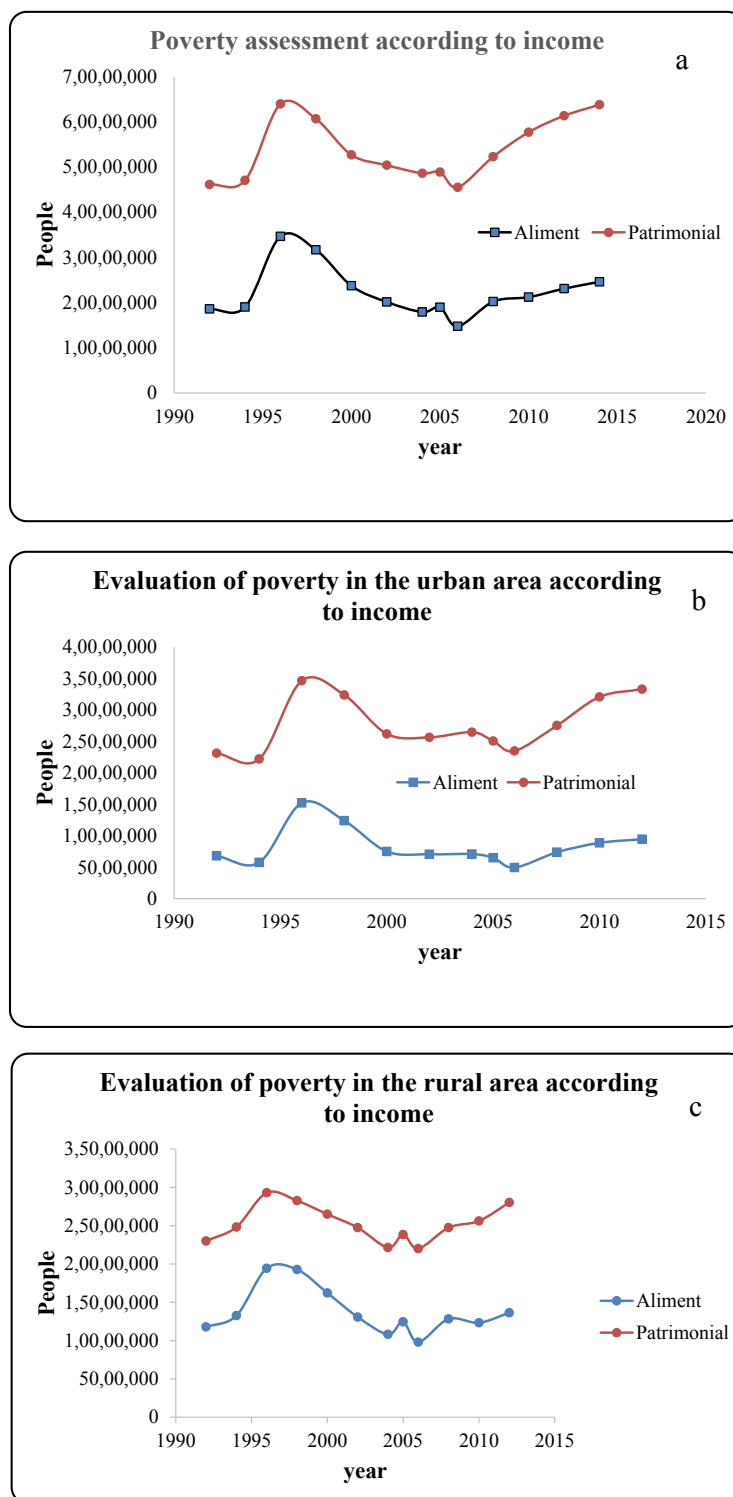


Figure 1: Line of food poverty (line of minimum welfare) and patrimonial (economic welfare line from 2014) from 1992 to 2012. a) Population, b) in urban areas and c) in rural areas.

looking for, a well-paid and long-term job. It is required that employment through SMEs is generated, for it requires entrepreneurs and trained people. This leads us to the other poverty or social deficiencies that are not taken into account in the present work for 2012, the percentages of

the population with educational lag by decile are: I (34.3), II (29.5), III (25.3), IV (22.1), V (20.1), VI (17.9), VII (16.0), VIII (13.2), IX (9.4) and X (4.6). These percentages are high, so the problem of poverty must study these other aspects, which is open to further research.

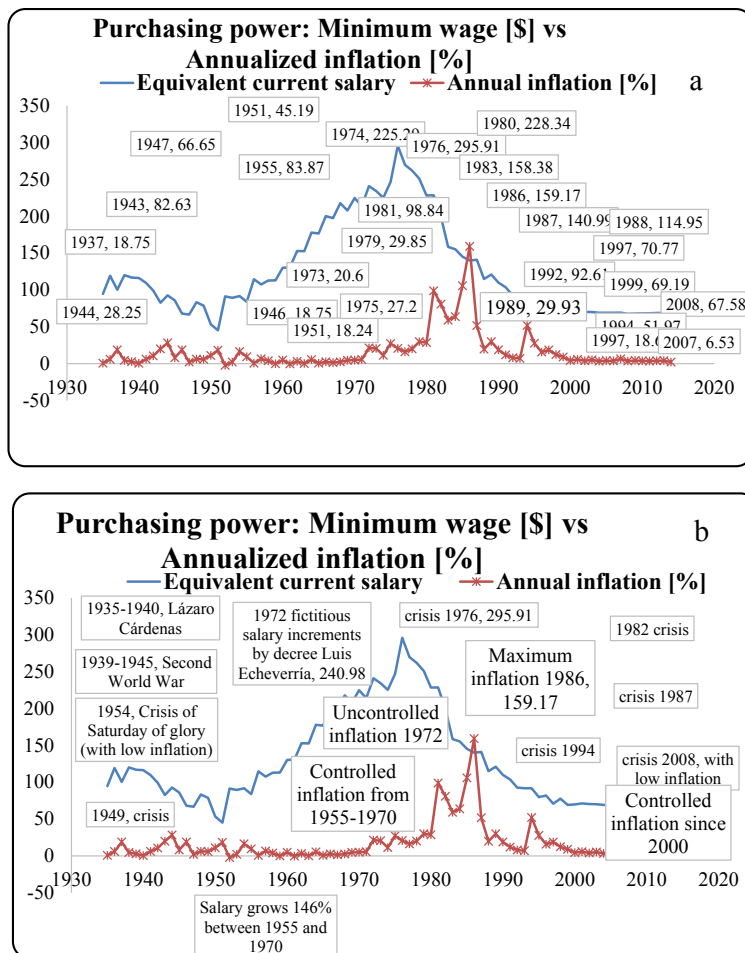


Figure 2: Historical minimum wage and annual inflation 1934-2012: a) Inflation and minimum wage data and, b) Historical facts.

Methodology

The economic conceptual framework is described in Figure 3a and, starting from a social accounting matrix (SAM-MX12) where the money flows from the columns and arrive at rows is constructed in the form of Defourny and Thorbecke [4,17,18] (Figure 3b). Figure 3c schematizes the multiplier effect between endogenous accounts of SAM-MX12. When it comes to households, the distribution will be in terms of income or expenditure, according to the direction of flow. The distribution by deciles of both income and expenditure of the Survey of Household income and expenditure (ENIGH-12) that were adjusted to SCNM.

