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**Tax–Benefit Incidence. The Mexican
experience during the last twenty years**

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Tax–Benefit Incidence. The Mexican experience during the last twenty years^{*}

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Abstract

This paper presents a tax-benefit incidence analysis for a large time period. The objective is to know if has been income redistribution across Mexican households during the last twenty years, since during this period the Mexican economy has suffered important structural changes and as well its public policies. The analysis is based on four National Income Surveys, thus combining microdata, and inequality and redistributive indexes was possible to distinguish the progressivity degree for every kind of taxes and transfers, and once calculated the tax and transfers vectors was possible to have a redistributive net vector by decil. Thus, were calculated the net transfers across the Mexican families after fiscal policies and its inequality improvements.

Keywords: Mexico, tax, benefit, incidence, inequality, redistribution.

JEL Classification: H22, H23, H24, H53, I38.

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Introduction

The welfare state in Mexico is truncated by the conditions and context with which it. The institutions that constitute the welfare state system were created in widely unequal contexts which have determined their development. Since a large share of the population has been excluded from the welfare state benefits, it is important to ask; if the welfare state system really is working? Or even, if a welfare state exists in Mexico? In accordance with the performance of inequality in Mexico is important to know if the social programs are working to minimize such inequality, due to in some cases some programs have been more inequalities than the national distribution income.

On the other hand, to get a modern welfare state it is necessary to have as well, a modern and strong tributary system in order to obtain a high social expenditure. Otherwise the inequalities and distortions of the social budget will remain. Thus, it is impossible to have a solid and universal social security system without increasing the tax revenues in relation to GDP, which is currently 15% the GDP in Mexico.

Then, this paper pretend to calculate the tributary weight per family (including direct and indirect taxes) and as well the total transfers (monetary and non monetary) obtained per family from social public policies. Thus, is estimated a consolidated vector to identify as the net receptors families as the net donors families and to know the “solidarity” degree across families, as well is pretended to know the equalization impact for the whole taxes and transfers and their effects on the family income distribution.

2 Data treatment

2.1 Income and expenditure of the families

To estimate the income tax (IT), value aggregate tax (VAT), social security contributions (SSC) and special taxes (ET) before determining the income and expenditure of families. To obtain these taxes, were used micro data, such as National Income Surveys, “Encuesta Nacional Ingreso Gasto de los Hogares” (ENIGH) and the National Health Survey; Encuesta Nacional de Salud (ENSA).

Since a panel for income surveys still does not exist for Mexico, several surveys were chosen to get a dynamic approach, thus the issues 1984, 1989, 1996 and 2002 were used; these years coincide with important tax changes. It is necessary to stress that the family is the “basic cell” in this analysis, in this sense a family

monetary income was built adding the whole monetary income concepts obtained per family and thus to get the IT and SSC. On the other hand the family monetary expenditure was calculated to get the VAT, ET and the house tax² (Predial).

2.2 Microdata vs. Macrodata

Once obtained the family income and expenditure reported by the national surveys it was necessary to compare and contrast against the National Accounts, as clearly the surveys are underreported, especially the family incomes. Such underreport was larger for business family income than for salaries family income, due to certain fears which exists due to tax retaliations. On the expenditure side, a certain underreport exists as well however less important. Then to correct this fact the Altimir Factor³ was employed. Previous to the Altimir factor several kind of families were distinguished to adjust income by income and to get a better estimation. In order to permit such differentiation, different underreports per each kind of income were taken in to account, otherwise the inequality could be underestimated. Adjusting was found around 50% underreported for income and expenditure.

Table 1
Deduction for the Family Disposable Income

Wage earning remunerations, Pensions	
Income like a Freelance (Self-employed)	+
Capital and property Income	
(net surpluss, net combine income, interests, dividends, income by properties rental)	+
Social Benefits ¹	+
Current Tranfers	+
Wealth and Income Taxes	-
Social security taxes ¹	-
=	
Disposable Family Income	

¹ Tax based on the household value.

² Taking "E" like the value expressed by the ENIGH, and "CN" like the value expressed trough the National Accounts, the factor is the ratio between these two values. Thus, the Altimir equation is expressed like: FA = CN/E. Therefore, if FA is big, will be greater difference between the National Accounts and the Microdata from the surveys.

2.3 Family Income Concepts

Before continuing with the analysis it is necessary to define the different family income concepts, which will be used to find the incidence on the family income distribution, the point is to know the income distribution before and after implementation of public policy. First of all the basic concept of Disposable Family Income (DFI) will be inferred due to the fact that the analysis will be dealing with this kind of income.

Once (DFI) is obtained, it is possible to deduce the next income concepts. Thus, through the Factors Income concept it is possible to find the income distribution without any kind (taxes or transfers) of public participation. To find the monetary benefits over the income, is necessary to take the Factors Income and to add the cash transfers to obtain the Income before Direct Taxes.

Table 2

Family Income Concepts

Building the concept		
Building the concept: FACTORS INCOME	INCOME BEFORE DIRECT TAX AND FINAL INCOME	Building the concept NET FINAL INCOME
DISPOSABLE INCOME	FACTORS INCOME	FINAL INCOME
+ Directs Taxes	+ Transfers in Kind	- Indirect tax
- Transfers in Cash		
= FACTORS INCOME	= INCOME BEFORE DIRECT TAX	= NET FINAL INCOME.
	DISPOSABLE INCOME	
	+ Benefits in Kind	
	= FINAL INCOME	

On the other hand the difference between Final Income and the Disposable Income capture the impact of Transfers in Kind, in turn the Net Final Income captures the indirect taxes effects over the family income

distribution. Finally, the difference between the Factors Income index and the Net Final Income index, capture the whole effect of the Intervention State for the family income distribution.

3 Methodologies for Tax Estimation

3.1 Tax Representation

Since the microdata obtained from the survey do not register any kind of taxes, it is necessary to estimate the tax burden per family. Thus in accordance with the national survey information it is possible to infer the majority of taxes collected, due to both the indirect and direct taxes contain between 90% and 95% of the total collected, giving a great representation for the estimations.

3.2 Tax translation

In accordance to the Pechman approach (1985), the next hypotheses for the different kind of Family incomes registered in the ENIGHs have been adopted:

- 1) The income tax (IT) is not translated, therefore is paid in accordance with the legal framework.
- 2) The VAT and the ET are paid completely by the consumers. For VAT exemption products, 50% was applied of the general tax, since the productive process is affected by the general tax rate.
- 3) The Social Security Contributions assigned to the employees, are not translated, and therefore are paid completely by the employees.
- 4) The Social Security Contributions assigned to the employers are translated totally; 1/3 to the consumers and 2/3 to the employees, this decision was taken though simulations exercises, which are close to the real tax collect.
- 5) Finally is assumed that benefits and profit taxes which come from business and corporation are paid directly by the owners.

Possibly the hypothesis number (4) could be controversial; in order to understand the tax translation it is necessary to know some facts. For example the market conditions for the employer and the demand price elasticity for its products if the tax is translated to the consumers, as well the same arguments can be taken in account when the tax is translated to the employees.

3.3 Direct tax estimation

Once incomes are obtained after taxes reported by the ENIGHs, the current tax legal framework⁴ per each kind of income was applied. Thus, for the person income tax different tax brackets were taken into account, tax credits and tax allowances per wage incomes.

It is important to say that it has been practically impossible to take which the tax avoidance into account, as well as tax relief. At the same time it was not possible to distinguish which people chose between the small tax payer system and the simplified system, in this case the general system for tax payers with professional and business activities was applied. It was only possible for the ENIGH2000 to apply the simplified system in accordance with the income level. Due to the social security contributions, differentiations were found between self employee and wage-earner, since only 0.7% of self-employee chooses pay social security contributions.

Once the data base was filtered, the income before tax was calculated, taking into account the code tax per year.

In this sense the next equation contains all the tax system characteristics:

$$Y_b + Y_e - Y_n - \tau(Y_b) - cf(Y_b) + \phi(Y_b) + \psi(Y_b) - ss(Y_b) - cf_{ss} \equiv 0 \quad (1)$$

Manipulating the income before tax is obtained (Y_b):

$$Y_b = \frac{Y_n - Y_e + cf_{ss}}{1 - \tau - cf + \phi + \psi - ss} \quad (2)$$

Where:

$Y_b =$ *Income before tax*

$Y_e =$ *Income after tax (Net Income)*

$ss(Y_b) =$ *Social Security Contributions*

$cf_{ss} =$ *Social security fees paid per the workers*⁵

$\tau(Y_b) =$ *Income Tax Rate*

⁴ Per each study year, 1984, 1989, 1996 and 2002.

⁵ Tax traslation

$cf(Y_b) = \text{Fix Income Tax Rate}$

$\varphi(Y_b) = \text{Tax subsidies}$

$\psi(Y_b) = \text{Wage Credit Tax}$

The coefficients ss , τ , φ , ψ , and the fix payments $cf(Y_b)$, cf_{ss} , were obtained using the “Income Tax Law” (Ley del Impuesto sobre la Renta) and the “Social Security Law” (Ley del Seguro Social). Since the interest income is not accumulative with other incomes, to get the income before tax by this concept was applied simply the factor $1/(1-\tau)$, where τ is the tax rate.

Due to fact that the national surveys are registered per capita incomes, the total family income was obtained since the basic unit of analysis are the families.

3.4 Indirect tax estimation

To calculate VAT, ET and House Tax, was used the family money expenditure reported by the different national surveys (ENIGHs), at the same time the families were classified by deciles in accordance with their income level, and then to appreciate their burden tax.

Finding VAT was possible aggregating the 15⁶ different groups of household consumption. Since the schedule tax, the Food & Beverages sector was sub-classified to distinguish between products with tax rate null, exempts, and general tax rate VAT (15%). It is worthy to say that a 7% tax rate to exempt products was applied, due to its productive process it is taxed with general rate tax. Thus it is assumed that the tax is translated to the final consumers, by only paying the half of the tax rate.

Finally to calculate better the total collection of VAT, the goods purchased between Mexico and abroad were distinguished, as well as goods purchased between the formal or informal markets.

$$Y = \sum_{i=0}^N y_i \quad (3)$$

Since that the total expenditure is a sum of all kinds of goods for whole families:

⁶ Food & Beverages, Public Transport, Clean Products, Personal Health, Education, Communications, Housing, Cloth & Shoes, Glassware & Bed Linen, Health, House Fixtures, Recreation, Private Transport, Gifts and Others Products.

$$G = \sum_i^N \sum_j^K (g_{i,j}) \quad (4)$$

Where $j = 0, 1, 2, 3 \dots K$ are the expenditure groups.

If T_{ij} is the VAT paid by the i th family, per the j th good, then:

$$T_{ij} = b_j t_j d_{ij} \quad (5)$$

Where:

b_j = Price given by the producer

d_{ij} = j th unities demanded by the family i th

t_j = VAT rate applied to the j th good

Since the principal target is to estimate the VAT as exact as possible paid per family, the i th family expenditure, for the j th good is defined like:

$$g_{ij} = b_j d_{ij} + T_{ij} \quad (6)$$

The equation is re-expressed because the term $b_j d_{ij}$ is unknown:

$$b_j d_{ij} = g_{ij} - T_{ij} \quad (7)$$

Combining this equation in 5:

$$T_{ij} = t_j * (g_{ij} - T_{ij}) \quad (8)$$

Re-grouping and applying factorization is possible to get the whole quantity paid per family:

$$T_{ij} = \left[\frac{t_j}{1+t_j} \right] g_{ij} \quad (9)$$

Finally, the tax vector is obtained adding all the families' taxes paid by kind of expenditure:

$$T = \sum_{i=0}^N \sum_{j=0}^K \left[\frac{t_j}{1+t_j} \right] g_{i,j} \quad (10)$$

In respect to the special taxes estimate, once isolated the different goods are taxed using the same methodology, although these products are taxed with both kinds of taxes.

4 Benefits Estimation Methodology

The most of public transfers given to the families are Transfers in Kind; in accordance with the ENIGH-2000 around 77% of whole transfers were made through Health and Education. While the Transfers in Cash basically in contrast with developed countries have a secondary role.

4.1.1 Education

Matching the student attendance at the Educative System and the whole educative expenditure per grade level the expenditure per student was obtained. Then, to get the public educative expenditure per family; first, the grade level was deduced using the students age; second, students and no-students were distinguished, finally the whole data base were filtered to distinguish between public and private schools attendance.