X_1 is the final exogenous demand for government consumption factors, exports and investment demand:

$$A_{13}X_1$$

X_2 is the exogenous injection from government transfers and remittances abroad:

$$(\mathbb{I} - A_{22})^{-1}X_2$$

X_3 is the final exogenous demand for government consumption, exports and investment demand:

$$(\mathbb{I} - A_{33})^{-1}X_3$$

Subsequently, normalizing by columns and renaming sub-matrices as:

$$y_1 = A_{13}y_3 + x_1$$

$$y_2 = A_{21}y_1 + A_{22}y_2 + x_2$$

$$y_3 = 0 + A_{22}y_2 + A_{33}y_3 + x_3$$

$$A_n = \begin{bmatrix} 0 & 0 & A_{13} \\ A_{21} & A_{22} & 0 \\ 0 & A_{32} & A_{33} \end{bmatrix}$$

$$Y_n = A_n Y_n + X$$

$$Y_n = (\mathbb{I} - A_n)^{-1} X$$

$$Y_n = M_n X$$

$$y_1 = A_{13}y_3 + x_1$$

Solving the system

$$y_1 = A_{13}y_3 + x_1$$

$$y_2 = (\mathbb{I} - A_{22})^{-1} A_{21} y_1 + (\mathbb{I} - A_{22})^{-1} x_2$$

$$y_3 = (\mathbb{I} - A_{33})^{-1} A_{32} y_2 + (\mathbb{I} - A_{33})^{-1} x_3$$

$$\begin{bmatrix} y_1 \\ y_2 \\ y_3 \end{bmatrix} = \begin{bmatrix} 0 & 0 & A_{13} \\ (\mathbb{I} - A_{22})^{-1} A_{21} & 0 & 0 \\ 0 & (\mathbb{I} - A_{33})^{-1} A_{32} & 0 \end{bmatrix} \begin{bmatrix} y_1 \\ y_2 \\ y_3 \end{bmatrix} + \begin{bmatrix} 1 & 0 & 0 \\ 0 & (\mathbb{I} - A_{22})^{-1} & 0 \\ 0 & 0 & (\mathbb{I} - A_{33})^{-1} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix}$$

$$\mathbb{A}_I = \begin{bmatrix} 0 & 0 & A_{13} \\ (\mathbb{I} - A_{22})^{-1} A_{21} & 0 & 0 \\ 0 & (\mathbb{I} - A_{33})^{-1} A_{32} & 0 \end{bmatrix}$$

$$\mathbb{A}_{II} = \begin{bmatrix} 1 & 0 & 0 \\ 0 & (\mathbb{I} - A_{22})^{-1} & 0 \\ 0 & 0 & (\mathbb{I} - A_{33})^{-1} \end{bmatrix}$$

$$Y_n = \mathbb{A}_{In} Y_n + \mathbb{A}_{IIn} X$$

$$Y_n = (\mathbb{I} - \mathbb{A}_{In})^{-1} \mathbb{A}_{IIn} X$$

$$Y_n = \mathbb{M}_n^* X$$

If one works with the marginal propensities to the expense or consumption and follows the same procedure it is gotten to substitute

$$\mathbb{A}_n \rightarrow \mathbb{C}_n,$$

$$\mathbb{C}_n = \begin{bmatrix} \mathbb{A}_n & X \\ L & t \\ 1 & 1 \end{bmatrix} = \begin{bmatrix} c_{11} = \frac{S_{11}}{S_{11}} & \dots & c_{1n} = \frac{S_{1n}}{S_{1n}} \\ \vdots & \ddots & \vdots \\ c_{n1} = \frac{S_{n1}}{S_{n1}} & \dots & c_{nm} = \frac{S_{nm}}{S_{nm}} \\ 1 & \dots & 1 \end{bmatrix}, S_{ij} \text{ elements of SAM - MX12,}$$

$$S_{ij} = \sum_{i=1}^n S_{ij}, j = 1, \dots, n$$

$$dY_n = \mathbb{C}_n dY + dX = (\mathbb{I} - \mathbb{C}_n)^{-1} dX = \mathbb{M}_C dX$$

$$\mathbb{M}_C = \mathbb{R}\mathbb{D};$$

\mathbb{R} is distribution effect y \mathbb{D} is interdependence effect

Rearranging terms

$$\mathbb{D} = (\mathbb{I} - C_{22})^{-1} C_{21} C_{13} (\mathbb{I} - C_{33})^{-1} = \mathbb{D}_3 \mathbb{D}_2 \mathbb{D}_1;$$

$$\mathbb{D}_1 = (\mathbb{I} - C_{33})^{-1} \text{ intersectoral production effect,}$$

$$\mathbb{D}_2 = C_{21} C_{13} \text{ direct distributional effects,}$$

$$\mathbb{D}_3 = (\mathbb{I} - C_{22})^{-1} \text{ Transfer effects}$$

$$\mathbb{R} = [\mathbb{I} + (\mathbb{I} - C_{22})^{-1} C_{21} C_{13} (\mathbb{I} - C_{33})^{-1} C_{32}]^{-1} = [\mathbb{I} + \mathbb{D}\mathbb{E}]^{-1}$$

$$\mathbb{E} = C_{32}$$

$$\mathbb{M}_{C23} = \mathbb{R}\mathbb{D} = [\mathbb{I} + \mathbb{D}\mathbb{E}]^{-1} \mathbb{D}$$

The Foster-Green-Thorbecke index, Pa, is well known [8,9] and serves to analyze poverty. If $\alpha=0$ is known as counting. For $\alpha=1$ as the poverty gap and $\alpha=2$ sensitivity. The sensitivity of poverty is determined by the elasticity of the selected poverty measure with respect to the median income by the various groups of households and their rates of growth.

$$dP_{\alpha ij} = \frac{\partial P_{\alpha ij}}{\partial y_i} dy_i + \sum_{k=1}^1 \frac{\partial P_{\alpha ij}}{\partial \theta_{ijk}} d\theta_{ijk} \quad (1)$$

$P_{\alpha ij}$ is F - G - T P_{α} index for sector j and group of households i

\bar{y}_i is the average per capita income of the household group i;

θ_{ijk} are the parameters of the income distribution.

The first term after equality is the change in average per capita income relative to the change in production in sector j. The second term is the change in income distribution.

An important assumption in this characterization is that the change in output of activity j is distributionally neutral such that

$$\frac{dP_{\alpha ij}}{P_{\alpha ij}} = \eta_{\alpha i} \left(\frac{d\bar{y}_i}{\bar{y}_i} \right) = \eta_{\alpha i} m_{ij} \left(\frac{dx_j}{y_i} \right), d\bar{y}_i = m_{ij}^* dx_j \quad (2)$$

$\eta_{\alpha i}$ is elasticity of $P_{\alpha ij}$ respect to the per capita mean of each group of households and a result of the increase in the production of sector j;

dy fix price multiplier.

The definition of aggregate poverty is as follows:

$$P_{\alpha j} = \sum_{i=1}^m P_{\alpha ij} \left(\frac{n_i}{n} \right) \quad (3)$$

$$\sum_{i=1}^m n_i = n \text{ (total population), } n_i \text{ Population in the } i\text{-th group}$$

$$\frac{dP_{\alpha j}}{P_{\alpha j}} = \sum_{i=1}^m \left(\frac{dP_{\alpha ij}}{P_{\alpha ij}} \right) \left(\frac{n_i}{n} \right) = \sum_{i=1}^m \left(\frac{dP_{\alpha ij}}{P_{\alpha ij}} \right) \left(\frac{P_{\alpha ij} n_i}{P_{\alpha j} n} \right) = \sum_{i=1}^m \left(\frac{dP_{\alpha ij}}{P_{\alpha ij}} \right) S_{\alpha i} \quad (4)$$

$$\frac{\sum_{k=1}^{q_i} \left(\frac{z - y_k}{z} \right)^\alpha}{\sum_{l=1}^{q_i} \left(\frac{z - y_l}{z} \right)^\alpha} = S_{\alpha i} \quad (5)$$

q_i number of poor in the i-th group

$$\sum_{i=1}^m q_i = q \text{ total number of poor}$$

Another assumption in this modeling is that there is a poverty limit on the i-th group. Let $S_{\alpha i}$ be those above the limit of that group.

$$\sum_{i=1}^m S_{\alpha i} = 1; S_{\alpha i} = \frac{\sum_{k=1}^{q_i} \left(\frac{z - y_k}{z} \right)^\alpha}{\sum_{l=1}^{q_i} \left(\frac{z - y_l}{z} \right)^\alpha}$$

$$\Rightarrow \frac{dP_{\alpha j}}{P_{\alpha j}} = \sum_{i=1}^m \left(\frac{dP_{\alpha ij}}{P_{\alpha ij}} \right) S_{\alpha i} = \sum_{i=1}^m S_{\alpha i} \eta_{\alpha i} m_{\alpha i} \left(\frac{dx_j}{y_i} \right) = \sum_{i=1}^m m'_{\alpha ij} q_{\alpha ij} \quad (5)$$

$$m'_{\alpha ij} \text{ modified indicator. } m'_{\alpha ij} = S_{\alpha i} m_{\alpha i} \quad (6)$$

Part of the m_{ij} indicator that contributes to the increase of income of poverty in the i th group.

$$q_{\alpha ij} = \eta_{\alpha i} \left(\frac{dx_j}{y_i} \right) \quad (7)$$

It represents the sensitivity of P_{α} to the change in income called "effect to the sensitivity of poverty".

Like

$$m_{ij} = r_{ik} \cdot d_{kj}$$

$$\frac{dP_{\alpha j}}{P_{\alpha j}} = r_{\alpha ik} \cdot d_{\alpha kj} \cdot d_{2\alpha jl} \cdot d_{1\alpha lm} \cdot q_{\alpha mj}$$

In other words, the total effects of poverty alleviation on the increase in production in sector j consists of the product of two components: 1) the average income change of the poor in all groups of households ($m_{\alpha j}$); and 2) the sensitivity of the measure of poverty ($q_{\alpha j}$). The welfare income line is defined as the equivalent of the total value of the food basket and the non-food basket per person per month. The minimum welfare line equals the value of the food basket per person per month. The poverty rate of Foster-Greer and Thorbecke, FGT ($\alpha=0$) is the number of people living in poverty. The FGT index ($\alpha=1$) is a measure of the average gap to the welfare or minimum welfare line, as appropriate depth measure. The FGT index ($\alpha=2$) is a measure of the squared average gaps or intensity measure [15].

We consider six scenarios: for each α ($=0,1$ and 2) is applied to the minimum welfare and welfare line. CONEVAL establishes for 2012 [15] that the population with income below the minimum welfare line is 20.0457391189998% with respect to the total population, that is, 23'514,885 people and the population with income below the welfare line is 51.6413926154648% or 60'578,530 people. The average monthly income per capita in rural areas is \$ 790.63 and in urban areas of \$ 1,112.60 for the population with income in the minimum welfare line. Similarly, for the population with income in the welfare line in both areas are \$ 1,483.68 and \$ 2,322.79, respectively. In addition, FGT poverty rates are calculated in relation to welfare lines for deciles I to V (Table 1).

Results

Comparing the total per capita income per decile with the corresponding one reported by CONEVAL [15] in the welfare lines for the rural and urban population, the percentages of the population in each situation are obtained, (Table 2).

Approximating the derivative of the poverty index by the increase of the same one obtains the Table 3 elasticities with respect to the parameters α and decil of income. The same for the case of income.

With this information only the substitutions are made in the cases of interest of equation 2.

$$\frac{\Delta P_{\alpha ij}}{P_{\alpha ij}} = \eta_{\alpha i} \left(\frac{\Delta y_i}{y_i} \right) = \eta_{\alpha i} m_{ij} \left(\frac{\Delta x_j}{y_i} \right), \Delta y_i = m_{ij}^* \Delta x_j \quad (9)$$

And as

$$\{m_{ij}\} = M_{C23} = \mathbb{R} \mathbb{D} = \mathbb{R} \mathbb{D}_1 \mathbb{D}_2 \mathbb{D}_3 \quad (10)$$

The decomposition is obtained by the distributional and transfer effects. Since the matrix of social accounting from the beginning was disaggregated into deciles of income in the relevant cells.

The results of three industries are shown: Manufacture of products of petroleum and coal, manufacture of parts for motor vehicles and basic steel industry. All for $\Delta x_j=1$.

FGT INDEX			Minimum welfare line		Welfare line	
		Decil	Rural	Urban	Rural	Urban
FGT	$\alpha=0$	I	0.076	0.044	0.039	0.067
		II			0.038	0.065
		III			0.069	0.058
		IV				0.06
		V				0.12
2012	$\alpha=1$	I	0.036	0.027	0.028	0.055
		II			0.015	0.04
		III			0.011	0.027
		IV				0.018
		V				0.017
	$\alpha=2$	I	0.017	0.017	0.02	0.045
		II			0.006	0.025
		III			0.002	0.012
		IV				0.006
		V				0.002
FGT	$\alpha=0$	I	0.081	0.069	0.071	0.119
		II			0.046	0.076
		III			0.036	0.061
		IV				0.057
		V				0.055
2010	$\alpha=1$	I	0.037	0.042	0.051	0.097
		II			0.017	0.046
		III			0.004	0.027
		IV				0.015
		V				0.005
	$\alpha=2$	I	0.017	0.026	0.037	0.08
		II			0.006	0.028
		III			0.0004	0.012
		IV				0.004
		V				0.0005

Table 1: FGT poverty indexes for welfare lines. Own elaboration based on the income distribution of the ENIGH.

% Total population 2010	Population with income below the minimum welfare line		Population with income below the welfare line	
	Rural	Urban	Rural	Urban
Deciles				
I	0.081	0.069	0.071	0.119
II		0.044	0.046	0.076
III			0.036	0.061
IV				0.057
V				0.055
% Total population 2012	Population with income below the minimum welfare line		Population with income below the welfare line	
DECILES	RURAL	URBAN	RURAL	URBAN
I	0.076	0.044	0.039	0.067
II		0.081	0.038	0.065
III			0.069	0.058
IV				0.06
V				0.12

Table 2: Percentage of the Mexican population in poverty with income below the welfare lines per deciles.

2012	$\eta_{aij} = (\Delta P_{aij} / P_{aij})(\bar{y}_i / \Delta \bar{y}_i)$			
	Minimum welfare line		Welfare line	
Decil	Rural	Urban	Rural	Urban
$\alpha=0$				
I	-0.7565	-6.3492	-9.1478	-8.5669
II		9.7328	-4.3727	-3.6326
III			11.668	-1.004
IV				1.5199
V				16.8341
$\alpha=1$				
I	-0.3435	-6.1175	-9.1374	-8.6192
II		13.1095	-2.4611	-3.0865
III			15.6791	0.2533
IV				4.4486
V				21.3285
$\alpha=2$				
I	0.0552	-5.8888	-9.1271	-8.6717
II		15.5143	-0.691	-2.5522
III			18.4582	1.4491
IV				7.0608
V				24.3987

Table 3: Elasticities by decile of household income for $\alpha=0,1,2$.

Testing with various income-expenditure distributions of households results that the same branches of economic activity are those that more or less impact on poverty alleviation [19-21]. And the multipliers are of the same order of magnitude.

Analysis and Discussion

For the branches of economic activity that most impact on poverty alleviation, we observe: In the line of minimum welfare for the rural and urban population, poverty alleviation is only in decile I, while in the population below the welfare line it is in deciles I and II for rural and I, II and III for the urban zone. For the urban population below the minimum welfare line mitigation is at least an order of magnitude higher than in the rural area. The same for the decile III in the case of the population below the welfare line, but for deciles I and II are almost of the same magnitude for both rural and urban areas. Similarly for those branches of economic activity that least impact (Tables 4 and 5).