4.1.2 Health

The incidence exercise is supported through two National Surveys, the National Health Survey (ENSA-2000) and four different issues of the Households National Survey (ENIGHs), finally this microdata analysis was contrasted with the National Accounts. In accordance with the Mexican Health System there are basically three principal institutions, as well as several secondary institutions. The Health Ministry (Secretaría de Salud, SSA) with its hospitals network use to supply health care to people without any kind of social insurance, normally people who works in the informal economy. The private sectors workers normally are covered by the Social

Security Mexican Institute (IMSS), the public workers like the federal bureaucracy are covered by the Social Security Services Federal Employments (ISSSTE). Once each institution was identified, the transfers were assigned by head. With base in the ENSA-2000 were built “shadow prices”, meaning that the costs of services supplied by the institutions were taken to obtain proxy variables. It is worthy to say that to get the expenditure per person the medical assistance probability by age and sex was used.

4.1.3 Electricity Subside

With the family expenditure reported by the ENIGHs their electricity bill and therefore the subsidy per family were calculated, finally the aggregated family information was contrasted versus the total subsidies reported by the Energy Ministry. Since only a small underreport was found, the estimation based on microdata is suitable.

4.1.4 Pensions

To calculate the transfers via pensions to the families, first the institutional supplier (IMSS or ISSSTE) were identified using the respective national surveys income. Since the national surveys do not give any information about the kind of supplier, this information was inferred using the pensions amounts, thus in accordance with such amount the supplier institution was determined. At the same time the institution supplier simply matching the health institution supplier was inferred, finally both methods were compared and contrasted to get a full identification.

4.1.5

Scholarships

To find the incidence, different income national surveys were used where only the public scholarships were considered, thus were imputed directly to the families. Finally the values found with the microdata were contrasted against the national accounts.

4.1.6

Agricultural Subsidies Program (PROCAMPO)

The agricultural subsidies were obtained directly from the income national surveys where the subsidies were attributed in accordance with the income tables.

4.1.7

Antipoverty National Program (PROGRESA-Oportunidades)

These kinds of transfers were recently incorporated to the national surveys; in fact the program was created in the late 90s. These monetary transfers are conformed by an education, health and food packaged. These monetary transfers are conditioned to use schools and hospitals services.

5 Families Income Disposable Tax Incidences

5.1 The tax burden

Once the family tax burden is estimated in accordance with the former methodology, the families were grouped by deciles for all the period studied. Such as can be observed in Table 3, around 50% of the whole tax burden is paid by the wealthiest 10% of families; in contrast the first five deciles hardly support 12% of whole family tax burden.

By analyzing the behavior for the period it is possible to appreciate several changes in the family tax burden, for example between 1984 and 1989 there was a regressive evolution, due an increase in tax burden in the first seven deciles, making the burden lighter for the top three deciles.

Table 3

Total Burden Tax per Decil

Decil	1984	1989	1996	2002
1	0.57	0.97	0.71	0.84
2	1.10	2.14	1.42	1.53
3	2.19	2.82	1.99	2.23
4	3.19	3.79	2.92	2.98
5	4.19	4.71	3.90	3.77
6	5.59	5.95	5.19	5.10
7	7.53	7.58	7.00	6.61
8	10.32	10.08	9.71	9.87
9	16.71	14.37	16.51	15.43
10	48.60	47.59	50.65	51.65

Note: The data were adjusted to National Accounts by the Altimir Factor criteria

However from 1996 the last trend started to change step by step the top deciles and especially the last decile was retrieving tax burden until it reached almost 52% of the whole family tax burden by the year 2002.

5.2 Disaggregated Tax Distributions

Taking into account the structure of tax paid per families, raising the last decil like the great protagonist on the income tax (PIT), it is noteworthy that the 10th decil has been paying around the 70-75% of the whole collection by this concept. In fact this prominence has been reflecting the high degree of income concentration in the last 18 years, where 1996 and 2002 show a higher tax concentration. To answer this issue, during all this time the fiscal authorities have been implementing tax changes to minimize the negative impact for the family income produced by the economic crisis; therefore tax subsidies, tax credit and the tax rescheduling have been created.

Table 4
Percentage Tax Distribution per Decil

Decil	1	2	3	4	5	6	7	8	9	10
1984										
Income Tax	0.12	0.29	1.12	2.15	2.97	3.81	6.19	8.16	13.75	61.44
Indirect Tax	1.09	1.91	2.77	3.46	4.48	6.12	7.88	10.72	17.35	44.22
VAT	1.15	2.12	2.90	3.92	4.84	6.56	7.86	10.32	15.48	44.85
Especial Tax	1.00	1.60	2.56	2.75	3.88	5.48	7.80	11.18	20.05	43.70
House Tax	0.78	2.20	4.55	7.35	10.10	8.48	14.29	16.84	12.29	23.12
Soc. Sec. Cont.	0.00	0.48	2.86	4.75	6.10	7.99	9.53	14.03	21.47	32.78
1989										
Income Tax	0.06	0.33	0.52	0.91	1.33	2.03	3.12	5.94	11.19	74.57
Indirect Tax	1.54	2.97	3.92	4.95	6.39	7.70	9.83	12.14	16.84	33.72
VAT	1.67	3.25	4.03	5.00	6.26	7.87	9.82	11.78	16.26	34.07
Especial Tax	1.38	2.58	3.77	4.89	6.57	7.52	9.93	12.69	17.57	33.10
House Tax	0.63	3.57	3.53	3.31	6.06	4.64	3.52	8.38	21.39	44.96
Soc. Sec. Cont.	1.63	4.25	5.40	7.61	8.34	10.68	12.28	14.50	15.39	19.93
1996										
Income Tax	0.13	0.19	0.42	0.70	1.37	1.92	3.37	6.33	13.93	71.64
Indirect Tax	1.34	2.35	3.05	4.17	5.26	7.09	8.93	11.35	17.62	38.84
VAT	1.47	2.58	3.26	4.38	5.43	7.21	8.90	11.33	17.09	38.34
Especial Tax	1.09	1.92	2.57	3.65	4.93	6.66	9.16	11.59	19.23	39.20
House Tax	0.16	0.56	2.22	4.68	4.01	8.90	6.41	8.42	13.26	51.37
Soc. Sec. Cont.	0.53	1.81	2.78	4.51	5.80	7.39	9.82	12.64	18.98	35.74
2002										
Income Tax	0.01	0.04	0.05	0.27	0.73	1.46	2.72	6.20	11.88	76.64
Indirect Tax	1.34	2.37	3.42	4.56	5.44	7.09	8.99	12.04	17.32	37.42
VAT	1.42	2.44	3.36	4.50	5.43	6.93	8.69	11.32	16.39	39.52
Especial Tax	1.23	2.31	3.60	4.56	5.57	7.26	9.15	13.07	19.03	34.21
House Tax	1.13	0.85	1.03	8.12	1.75	9.80	18.78	16.02	10.15	32.37
Soc. Sec. Cont.	1.48	2.88	4.29	5.30	6.64	8.59	9.63	12.96	18.96	29.26

Elaborated with different ENIGH and Tax Lows

By the other hand, the indirect taxes have a strong concentration in the top deciles albeit less spectacular than the income tax, due to the 10th decil only paid around 38% by the year 2002. However in this case the tax concentration in the last decil has been decreasing, since 1984 paid around 44%. In accordance with the theory, these kinds of taxes show a smoother behavior across deciles than the direct taxes, because the family

expenditure behavior is less cyclic and less concentrated than with income taxes. In this sense the indirect taxes have showed a less progressive trend.