Poverty in decile I is marked with respect to the decile II in the branches that most mitigate poverty and with respect to the decile III in the branches of economic activity that least alleviate poverty and

are similar between deciles I and II. This shows the enormous social inequality still among the lowest deciles of income and the differences between rural and urban zones (Tables 6 and 7).

The population below the welfare line, it is more sensitive to poverty in decile I in both rural and urban areas and in decile II in the urban area for the economic activities that least impact. While in the branches of economic activity that most mitigate poverty, it is in the decile I the greatest sensitivity in both urban and rural areas. And for the population with incomes below the welfare line, the decile II in urban areas the sensitivity to poverty is higher than in rural areas (Tables 8 and 9).

Conclusion

The results show that poverty is related to the structure of the Mexican economy. That is why the permits given by the government to informal traders is a kind of corruption as it is not reflected in the tax system. More than 50% of the population work in the informal sector. In addition, in this decade the most requested jobs are those related to the provision of services in the health sector. Unlike in branches

α=0 Code NAICS	Economic activity/decil	Economic activities that most alleviate poverty					
		Rural		Urban		Rural	
		Minimum welfare line	Minimum welfare line	Welfare line			
		D1	D1	D2	D1	D2	D3
6231	Nursing Care Facilities (Skilled Nursing Facilities)	-0.0017	-0.01406	0.010071	-0.02025	-0.00453	0.008587
6117	Education support services	-0.0017	-0.01404	0.01006	-0.02023	-0.00452	0.008577
9321	International and extraterritorial organizations and bodies	-0.0017	-0.01401	0.010039	-0.02019	-0.00451	0.008559
6115	Trade Schools	-0.0017	-0.01401	0.010037	-0.02018	-0.00451	0.008558
6114	Commercial, computer and executive training schools	-0.0017	-0.01397	0.010008	-0.02013	-0.0045	0.008533
4879	Other tourist transport	-0.0017	-0.01396	0.010002	-0.02011	-0.00449	0.008528
5225	Services related to non-stock exchange credit intermediation	-0.0017	-0.01391	0.009968	-0.02004	-0.00448	0.008499
7213	Pensions and guesthouses, and apartments and houses furnished with hotel services	-0.0017	-0.0139	0.009962	-0.02003	-0.00448	0.008494
6214	Centers for the care of patients who do not require hospitalization	-0.0017	-0.01389	0.009949	-0.02001	-0.00447	0.008483
6233	Nursing home and other nursing homes	-0.0017	-0.01388	0.009944	-0.02	-0.00447	0.008478
6213	Other health care practices	-0.0017	-0.01388	0.009943	-0.02	-0.00447	0.008478
4855	Bus hire with driver	-0.0016	-0.01374	0.009841	-0.01979	-0.00442	0.00839
4812	Not Regular air transport	-0.0016	-0.01366	0.009787	-0.01968	-0.0044	0.008344
5617	Cleaning services	-0.0016	-0.01359	0.009738	-0.01958	-0.00438	0.008303
4832	Inland water transport	-0.0016	-0.01359	0.009737	-0.01958	-0.00438	0.008302
4854	School and personnel transportation	-0.0016	-0.0135	0.009672	-0.01945	-0.00435	0.008246
7212	Camps and recreational shelters	-0.0016	-0.01345	0.009633	-0.01937	-0.00433	0.008214
5414	Specialized design	-0.0016	-0.01334	0.009558	-0.01922	-0.00429	0.00815
5614	Secretarial support service, photocopying, collection, credit investigation and similar	-0.0016	-0.01329	0.00952	-0.01915	-0.00428	0.008117
6216	Nursing services at home	-0.0016	-0.01326	0.009501	-0.01911	-0.00427	0.008101
α=0 Code NAICS	Economic activity/decil	Economic activities that most alleviate poverty					
		Urban Welfare line					
		D1	D2	D3	D4	D5	
6231	Nursing Care Facilities (Skilled Nursing Facilities)	-0.01897	-0.00376	-0.00074	0.000871	0.007764	
6117	Education support services	-0.01895	-0.00376	-0.00074	0.00087	0.007756	
9321	International and extraterritorial organizations and bodies	-0.01891	-0.00375	-0.00074	0.000868	0.00774	
6115	Trade Schools	-0.0189	-0.00375	-0.00074	0.000868	0.007739	
6114	Commercial, computer and executive training schools	-0.01885	-0.00374	-0.00073	0.000865	0.007716	
4879	Other tourist transport	-0.01884	-0.00373	-0.00073	0.000865	0.007711	
5225	Services related to non-stock exchange credit intermediation	-0.01877	-0.00372	-0.00073	0.000862	0.007685	
7213	Pensions and guesthouses, and apartments and houses furnished with hotel services	-0.01876	-0.00372	-0.00073	0.000861	0.00768	
6214	Centers for the care of patients who do not require hospitalization	-0.01874	-0.00371	-0.00073	0.00086	0.00767	
6233	Nursing home and other nursing homes	-0.01873	-0.00371	-0.00073	0.00086	0.007667	
6213	Other health care practices	-0.01873	-0.00371	-0.00073	0.00086	0.007666	
4855	Bus hire with driver	-0.01853	-0.00367	-0.00072	0.000851	0.007587	
4812	Not Regular air transport	-0.01843	-0.00365	-0.00072	0.000846	0.007545	
5617	Cleaning services	-0.01834	-0.00364	-0.00071	0.000842	0.007508	
4832	Inland water transport	-0.01834	-0.00363	-0.00071	0.000842	0.007507	
4854	School and personnel transportation	-0.01821	-0.00361	-0.00071	0.000836	0.007457	
7212	Camps and recreational shelters	-0.01814	-0.0036	-0.00071	0.000833	0.007427	
5414	Specialized design	-0.018	-0.00357	-0.0007	0.000826	0.007369	
5614	Secretarial support service, photocopying, collection, credit investigation and similar	-0.01793	-0.00355	-0.0007	0.000823	0.00734	
6216	Nursing services at home	-0.01789	-0.00355	-0.0007	0.000821	0.007325	

North America industrial Classification System (NAICS) code of 2007.

Table 4: Branches of economic activity that most impact on the alleviation of poverty in the rural and urban population for the lines of well-being by household income decile.

$\alpha=0$ Code NAICS	Economic activity/Decil	Economic activities that least alleviate poverty					
		Rural	Urban		Rural		
		Minimum welfare line	Minimum welfare line		Welfare line		
		D1	D1	D2	D1	D2	D3
3311	Basic iron and steel industry	-0.00026	-0.00218	0.001561	-0.00314	-0.0007	0.001331
3321	Manufacture of forged and die-cut metal products	-0.00026	-0.00218	0.001561	-0.00314	-0.0007	0.001331
3329	Manufacture of other fabricated metal products	-0.00026	-0.00215	0.001537	-0.00309	-0.00069	0.00131
3326	Manufacture of wire, wire products and springs	-0.00026	-0.00214	0.001535	-0.00309	-0.00069	0.001309
3259	Manufacture of other chemical products	-0.00025	-0.00212	0.001521	-0.00306	-0.00068	0.001296
4841	General cargo haulage	-0.00025	-0.00208	0.001488	-0.00299	-0.00067	0.001269
3222	Manufacture of paperboard and paper products	-0.00025	-0.00206	0.001475	-0.00297	-0.00066	0.001258
3256	Manufacture of soap, cleaners and toilet preparations	-0.00025	-0.00206	0.001475	-0.00297	-0.00066	0.001258
3323	Manufacture of metal structures and products of blacksmithing	-0.00025	-0.00206	0.001474	-0.00296	-0.00066	0.001257
3152	Manufacture of wearing apparel	-0.00024	-0.00205	0.001471	-0.00296	-0.00066	0.001255
3313	Basic aluminum industry	-0.00024	-0.00204	0.001462	-0.00294	-0.00066	0.001246
3345	Manufacture of measuring, control, navigation and electronic medical equipment	-0.00024	-0.00203	0.001458	-0.00293	-0.00066	0.001243
3325	Manufacture of fittings and locks	-0.00024	-0.00201	0.001437	-0.00289	-0.00065	0.001225
3241	Manufacture of products of petroleum and coal	-0.00024	-0.002	0.001436	-0.00289	-0.00065	0.001224
1153	Services related to forest harvesting	-0.00024	-0.002	0.001432	-0.00288	-0.00064	0.001221
3261	Manufacture of plastic products	-0.00024	-0.00199	0.001428	-0.00287	-0.00064	0.001217
4851	Urban and suburban public fixed-route passenger transport	-0.00023	-0.00193	0.001386	-0.00279	-0.00062	0.001181
3339	Manufacture of other machinery and equipment for general industry	-0.00023	-0.00193	0.001385	-0.00279	-0.00062	0.001181
3399	Other Manufacturing	-0.00023	-0.00193	0.001379	-0.00277	-0.00062	0.001176
3336	Manufacture of internal combustion engines, turbines and transmissions	-0.00023	-0.00191	0.00137	-0.00276	-0.00062	0.001168
3363	Manufacture of parts for motor vehicles	-0.00023	-0.00191	0.001368	-0.00275	-0.00062	0.001167
3312	Manufacture of iron and steel products	-0.00022	-0.00187	0.001338	-0.00269	-0.0006	0.001141
3342	Manufacture of communication equipment	-0.00021	-0.00178	0.001277	-0.00257	-0.00057	0.001088
3353	Manufacture of electricity generation and distribution equipment	-0.00021	-0.00177	0.001265	-0.00254	-0.00057	0.001079
3361	Manufacture of cars and trucks	-0.00019	-0.00161	0.001155	-0.00232	-0.00052	0.000985
3341	Manufacture of computers and peripheral equipment	-0.00016	-0.00132	0.000944	-0.0019	-0.00042	0.000805
3343	Manufacture of audio and video equipment	-0.00016	-0.00131	0.000941	-0.00189	-0.00042	0.000802
$\alpha=0$ Code NAICS	Economic activity/ Decil	Economic activities that least alleviate poverty					
		Urban					
		Welfare line					
		D1	D2	D3	D4	D5	
3311	Basic iron and steel industry	-0.00294	-0.00058	-0.00011	0.00014	0.0012	
3321	Manufacture of forged and die-cut metal products	-0.00294	-0.00058	-0.00011	0.00014	0.0012	
3329	Manufacture of other fabricated metal products	-0.00289	-0.00057	-0.00011	0.00013	0.00118	
3326	Manufacture of wire, wire products and springs	-0.00289	-0.00057	-0.00011	0.00013	0.00118	
3259	Manufacture of other chemical products	-0.00286	-0.00057	-0.00011	0.00013	0.00117	
4841	General cargo haulage	-0.0028	-0.00056	-0.00011	0.00013	0.00115	
3222	Manufacture of paperboard and paper products	-0.00278	-0.00055	-0.00011	0.00013	0.00114	
3256	Manufacture of soap, cleaners and toilet preparations	-0.00278	-0.00055	-0.00011	0.00013	0.00114	
3323	Manufacture of metal structures and products of blacksmithing	-0.00278	-0.00055	-0.00011	0.00013	0.00114	
3152	Manufacture of wearing apparel	-0.00277	-0.00055	-0.00011	0.00013	0.00113	
3313	Basic aluminum industry	-0.00275	-0.00055	-0.00011	0.00013	0.00113	
3345	Manufacture of measuring, control, navigation and electronic medical equipment	-0.00275	-0.00054	-0.00011	0.00013	0.00112	
3325	Manufacture of fittings and locks	-0.00271	-0.00054	-0.00011	0.00012	0.00111	
3241	Manufacture of products of petroleum and coal	-0.0027	-0.00054	-0.00011	0.00012	0.00111	
1153	Services related to forest harvesting	-0.0027	-0.00053	-0.00011	0.00012	0.0011	
3261	Manufacture of plastic products	-0.00269	-0.00053	-0.00011	0.00012	0.0011	
4851	Urban and suburban public fixed-route passenger transport	-0.00261	-0.00052	-0.0001	0.00012	0.00107	
3339	Manufacture of other machinery and equipment for general industry	-0.00261	-0.00052	-0.0001	0.00012	0.00107	
3399	Other Manufacturing	-0.0026	-0.00052	-0.0001	0.00012	0.00106	
3336	Manufacture of internal combustion engines, turbines and transmissions	-0.00258	-0.00051	-0.0001	0.00012	0.00106	
3363	Manufacture of parts for motor vehicles	-0.00258	-0.00051	-0.0001	0.00012	0.00106	
3312	Manufacture of iron and steel products	-0.00252	-0.0005	-9.8E-05	0.00012	0.00103	
3342	Manufacture of communication equipment	-0.0024	-0.00048	-9.4E-05	0.00011	0.00098	
3353	Manufacture of electricity generation and distribution equipment	-0.00238	-0.00047	-9.3E-05	0.00011	0.00098	
3361	Manufacture of cars and trucks	-0.00218	-0.00043	-8.5E-05	0.0001	0.00089	
3341	Manufacture of computers and peripheral equipment	-0.00178	-0.00035	-6.9E-05	0.000082	0.00073	
3343	Manufacture of audio and video equipment	-0.00177	-0.00035	-6.9E-05	0.000081	0.00073	

North America industrial Classification System (NAICS) code of 2007.

Table 5: Branches of economic activity that least impact on the poverty alleviation in the rural and urban population for well-being lines by household income decile.