In respect to the social security contributions, it is also possible to observe the tax concentration. However, less than with income tax. Since the contributions schedules have boundaries as well contributions a smoother path is followed. In this sense less concentration is found in the contributions per top deciles, showing a regressive quotas system. In the Mexican case an important share of these quotas are founded by the Federal Budget and therefore by the whole tax system (Table 4).

5.4 Concentration and Gini Coefficients

To get the tax effect on the income distribution, first the respective concentration coefficients were obtained and later have been contrasted against the Gini index of disposable income. In accordance with Table 5 the concentration coefficient for the whole tax for every year studied is larger than its respective Gini index of disposable income. In this sense it is possible to stress that the whole tax system has a positive redistributive role. Observing the evolution for this period found that the gap between the concentration coefficients and the index Gini almost have kept stable except for 1996 where a less distributive effect was registered .

Disaggregating by kind of taxes clearly is possible to see how the direct taxes carry on the greatest redistributive effect by the kind of taxes. In contrast the indirect taxes practically do not have any positive redistributive effect, even worsening the disposable income because their concentration coefficients are smaller than their respective Gini index. In fact, the whole distributive effect practically is supported by the income tax (PIT), since their concentration indexes are quite larger than their Gini indexes for disposable income. This behavior has been stressed during that time, because the concentration coefficient values have passed from 0.7246 in 1984 to 0.8488 for the year 2002.

On the other hand the social security contributions and the rest of taxes have registered concentration coefficients smaller than their Gini indexes, and therefore hardly have redistributive effects. However the social security contributions and the house tax have increased their concentration coefficients in the last twenty years, giving a progressive tax effect. On the other hand the VAT has kept its concentration coefficient almost without

change. Finally the special taxes have registered an important decreasing on its concentration coefficient, passing from 0.536 values in 1984 to 0.473 values in 2002, worsening the family income distribution.

Table 5

Concentration and Gini Coefficients

Gini Index	1984	1989	1996	2002
Disposable Income	0.5002	0.5864	0.5230	0.5084
	0.0087	0.0136	0.0103	0.0047

Concentration Indexes

Kind of Taxes	1984	1989	1996	2002
Whole Tax System	0.5942	0.6346	0.6178	0.5997
	0.0169	0.0202	0.0097	0.0057
Direct Taxes	0.6056	0.6616	0.6397	0.6291
	0.0179	0.0213	0.0107	0.0061
Indirect Taxes	0.4967	0.4573	0.5102	0.4794
	0.0092	0.0067	0.0051	0.0037
Income Tax	0.7246	0.8230	0.8375	0.8488
	0.0177	0.0156	0.0102	0.8488
Social Security Contributions	0.3530	0.3125	0.4762	0.4159
	0.0105	0.0068	0.0055	0.0046
VAT	0.4869	0.4510	0.4970	0.4820
	0.0103	0.0077	0.0061	0.0042
Especial Tax	0.5362	0.4730	0.5413	0.4738
	0.0105	0.0065	0.0062	0.0042
House Tax	0.2647	0.5649	0.5653	0.4942
	0.0242	0.0581	0.0770	0.0518

Note: Elaborated with different ENIGH issues.

5.4 The Tax Progressivity

The Kakwani index captures the tax disproportion and its redistributive effect, thus a bigger disproportional tax means a bigger progressivity degree. If the tax is progressive, the value of Kakwani index will be big, keeping a direct relation between the progressivity degree and the Kakwani value.

Analyzing the whole tax system, the Kakwani index found a lightly disproportion in favour to the lowest family incomes, then the whole tax system is hardly progressive next to the neutrality. On the time, the index has had a constant behaviour, with 1989 like exception. This year the index decreased almost to the half (0.048), even

when the concentration index showing the highest value (0.634). A feasible explanation to understand such a decrease is the increasing inequality for the disposable income, since for that year the Gini index registered its highest coefficient (Table 6).

Table 6
Kakwani Index for the Tax System

Kind of Tax	1984	1989	1996	2002
Whole taxes	0.0940 0.0119	0.0482 0.0094	0.0949 0.0090	0.0913 0.0042
Direct Taxes	0.1054 0.0131	0.0752 0.0105	0.1167 0.0098	0.1207 0.0046
Indirect Taxes	-0.0035 0.0062	-0.1291 0.0126	-0.0127 0.0081	-0.0290 0.0042
Income Taxes	0.2245 0.0131	0.2366 0.0066	0.3145 0.0100	0.3404 0.0045
Social Security Contributions	-0.1472 0.0130	-0.2739 0.0150	-0.0468 0.0111	-0.0925 0.0063
VAT	-0.0132 0.0066	-0.1354 0.0128	-0.0260 0.0077	-0.0264 0.0042
Especial Tax	0.0360 0.0108	-0.1134 0.0136	0.0183 0.0110	-0.0346 0.0051
House Tax	-0.2355 0.0435	-0.0215 0.0595	0.0423 0.0774	-0.0142 0.0518

Note: The progressivity is respect to the Disposable Income

Disaggregating by tax, is confirmed the high progressivity for the indirect taxes, while the direct taxes show a light progressivity next to the neutrality. In detail, a less progressive tax system for 1989 obeys to the indirect taxes and particularly the special taxes have become regressives. While, the income tax (PIT) have showed higher Kakwani values year by year, as well the social security contributions have shown the same path, albeit much less progressive than the income tax, due to an important degree of regressiveness in 1984. The data for the year 2002 has come close to neutrality. Though its behavior has improved, the social security contributions still continue to be the most regressive in the whole tax system. As well the VAT shows certain regressivity for the whole period, albeit close to the neutrality for the year 1996. Finally, both the special taxes as the house tax registered certain regressivity for the year 2002, even during the studied period both positive as negative progressivity were shown, and therefore have not followed a defined path.

To sum up, the progressivity for the whole Mexican tax system has hardly changed in the last 18 years, where the income tax and social security contributions have registered more progressivity, while the VAT progressivity has been almost neutral without changes and the especial taxes and the house taxes have lost progressivity.

6 Families Benefits Incidence

6.1 The Social Expenditure and Income Distribution

Once calculated Transfers in Cash and Transfers in Kind to the households in accordance with the above methodology, the households were ordered by deciles using as criteria the Disposable Familiar Income, in this way the Table 7 was obtained.

Table 7

Total Transfers Distribution

Decil	1984	1989	1996	2002
1	3.67	5.57	5.30	5.11
2	5.59	7.68	7.02	7.06
3	6.56	7.89	8.02	8.03
4	7.87	9.30	9.01	8.86
5	7.72	8.88	8.90	9.14
6	9.65	10.49	10.41	10.46
7	10.90	11.34	11.33	10.71
8	12.55	11.77	11.61	11.32
9	17.32	12.52	13.62	14.95
10	18.17	14.57	14.77	14.35

Note: Adjusted by the Altimir Factor

In accordance with Table 7, it is possible to see more progressivity in 1989, simply because the last two deciles have lost weight (8.4%) in respect to the whole transfers, in contrast the first two deciles have increased their weight almost 4%. However the positive trend seems has been detained, due to the next years the transfer's structure hardly changed. This unyielding attitude was enclosed with a high inequality income, since for the 10th decil is receiving public transfers almost three times more than the 1st decil (2002), simply with this first photograph of the transfers distribution is possible to notice a strong inequality, still far away from the more equitable countries.⁷

6.2 The disaggregated transfers

⁷ For the Spanish case, the transfer's structure in 1989 was almost completely equitable, with the only exception for 1st decile, which gets a little bit less than the rest deciles. Calonge and Manresa (1997).

Considering the disaggregated benefits, is evident the important weight for transfers in kind, especially health and education inside the social expenditure. By other side the monetary transfers are undeveloped though have been increasing in an important way during the studied period. Thus, while the monetary transfers are the principal redistribution sources for the developed countries, for the Mexican case these transfers are limited to the anti-poverty program and non-contributive pensions since hardly exists unemployment subsidies or universal system pensions. Therefore can be deduced the anachronism and weakness of the “Mexican Welfare State” simply by the enormous importance for health and education inside the whole transfers, however has been a important correction of the social expenditure in favour to the poorest deciles during the last times.

Thus, the educations transfers have been reduced for the 10th decil almost 50% passing from 8.3% in 1984 to 4.2% for the 2002 year. In spite that positive change, the top deciles still continue receiving bigger transfers in absolute terms than the fists deciles. The health transfers like second transfers source, have a more equitable structure across deciles, however as well is lightly regressive albeit has been developing toward more equality during the last 18 years, thus while in 1984 the 10th decil received 2.6 times more than the 1st one, for the 2002 year, the 10th decil received only 1.4 times more than the 1st one.

The rest of transfers in kind, like the electricity subsidy presents a very regressive structure, where its behaviour even has been worsening, due to for the 2002 year the 10th decil got 13 times more subsidy than the 1st one. This illogical and absurd subsidy is emphasized simply observing that its budget is bigger than the anti-poverty program budget.

Respect to the monetary transfers, is important to say that the pensions behavior has been quite dynamic during the studied period, where the pensions represented 18% of the whole transfers by the 2002 year, this phenomenon is explained principally by the increasing ageing. Taking account the formality job rate for the Mexican labour market and the profile of its workers, the pensions system is not progressive basically by two principal reasons, fist there are a high quantity of workers on the informal economy, and second because the pensions are contributive, thus the pensions system benefit privilege the higher incomes. While the pension’s structure across deciles improved during 1989 and 1996, 2002 presented an important deterioration, where the whole first five deciles got fewer benefits than the 10th decil.

Table 8

Disaggregated Distribution for Public Transfers

Deciles	1	2	3	4	5	6	7	8	9	10	Total
1984											
Pensions	0.15	0.31	0.54	0.46	0.32	0.67	1.31	1.97	3.01	4.76	13.49
Scholarships	0.00	0.00	0.02	0.00	0.01	0.38	0.07	0.07	0.85	0.31	1.71
Education	1.66	2.73	2.93	3.74	3.89	4.71	5.48	5.75	8.61	8.29	47.81
Health	1.86	2.55	3.07	3.67	3.51	3.89	4.03	4.76	4.85	4.80	36.99
Monetary	0.15	0.31	0.56	0.46	0.32	1.05	1.39	2.04	3.86	5.07	15.20
In Kind	3.52	5.28	6.00	7.41	7.40	8.60	9.52	10.51	13.46	13.10	84.80
Total Trans.	3.67	5.59	6.56	7.87	7.72	9.65	10.90	12.55	17.32	18.17	100.00
1989											
Pensions	0.44	1.07	0.64	0.85	1.32	1.26	1.41	1.50	2.12	2.31	12.93
Scholarships	0.01	0.00	0.01	0.03	0.00	0.05	0.06	0.06	0.02	1.31	1.56
Education	2.14	3.02	3.46	4.31	3.81	4.88	5.44	5.52	5.79	6.11	44.49
Health	2.87	3.39	3.56	3.81	3.44	3.91	3.93	4.11	3.89	3.64	36.55
Electric. Sub.	0.10	0.19	0.22	0.30	0.30	0.40	0.49	0.58	0.70	1.20	4.48
Monetary	0.45	1.08	0.64	0.88	1.33	1.30	1.47	1.56	2.15	3.62	14.48
In Kind	5.12	6.60	7.24	8.42	7.56	9.18	9.87	10.21	10.37	10.95	85.52
Total Trans.	5.57	7.68	7.89	9.30	8.88	10.49	11.34	11.77	12.52	14.57	100.00
1996											
Pensions	0.20	0.71	0.66	0.92	1.04	1.04	1.44	1.54	3.04	3.82	14.42
Scholarships	0.07	0.10	0.10	0.08	0.05	0.11	0.08	0.05	0.10	0.20	0.95
Agricol. Sub.	0.34	0.41	0.34	0.23	0.23	0.27	0.17	0.19	0.18	0.57	2.93
Education	2.66	3.41	4.30	4.93	4.68	5.76	6.18	6.30	6.55	5.59	50.36
Health	1.87	2.10	2.30	2.43	2.40	2.64	2.79	2.73	2.74	2.58	24.57
Electric. Sub.	0.17	0.29	0.33	0.42	0.51	0.59	0.66	0.80	1.01	2.02	6.78
Monetary	0.60	1.22	1.09	1.23	1.33	1.42	1.70	1.79	3.32	4.59	18.29
In Kind	4.70	5.80	6.93	7.77	7.58	8.99	9.63	9.83	10.30	10.19	81.71
Total Trans.	5.30	7.02	8.02	9.01	8.90	10.41	11.33	11.61	13.62	14.77	100.00
2002											
Pensiones	0.60	0.66	0.74	0.80	0.76	1.45	1.85	2.80	3.29	5.05	18.00
Agricol. Sub.	0.10	0.12	0.12	0.13	0.09	0.14	0.12	0.13	0.07	0.51	1.53
Antipoverty P	0.67	0.72	0.72	0.68	0.56	0.49	0.26	0.12	0.10	0.02	4.34
Scholarships	0.06	0.11	0.14	0.13	0.11	0.27	0.15	0.18	1.92	0.64	3.71
Education	2.09	3.26	3.89	4.40	4.70	4.99	5.18	4.78	6.23	4.22	43.74
Health	1.49	1.98	2.16	2.40	2.55	2.69	2.64	2.71	2.59	2.44	23.65
Electric. Sub.	0.11	0.20	0.27	0.33	0.37	0.42	0.50	0.60	0.75	1.48	5.03
Monetary	1.43	1.61	1.71	1.74	1.52	2.36	2.38	3.23	5.38	6.22	27.58
In Kind	3.68	5.45	6.32	7.13	7.62	8.10	8.33	8.09	9.57	8.13	72.42
Total Trans.	5.11	7.06	8.03	8.86	9.14	10.46	10.71	11.32	14.95	14.35	100.00