α=1 Code NAICS	Economic activity/decil	Economic activities that most alleviate poverty					
		Rural		Urban		Rural	
		Minimum welfare line		Minimum welfare line		Welfare line	
		D1	D2	D1	D2	D1	D2
6231	Nursing Care Facilities (Skilled Nursing Facilities)	-0.00076	-0.01354	0.013565	-0.02023	-0.00255	0.011538
6117	Education support services	-0.00076	-0.01353	0.01355	-0.02021	-0.00254	0.011526
9321	International and extraterritorial organizations and bodies	-0.00076	-0.0135	0.013522	-0.02016	-0.00254	0.011502
6115	Trade Schools	-0.00076	-0.0135	0.01352	-0.02016	-0.00254	0.0115
6114	Commercial, computer and executive training schools	-0.00076	-0.01346	0.013481	-0.0201	-0.00253	0.011467
4879	Other tourist transport	-0.00076	-0.01345	0.013472	-0.02009	-0.00253	0.01146
5225	Services related to non-stock exchange credit intermediation	-0.00075	-0.01341	0.013426	-0.02002	-0.00252	0.01142
7213	Pensions and guesthouses, and apartments and houses furnished with hotel services	-0.00075	-0.0134	0.013418	-0.02001	-0.00252	0.011413
6214	Centers for the care of patients who do not require hospitalization	-0.00075	-0.01338	0.0134	-0.01998	-0.00252	0.011399
6233	Nursing home and other nursing homes	-0.00075	-0.01337	0.013394	-0.01997	-0.00251	0.011393
6213	Other health care practices	-0.00075	-0.01337	0.013393	-0.01997	-0.00251	0.011392
4855	Bus hire with driver	-0.00074	-0.01323	0.013255	-0.01977	-0.00249	0.011275
4812	Not Regular air transport	-0.00074	-0.01316	0.013182	-0.01966	-0.00248	0.011213
5617	Cleaning services	-0.00074	-0.0131	0.013116	-0.01956	-0.00246	0.011157
4832	Inland water transport	-0.00074	-0.0131	0.013115	-0.01956	-0.00246	0.011156
4854	School and personnel transportation	-0.00073	-0.01301	0.013027	-0.01943	-0.00245	0.011081
7212	Camps and recreational shelters	-0.00073	-0.01296	0.012975	-0.01935	-0.00244	0.011037
5414	Specialized design	-0.00074	-0.0131	0.013116	-0.0192	-0.00242	0.010951
5614	Secretarial support service, photocopying, collection, credit investigation and similar	-0.00074	-0.0131	0.013115	-0.01912	-0.00241	0.010908
6216	Nursing services at home	-0.00073	-0.01301	0.013027	-0.01908	-0.0024	0.010886
α=1 Code NAICS	Economic activity/decil	Economic activities that most alleviate poverty					
		URBAN Welfare line					
		D1	D2	D3	D4	D5	
6231	Nursing Care Facilities (Skilled Nursing Facilities)	-0.01908	-0.00319	0.000186	0.002548	0.009837	
6117	Education support services	-0.01906	-0.00319	0.000186	0.002546	0.009827	
9321	International and extraterritorial organizations and bodies	-0.01902	-0.00318	0.000186	0.00254	0.009806	
6115	Trade Schools	-0.01902	-0.00318	0.000186	0.00254	0.009805	
6114	Commercial, computer and executive training schools	-0.01896	-0.00317	0.000185	0.002533	0.009776	
4879	Other tourist transport	-0.01895	-0.00317	0.000185	0.002531	0.00977	
5225	Services related to non-stock exchange credit intermediation	-0.01889	-0.00316	0.000185	0.002522	0.009737	
7213	Pensions and guesthouses, and apartments and houses furnished with hotel services	-0.01888	-0.00316	0.000184	0.002521	0.009731	
6214	Centers for the care of patients who do not require hospitalization	-0.01885	-0.00316	0.000184	0.002517	0.009718	
6233	Nursing home and other nursing homes	-0.01884	-0.00315	0.000184	0.002516	0.009713	
6213	Other health care practices	-0.01884	-0.00315	0.000184	0.002516	0.009713	
4855	Bus hire with driver	-0.01865	-0.00312	0.000182	0.00249	0.009612	
4812	Not Regular air transport	-0.01854	-0.0031	0.000181	0.002476	0.00956	
5617	Cleaning services	-0.01845	-0.00309	0.00018	0.002464	0.009512	
4832	Inland water transport	-0.01845	-0.00309	0.00018	0.002464	0.009512	
4854	School and personnel transportation	-0.01833	-0.00307	0.000179	0.002447	0.009448	
7212	Camps and recreational shelters	-0.01825	-0.00306	0.000178	0.002438	0.00941	
5414	Specialized design	-0.01811	-0.00303	0.000177	0.002419	0.009337	
5614	Secretarial support service, photocopying, collection, credit investigation and similar	-0.01804	-0.00302	0.000176	0.002409	0.0093	
6216	Nursing services at home	-0.018	-0.00301	0.000176	0.002404	0.009281	

North America industrial Classification System (NAICS) code of 2007.

Table 6: Branches of economic activity that most impact on the poverty alleviation and social inequality in the rural and urban population for the lines of well-being by household income decile.

α=1 Code NAICS	Economic activity/Decil	Economic activities that least alleviate poverty					
		Rural	Urban		Rural		
		Minimum welfare line	Minimum welfare line		Welfare line		
		D1	D1	D2	D1	D2	D3
3311	Basic iron and steel industry	-0.000118	-0.0021	0.002102	-0.00088	-0.00011	0.000504
3321	Manufacture of forged and die-cut metal products	-0.000118	-0.0021	0.002102	-0.00076	-9.5E-05	0.00043
3329	Manufacture of other fabricated metal products	-0.000116	-0.00207	0.00207	-0.00065	-8.2E-05	0.000371
3326	Manufacture of wire, wire products and springs	-0.000116	-0.00207	0.002068	-0.00085	-0.00011	0.000482
3259	Manufacture of other chemical products	-0.000115	-0.00205	0.002048	-0.00082	-0.0001	0.000465
4841	General cargo haulage	-0.000112	-0.002	0.002004	-0.00117	-0.00015	0.000669
3222	Manufacture of paperboard and paper products	-0.000111	-0.00198	0.001987	-0.00079	-9.9E-05	0.000449
3256	Manufacture of soap, cleaners and toilet preparations	-0.000111	-0.00198	0.001987	-0.0009	-0.00011	0.000514
3323	Manufacture of metal structures and products of blacksmithing	-0.000111	-0.00198	0.001985	-0.0007	-8.8E-05	0.000398
3152	Manufacture of wearing apparel	-0.000111	-0.00198	0.001982	-0.00086	-0.00011	0.000488
3313	Basic aluminum industry	-0.00011	-0.00197	0.001969	-0.0004	-5.1E-05	0.000229
3345	Manufacture of measuring, control, navigation and electronic medical equipment	-0.00011	-0.00196	0.001963	-0.00038	-4.8E-05	0.000216
3325	Manufacture of fittings and locks	-0.000108	-0.00193	0.001935	-0.00032	-4.1E-05	0.000185
3241	Manufacture of products of petroleum and coal	-0.000108	-0.00193	0.001934	-0.00111	-0.00014	0.000635
1153	Services related to forest harvesting	-0.000108	-0.00193	0.001929	-0.0007	-8.8E-05	0.0004
3261	Manufacture of plastic products	-0.000108	-0.00192	0.001923	-0.00061	-7.7E-05	0.000348
4851	Urban and suburban public fixed-route passenger transport	-0.000105	-0.00186	0.001866	-0.00119	-0.00015	0.000677
3339	Manufacture of other machinery and equipment for general industry	-0.000105	-0.00186	0.001866	-0.00064	-8.1E-05	0.000367
3399	Other Manufacturing	-0.000104	-0.00186	0.001858	-0.00073	-9.2E-05	0.000415
3336	Manufacture of internal combustion engines, turbines and transmissions	-0.000103	-0.00184	0.001846	-0.00073	-9.3E-05	0.000419
3363	Manufacture of parts for motor vehicles	-0.000103	-0.00184	0.001843	-0.00064	-8.1E-05	0.000365
3312	Manufacture of iron and steel products	-0.000101	-0.0018	0.001803	-0.00088	-0.00011	0.000502
3342	Manufacture of communication equipment	-9.64E-05	-0.00172	0.00172	-0.00024	-3.1E-05	0.000139
3353	Manufacture of electricity generation and distribution equipment	-9.55E-05	-0.0017	0.001704	-0.00046	-5.8E-05	0.000265
3361	Manufacture of cars and trucks	-8.72E-05	-0.00155	0.001556	-0.00067	-8.5E-05	0.000383
3341	Manufacture of computers and peripheral equipment	-7.13E-05	-0.00127	0.001272	-0.00034	-4.3E-05	0.000192
3343	Manufacture of audio and video equipment	-0.000071	-0.00127	0.001267	-0.00016	-2E-05	8.87E-05
α=1 Code NAICS	Economic activity/Decil	Economic activities that least alleviate poverty					
		Urban Welfare line					
		D1	D2	D3	D4	D5	
3311	Basic iron and steel industry	-0.002957	-0.0005	2.89E-05	0.000395	0.001524	
3321	Manufacture of forged and die-cut metal products	-0.002957	-0.0005	2.89E-05	0.000395	0.001524	
3329	Manufacture of other fabricated metal products	-0.002912	-0.00049	2.84E-05	0.000389	0.001501	
3326	Manufacture of wire, wire products and springs	-0.002909	-0.00049	2.84E-05	0.000389	0.0015	
3259	Manufacture of other chemical products	-0.002881	-0.00048	2.81E-05	0.000385	0.001485	
4841	General cargo haulage	-0.002819	-0.00047	2.75E-05	0.000377	0.001453	
3222	Manufacture of paperboard and paper products	-0.002795	-0.00047	2.73E-05	0.000373	0.001441	
3256	Manufacture of soap, cleaners and toilet preparations	-0.002795	-0.00047	2.73E-05	0.000373	0.001441	
3323	Manufacture of metal structures and products of blacksmithing	-0.002792	-0.00047	2.73E-05	0.000373	0.00144	
3152	Manufacture of wearing apparel	-0.002788	-0.00047	2.72E-05	0.000372	0.001437	
3313	Basic aluminum industry	-0.00277	-0.00046	2.71E-05	0.00037	0.001428	
3345	Manufacture of measuring, control, navigation and electronic medical equipment	-0.002762	-0.00046	2.7E-05	0.000369	0.001424	
3325	Manufacture of fittings and locks	-0.002722	-0.00046	2.66E-05	0.000364	0.001404	
3241	Manufacture of products of petroleum and coal	-0.002721	-0.00046	2.66E-05	0.000363	0.001403	
1153	Services related to forest harvesting	-0.002713	-0.00045	2.65E-05	0.000362	0.001399	
3261	Manufacture of plastic products	-0.002705	-0.00045	2.64E-05	0.000361	0.001395	
4851	Urban and suburban public fixed-route passenger transport	-0.002625	-0.00044	2.57E-05	0.000351	0.001354	
3339	Manufacture of other machinery and equipment for general industry	-0.002624	-0.00044	2.56E-05	0.000351	0.001353	
3399	Other Manufacturing	-0.002613	-0.00044	2.55E-05	0.000349	0.001347	
3336	Manufacture of internal combustion engines, turbines and transmissions	-0.002596	-0.00044	2.54E-05	0.000347	0.001338	
3363	Manufacture of parts for motor vehicles	-0.002593	-0.00043	2.53E-05	0.000346	0.001337	
3312	Manufacture of iron and steel products	-0.002536	-0.00042	2.48E-05	0.000339	0.001307	
3342	Manufacture of communication equipment	-0.002419	-0.00041	2.36E-05	0.000323	0.001247	
3353	Manufacture of electricity generation and distribution equipment	-0.002397	-0.0004	2.34E-05	0.00032	0.001236	
3361	Manufacture of cars and trucks	-0.002188	-0.00037	2.14E-05	0.000292	0.001128	
3341	Manufacture of computers and peripheral equipment	-0.001789	-0.0003	1.75E-05	0.000239	0.000922	
3343	Manufacture of audio and video equipment	-0.001782	-0.0003	1.74E-05	0.000238	0.000919	