Elaborated with the ENIGH and National Account data

The scholarships have showed a poor performance during the time, due to hardly have changed its structure across deciles. Though by 2002 has improved the participation for the first deciles, the amount destined to this concept inside the whole transfers are still very low.

The agricultural subsidies program (PROCAMPO), have had a poor behavior from the redistributive point of view, due to have changed from a position lightly progressivity in 1996 to the proportionality in 2002, favoring especially the 10th decil. Finally the anti-poverty program has been the most redistributive across the whole transfers with a strong redistributive profile since the 1st decile get 43 times more transfers than the 10th, the

principal handicap is its low budget due to only represents 4.3% of the whole transfers, which is even smaller than the electricity subsidies which one is highly unequal.

6.3 Concentration and Gini Coefficients

In contrast to the tax analysis, a small concentration index means a better distributive effect, in fact when the coefficients become negatives the distributive effect is absolutely positive, concentrating the transfers on the first deciles.

In general has increased the progressivity for the whole benefits during the analyzed period (Table 9). Disaggregating, the transfers in kind have had a better performance that the monetary transfers, since the first one have reduced its coefficient 64% while the second one only have reduced 43% its coefficient between the initial and final year.

The behavior per kind of benefits is the next; the educative transfers have had an impressive performance with a sharp fall in its index (116%), thus the public educative expenditure has improved its redistributive focus, showing a more fair expenditure and supporting the first deciles, however such performance still has not turned completely equable the educative expenditure, because while the index be positive, the transfers continue supporting more the high medium and top deciles than the lower deciles.

Respect to the health aggregated transfers, as well has been a better performance because the concentration coefficients have decreased becoming almost neutrals. The health system like a whole presents a light bias toward the progressivity, especially supported by the national health services of the Health Ministry (SSA), since its universal services use to supply medical services to people without a job inside the formal market labour.⁸

In contrast, the concentration coefficients for pensions have the highest values, although smaller than their respective Gini indexes, in this case the highly unequal income distribution permits a positive distributive effect to the pensions. So, is important to stress than the positive redistributive effect obey to high inequality and not to the redistributive attributes of the pension system.

⁸ When the health transfers are analyzed by kind of institution, the differences among institutions become important.

Respect the scholarships transfers, in accordance with the evolution of its concentration indexes has been an important improved due to the first years the system was highly regressive, while for 2002 the system became more progressive. However, is important to say that 1996 registered the best performance, where the system was almost neutral, in this case will be interesting to know why the scholarship system got worse.

Table 9

Cocentration and Gini Indexes for Households

Gini Index	1984	1989	1996	2002
Disposable Income	0.5002	0.5864	0.5230	0.5084
	0.0087	0.0136	0.0103	0.0047

Concentration Indexes

Kind of Transfers	1984	1989	1996	2002
Whole Transfers	0.2334	0.1561	0.1793	0.1589
	0.0084	0.0048	0.0049	0.0046
In Kind	0.2197	0.1409	0.1586	0.1333
	0.0078	0.0042	0.0045	0.0042
Monetary	0.3974	0.2776	0.3281	0.2760
	0.0522	0.0251	0.0198	0.0148
Education	0.2476	0.1747	0.1410	0.1146
	0.0089	0.0048	0.0064	0.0056
Health	0.1096	0.0424	0.0615	0.0648
	-0.0060	0.0035	0.0028	0.0027
Pensions	0.3823	0.2660	0.3986	0.4147
	0.0556	0.0247	0.0223	0.0175
Scholarships	0.6596	0.6980	0.0956	0.3523
	0.0618	0.1296	0.0646	0.0424
Electricity Subsidies		0.3657	0.3773	0.3786
		0.0095	0.0090	0.0077
Agricultural Subsidies			0.0891	0.1637
			0.0455	0.0397
Antipoverty Program				-0.2915
				0.0114

Note: Elaborated with different ENIGHs issues.

Finally the electricity subsidies show some of the higher concentration index across the whole transfers, where the top deciles get the bigger transfers, but even worse still today has not exist the most minim change on its structure. By other side the agricultural subsidies have had as well a bad performance; due to its concentration coefficients have showed a larger concentration on the higher income deciles. In contrast the anti-poverty

program got the lowest concentration coefficient among all the transfers and therefore is the most progressive benefit to the Mexican families.

6.4 The Benefits Progressivity

For the benefits progressivity analysis as well was used the Kakwani index to calculate the disproportional degree of each one of the transfers. In accordance with this index, the whole transfers have increased the progressivity degree around 31% during the last 18 years, however in spite this advance the highest progressivity was registered for the 1989 year.

Table 10
Kakwani Index per Transfers

Kind of Transfers	1984	1989	1996	2002
Whole Transfers	0.2667	0.4303	0.3437	0.3495
	0.0116	0.0143	0.0111	0.0064
In Kind	0.2805	0.4455	0.3643	0.3751
	0.0114	0.0142	0.0109	0.0062
Monetary	0.1027	0.3088	0.1948	0.2324
	0.0525	0.0284	0.0223	0.0154
Education	0.2525	0.4149	0.3819	0.3938
	0.0121	0.0144	0.0121	0.0074
Health	0.3906	0.5441	0.4616	0.4436
	0.0104	0.0140	0.0107	0.0054
Pensions	0.1179	0.3204	0.1244	0.0937
	0.0557	0.0821	0.0247	0.0181
Scholarships	-0.1594	-0.1116	0.4274	0.1561
	0.0629	0.1301	0.0653	0.0426
Electricity Subsidies		0.2207	0.1456	0.1298
		0.0142	0.0126	0.0079
Agricultural Subsidies			0.4339	0.3447
			0.0461	0.0396
Antipoverty Program				0.7999
				0.0125

Note: The transfers progressivity is respect the Disposable Income

The Transfers in Kind showed the highest progressivity indexes; however the monetary transfers were more dynamics, due to its index grew 126%⁹ while the transfers in kind only grew its progressivity 33%.

⁹ Is important to say that the last national household surveys issues have incorporated more monetary transfers and that's why has augmented its importance between the whole transfers.

Disaggregating, the educative transfers have had good performance since its progressivity index increased 56% during the time period showing a value of 0.393 for the 2002 year. By its side the health transfers have had a good behavior albeit lower than the educative transfers, however registered for the last year a higher progressivity value.

In contrast, the progressivity degrees for pensions have been diminishing with a index value 20% smaller for the final year studied. While the progressivity degree for scholarships has become positive, is still so low. By other side the electricity subsidy has lost an important degree of progressivity (almost 40%) reflecting a logical absurd. In the same sense the agricultural subsidies lost 20% of progressivity, while the antipoverty program confirms the highest progressivity degree with a value for the Kakwani index of 0.799.

Thus, is possible to classify the transfers by the progressivity degree in two groups, fist for all the benefits which its progressivity degree is above the level for the whole aggregated transfers, in this case there are education, health, the agricultural subsidies and the antipoverty national program. On the second group there are pensions, scholarships and electricity subsidies which registered a progressivity degree under the whole transfers.

In general after the Kakwani index analysis is found that the transfers in absolute terms are doing much more benefits to the top deciles, but the high inequality for the income distribution, favor relative distributive effects, spite in of some transfers registered really poor progresivities degrees.

7 The total distributive effect

To have a complete fiscal incidence analysis is necessary to get both as tax incidence as benefit incidence analysis. Here both were calculated already, therefore now will be obtained a consolidated of the net tax balance and the net social expenditure. In this sense will be quantified the whole redistributive impact for the family income distribution, thus will be possible to identify by decil the net receptors and the net contributors and to calculate the quantity transferred across deciles.

7.1 The family income evolution

To evaluate the public policies redistributive effects for the different kind of incomes, will be used the Reynolds-Smolensky redistributive index. Thus, the basic income concept is the Factors Income or income without any

public intervention while on the extreme is the Final Income after Indirect Taxes, thus the difference between both incomes will be the whole public policies redistributive effects on the family income. Following the next diagram for the different income concepts will make easier the analysis comprehension.

$$\text{Factors Income}^{10} \rightarrow \text{Income before Direct Taxes}^{11} \rightarrow \text{Disposable Income}^{12} \rightarrow$$

$$\text{Final Income}^{13} \rightarrow \text{Final Income after Indirect Taxes}^{14}$$

The difference between the first and last kind of income will be captured by the net distribution vector, which is the difference between the benefits received and the tax paid by the families. In the same way, studying the intermediate concepts between both incomes is possible to know the isolate effect for benefits and taxes.

7.2 The redistributive effect

In accordance with the Table 4.3 is possible to see a whole positive redistributive effect for every one of the studied years, with an increasing improving registered on the last column of the table, where the Normalized Reynolds-Smolensky index confirm an improving for the family distribution income between 9% and 12%. Though this values show a positive dynamic with higher values for the last years, at the same time such improving could be insufficient given the high inequality income distribution across the Mexican families.¹⁵

Analyzing the four aggregated elements which have affected the family income distribution, the Transfers in Kind are the most redistributive (except for 1984) supporting 60% of the whole redistributive effect. The direct taxes arise like the second redistribution source, explaining around 30% of the redistributive effect. This protagonist role is possible by the highly unequal income distribution, making the personal tax highly redistributive.¹⁶

Respect the monetary transfers; its performance has improved significant during the last 18 years, however continue like the 3rd redistributive source. Contributing with only 11.7% on the whole redistributive impact,

¹⁰ Factors Income = Disposable Income + Direct Taxes – Monetary Transfers

¹¹ Income before Direct Taxes = Factors Income + Monetary Transfers

¹² Disposable Income = Income before Direct Taxes – Direct Taxes

¹³ Final Income = Disposable Income + Transfers in Kind

¹⁴ Final Income after Indirect Taxes = Final Income – Indirect Taxes

¹⁵ The Gini coefficient for the developed countries used to improve until 60% after transfers, quoting the Spanish case, Calonge and Manresa found a Gini coefficient improved around 32% while the best mark for the Mexican case was 11.7% in 2002.

¹⁶ Based on a wide range of credit taxes, subsidies and tax exemptions.

hardly is comparable with the developed countries, where these kinds of benefits are the principal source of redistribution income.

Finally the indirect taxes have a negative incidence almost neutral on the redistribution income, for any studied year hardly reaches more than 0.25% its participation on the whole redistributive effect. In fact the indirect taxes registered a negative effect on the distribution income for the years 1989 and 2002.