North America industrial Classification System (NAICS) code of 2007.

Table 7: Branches of economic activity that least impact on the poverty alleviation and social inequality in the rural and urban population for well-being lines by household income decile.

α=2 Code NAICS	Economic activity /decil	Economic activities that most alleviate poverty					
		Rural	Urban		Rural		
		Minimum welfare line	Minimum welfare line		Welfare line		
		D1	D1	D2	D1	D2	D3
6231	Nursing Care Facilities (Skilled Nursing Facilities)	0.000122	-0.01304	0.016053	-0.02021	-0.00072	0.013584
6117	Education support services	0.000122	-0.01302	0.016036	-0.02018	-0.00071	0.013569
9321	International and extraterritorial organizations and bodies	0.000122	-0.013	0.016002	-0.02014	-0.00071	0.01354
6115	Trade Schools	0.000122	-0.01299	0.016	-0.02014	-0.00071	0.013539
6114	Commercial, computer and executive training schools	0.000121	-0.01296	0.015953	-0.02008	-0.00071	0.013499
4879	Other tourist transport	0.000121	-0.01295	0.015943	-0.02007	-0.00071	0.013491
5225	Services related to non-stock exchange credit intermediation	0.000121	-0.0129	0.015889	-0.02	-0.00071	0.013445
7213	Pensions and guesthouses, and apartments and houses furnished with hotel services	0.000121	-0.0129	0.015879	-0.01999	-0.00071	0.013436
6214	Centers for the care of patients who do not require hospitalization	0.000121	-0.01288	0.015858	-0.01996	-0.00071	0.013419
6233	Nursing home and other nursing homes	0.000121	-0.01287	0.015851	-0.01995	-0.00071	0.013412
6213	Other health care practices	0.000121	-0.01287	0.01585	-0.01995	-0.00071	0.013412
4855	Bus hire with driver	0.000119	-0.01274	0.015686	-0.01974	-0.0007	0.013273
4812	Not Regular air transport	0.000119	-0.01267	0.0156	-0.01964	-0.0007	0.0132
5617	Cleaning services	0.000118	-0.01261	0.015522	-0.01954	-0.00069	0.013135
4832	Inland water transport	0.000118	-0.01261	0.015521	-0.01954	-0.00069	0.013134
4854	School and personnel transportation	0.000117	-0.01252	0.015417	-0.01941	-0.00069	0.013045
7212	Camps and recreational shelters	0.000117	-0.01247	0.015355	-0.01933	-0.00068	0.012993
5414	Specialized design	0.000116	-0.01237	0.015236	-0.01918	-0.00068	0.012893
5614	Secretarial support service, photocopying, collection, credit investigation and similar	0.000115	-0.01233	0.015176	-0.0191	-0.00068	0.012841
6216	Nursing services at home	0.000115	-0.0123	0.015145	-0.01906	-0.00068	0.012815
α=2 Code NAICS	Economic activity/decil	Economic activities that most alleviate poverty					
		URBAN					
		Welfare line					
		D1	D2	D3	D4	D5	
6231	Nursing Care Facilities (Skilled Nursing Facilities)	-0.0192	-0.00264	0.001066	0.004045	0.011253	
6117	Education support services	-0.01918	-0.00264	0.001065	0.00404	0.011241	
9321	International and extraterritorial organizations and bodies	-0.01914	-0.00263	0.001063	0.004032	0.011218	
6115	Trade Schools	-0.01913	-0.00263	0.001063	0.004031	0.011216	
6114	Commercial, computer and executive training schools	-0.01908	-0.00262	0.00106	0.00402	0.011184	
4879	Other tourist transport	-0.01907	-0.00262	0.001059	0.004017	0.011177	
5225	Services related to non-stock exchange credit intermediation	-0.019	-0.00261	0.001056	0.004003	0.011138	
7213	Pensions and guesthouses, and apartments and houses furnished with hotel services	-0.01899	-0.00261	0.001055	0.004001	0.011131	
6214	Centers for the care of patients who do not require hospitalization	-0.01897	-0.00261	0.001054	0.003996	0.011117	
6233	Nursing home and other nursing homes	-0.01896	-0.00261	0.001053	0.003994	0.011112	
6213	Other health care practices	-0.01896	-0.00261	0.001053	0.003994	0.011111	
4855	Bus hire with driver	-0.01876	-0.00258	0.001042	0.003952	0.010996	
4812	Not Regular air transport	-0.01866	-0.00257	0.001036	0.003931	0.010936	
5617	Cleaning services	-0.01856	-0.00255	0.001031	0.003911	0.010881	
4832	Inland water transport	-0.01856	-0.00255	0.001031	0.003911	0.010881	
4854	School and personnel transportation	-0.01844	-0.00254	0.001024	0.003884	0.010808	
7212	Camps and recreational shelters	-0.01836	-0.00253	0.00102	0.003869	0.010764	
5414	Specialized design	-0.01822	-0.00251	0.001012	0.003839	0.010681	
5614	Secretarial support service, photocopying, collection, credit investigation and similar	-0.01815	-0.0025	0.001008	0.003824	0.010639	
6216	Nursing services at home	-0.01811	-0.00249	0.001006	0.003816	0.010617	

North America industrial Classification System (NAICS) code of 2007.

Table 8: Branches of economic activity that most impact on the sensitivity of poverty in the rural and urban population for the lines of well-being by household income decile.

α=2 Code NAICS	Economic activity/Decil	Economic activities that least alleviate poverty					
		Rural	Urban		Rural		
		Minimum welfare line	Minimum welfare line		Welfare line		
		D1	D1	D2	D1	D2	D3
3311	Basic iron and steel industry	-0.00202	-0.00202	0.002488	-0.00313	-0.000111	0.002105
3321	Manufacture of forged and die-cut metal products	-0.00202	-0.00202	0.002487	-0.00313	-0.000111	0.002105
3329	Manufacture of other fabricated metal products	-0.00199	-0.00199	0.00245	-0.00308	-0.000109	0.002073
3326	Manufacture of wire, wire products and springs	-0.00199	-0.00199	0.002447	-0.00308	-0.000109	0.002071
3259	Manufacture of other chemical products	-0.00197	-0.00197	0.002424	-0.00305	-0.000108	0.002051
4841	General cargo haulage	-0.00193	-0.00193	0.002372	-0.00299	-0.000106	0.002007
3222	Manufacture of paperboard and paper products	-0.00191	-0.00191	0.002352	-0.00296	-0.000105	0.00199
3256	Manufacture of soap, cleaners and toilet preparations	-0.00191	-0.00191	0.002351	-0.00296	-0.000105	0.001989
3323	Manufacture of metal structures and products of blacksmithing	-0.00191	-0.00191	0.002349	-0.00296	-0.000105	0.001988
3152	Manufacture of wearing apparel	-0.0019	-0.00191	0.002345	-0.00295	-0.000104	0.001985
3313	Basic aluminum industry	-0.00189	-0.00189	0.00233	-0.00293	-0.000104	0.001972
3345	Manufacture of measuring, control, navigation and electronic medical equipment	-0.00189	-0.00189	0.002324	-0.00293	-0.000103	0.001966
3325	Manufacture of fittings and locks	-0.00186	-0.00186	0.00229	-0.00288	-0.000102	0.001938
3241	Manufacture of products of petroleum and coal	-0.00186	-0.00186	0.002289	-0.00288	-0.000102	0.001937
1153	Services related to forest harvesting	-0.00185	-0.00185	0.002282	-0.00287	-0.000102	0.001931
3261	Manufacture of plastic products	-0.00185	-0.00185	0.002276	-0.00287	-0.000101	0.001926
4851	Urban and suburban public fixed-route passenger transport	-0.00179	-0.00179	0.002209	-0.00278	-0.0000984	0.001869
3339	Manufacture of other machinery and equipment for general industry	-0.00179	-0.00179	0.002208	-0.00278	-0.0000983	0.001868
3399	Other Manufacturing	-0.00179	-0.00179	0.002198	-0.00277	-0.0000979	0.00186
3336	Manufacture of internal combustion engines, turbines and transmissions	-0.00177	-0.00177	0.002184	-0.00275	-0.0000973	0.001848
3363	Manufacture of parts for motor vehicles	-0.00177	-0.00177	0.002181	-0.00275	-0.0000971	0.001846
3312	Manufacture of iron and steel products	-0.00173	-0.00173	0.002133	-0.00269	-0.000095	0.001805
3342	Manufacture of communication equipment	-0.00165	-0.00165	0.002035	-0.00256	-0.0000906	0.001722
3353	Manufacture of electricity generation and distribution equipment	-0.00164	-0.00164	0.002017	-0.00254	-0.0000898	0.001706
3361	Manufacture of cars and trucks	-0.0015	-0.0015	0.001841	-0.00232	-0.000082	0.001558
3341	Manufacture of computers and peripheral equipment	-0.00122	-0.00122	0.001505	-0.00189	-0.000067	0.001273
3343	Manufacture of audio and video equipment	-0.00122	-0.00122	0.001499	-0.00189	-0.0000668	0.001269
α=2 Code NAICS	Economic activity/Decil	Economic activities that least alleviate poverty					
		URBAN					
		Welfare line					
		D1	D2	D3	D4	D5	
3311	Basic iron and steel industry	-0.00297	-0.00041	0.000165	0.000627	0.001744	
3321	Manufacture of forged and die-cut metal products	-0.00297	-0.00041	0.000165	0.000627	0.001744	
3329	Manufacture of other fabricated metal products	-0.00293	-0.0004	0.000163	0.000617	0.001717	
3326	Manufacture of wire, wire products and springs	-0.00293	-0.0004	0.000163	0.000617	0.001716	
3259	Manufacture of other chemical products	-0.0029	-0.0004	0.000161	0.000611	0.001699	
4841	General cargo haulage	-0.00284	-0.00039	0.000158	0.000598	0.001663	
3222	Manufacture of paperboard and paper products	-0.00281	-0.00039	0.000156	0.000593	0.001649	
3256	Manufacture of soap, cleaners and toilet preparations	-0.00281	-0.00039	0.000156	0.000592	0.001648	
3323	Manufacture of metal structures and products of blacksmithing	-0.00281	-0.00039	0.000156	0.000592	0.001647	
3152	Manufacture of wearing apparel	-0.0028	-0.00039	0.000156	0.000591	0.001644	
3313	Basic aluminum industry	-0.00279	-0.00038	0.000155	0.000587	0.001634	
3345	Manufacture of measuring, control, navigation and electronic medical equipment	-0.00278	-0.00038	0.000154	0.000585	0.001629	
3325	Manufacture of fittings and locks	-0.00274	-0.00038	0.000152	0.000577	0.001606	
3241	Manufacture of products of petroleum and coal	-0.00274	-0.00038	0.000152	0.000577	0.001605	
1153	Services related to forest harvesting	-0.00273	-0.00038	0.000152	0.000575	0.0016	
3261	Manufacture of plastic products	-0.00272	-0.00037	0.000151	0.000573	0.001595	
4851	Urban and suburban public fixed-route passenger transport	-0.00264	-0.00036	0.000147	0.000557	0.001548	
3339	Manufacture of other machinery and equipment for general industry	-0.00264	-0.00036	0.000147	0.000556	0.001548	
3399	Other Manufacturing	-0.00263	-0.00036	0.000146	0.000554	0.001541	
3336	Manufacture of internal combustion engines, turbines and transmissions	-0.00261	-0.00036	0.000145	0.00055	0.001531	
3363	Manufacture of parts for motor vehicles	-0.00261	-0.00036	0.000145	0.00055	0.001529	
3312	Manufacture of iron and steel products	-0.00255	-0.00035	0.000142	0.000538	0.001496	
3342	Manufacture of communication equipment	-0.00243	-0.00034	0.000135	0.000513	0.001427	
3353	Manufacture of electricity generation and distribution equipment	-0.00241	-0.00033	0.000134	0.000508	0.001414	
3361	Manufacture of cars and trucks	-0.0022	-0.0003	0.000122	0.000464	0.001291	
3341	Manufacture of computers and peripheral equipment	-0.0018	-0.00025	1.00E-04	0.000379	0.001055	
3343	Manufacture of audio and video equipment	-0.00179	-0.00025	9.96E-05	0.000378	0.001051	

North America industrial Classification System (NAICS) code of 2007.

Table 9: Branches of economic activity that least impact on the sensitivity of poverty in the rural and urban population for well-being lines by household income decile.

of economic activity specialized in metallurgical and petroleum technologies.

Differences in the impact of poverty alleviation between rural and urban areas are notable as well as among low income deciles.

The most vulnerable population is income in decile I in rural areas and in decile II in urban areas.

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