Table 11

Gini Coefficient per kind of National Income

Year	Factors Income	Income before Direct Tax	Disposable Income	Final Income	Final Income after Indirect Tax
1984	0.5318 0.0105	0.5303 0.0104	0.5002 0.0087	0.4787 0.0084	0.4783 0.0084
1989	0.6096 0.0150	0.6052 0.0150	0.5864 0.0136	0.5511 0.0135	0.5548 0.0138
1996	0.5517 0.0097	0.5460 0.0096	0.5230 0.0103	0.4830 0.0098	0.4823 0.0101
2002	0.5357 0.0048	0.5277 0.0047	0.5084 0.0047	0.4730 0.0046	0.4732 0.0047

Normalized Reynolds-Smolensky Index per Kind of Transfer and Tax

Effect	<small>Inc. before Direct Tax vs. Factors Income =</small>	<small>Disposable Inc. vs. Inc. before Direct Tax =</small>	<small>Final Income vs. Disposable Income =</small>	<small>Final Inc. Free Tax Ind. Vs Final Income =</small>	<small>Factors Income Vs. Final Inc. Free Tax Ind. =</small>
	Monetary Trans.	Direct Taxes	Trans. In Kind	Indirect Taxes	Total
1984	0.0029	0.0568	0.0430	0.0008	0.1006
1989	0.0072	0.0310	0.0602	-0.0067	0.0898
1996	0.0102	0.0422	0.0764	0.0014	0.1257
2002	0.0150	0.0366	0.0696	-0.0004	0.1168

Note: Elaborated with different ENIGH issues

7.3 The net fiscal balance

The net fiscal balance calculus cast light about who are the principals favored and how much is transferred to the families though taxes and transfers. As well with this balance is possible to identify the net contributors. To calculate the net balance, fist were calculated the net annuals transfers per capita in monetary terms, subtracting the vector of total tax payments from the vector of total transfers.

From a dynamic point of view, the Table 12 shows a generalized increase for the net receptors deciles of transfers by the last 18 years. However such increase has not been homogeneous, while the first 4 deciles have multiplied three times its transfers, the next 2 deciles (intermediate) have multiplied more than five times the amount received. This unbalance is favorable to the intermediate deciles, closer to medium class.

Table 12

Net Transfers respect the Family Final Income*

Decil	1984	1989	1996	2002
1	14.41	26.54	36.13	40.29
2	11.61	16.44	27.87	29.62
3	7.63	9.99	23.10	23.92
4	5.72	6.90	18.66	19.35
5	2.20	1.91	12.97	14.24
6	1.58	0.63	10.72	11.59
7	-0.47	-2.01	7.05	6.92
8	-2.59	-5.35	1.89	1.14
9	-5.02	-8.34	-4.17	-1.65
10	-12.95	-13.85	-16.48	-18.06

* / Free of any kind of tax oncluding indirect taxes

At the same time both as 7th as 8th have become net receptors while the 9th decil has diminished its net transfers. All this evolution for the net transfers has deepened the protagonist role of the 10th decil, due to the most of net transfers across families are supported by the this last decil. Is important to say that between 1996 and 2002 the medium deciles have gained weight against the first deciles, in fact the 2002 year register a certain homogenization across the first six deciles. However such homogenizations produce an unbalance favorable to the medium deciles compared with the unbalance favorable to 1989 where the first four deciles concentrated 91.6% of the net transfers.

Contrasting the same net transfers per decil against itself free tax final income, is observed a increasing incidence favorable to the first deciles, thus while the net transfers represented 14% of its final income by the 1st decil to the 2002 year increased until 40%. In this sense the transfers in relative terms contrasted against the final income level are trending to favor the families with lower incomes. Is important to warn, that only the last two deciles are supporting the redistributive process across families and especially the last one, where 18% of its final income is destined to the redistribution. Such concentration is produced by the worsening of income distribution in the last years.

By other side comparing the difference between the Family Factors Income and the Family Final Income after Indirect Taxes, is evident that the final income is increased considerably for the fist three deciles in 2002. Then, clearly is possible appreciate the good performance for the transfers and its positive effects on the final income, as well is possible to notice how the last decil is supporting almost exclusively the redistributive process diminishing its final income 15%, this value contrast against the final income improving around 67% for the 1st decil.

Table 13

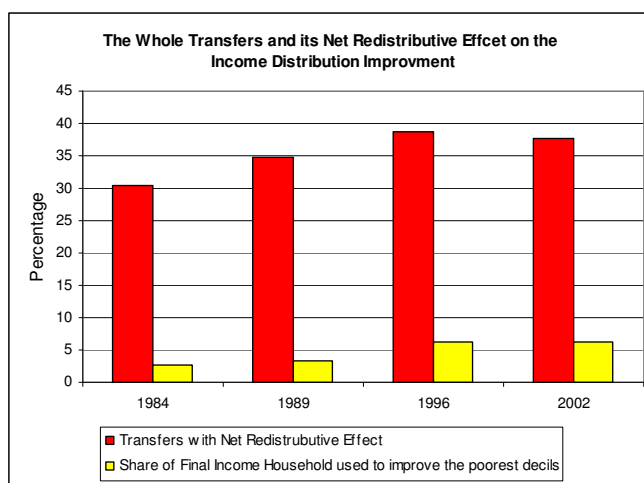
Difference between Free Tax Final Income and Factors Income

Decil	1984	1989	1996	2002
1	16.83	36.13	56.57	67.48
2	13.13	19.68	38.63	42.08
3	8.27	11.10	30.04	31.44
4	6.07	7.41	22.95	23.99
5	2.25	1.95	14.90	16.60
6	1.61	0.63	12.01	13.10
7	-0.47	-1.97	7.58	7.44
8	-2.52	-5.08	1.93	1.15
9	-4.78	-7.70	-4.00	-1.62
10	-11.46	-12.16	-14.15	-15.30

Note: Elaborated with ENIGH and National Accounts data

Is quite unexpected how the income final improvements for the fist deciles is based on a relative modest share of transfers, which hardly represents 9.8% of the whole family final income during 1984 and 16.7% for the 2002. That means than just between 2.8% and 6.3% of the Whole Mexican Household Final Income is used to improve the economics position for the poorest families, in others words this is the solidarity degree across families or the share of the family final income really redistributive (Figure 1).

Figure 1



Conclusions and comments

Once finished the whole analysis tax-benefit incidence for the Mexican Family Income is possible to enhance some interesting points. First of all, the tax system has practically kept without change during the 18 years studied; In general the whole tax system is hardly progressive with a positive redistributive effect around 3.6% in 2002 on the final family income. With an income tax really progressive and some tax like VAT regressive. Since the high income concentration, around 51% of the whole burden tax is paid just by the 10% richest of the population. It is clear that for a long term is not viable this burden tax. As well, since the low tax pressure is impossible to increase significantly the social budget. That is why the country has to increase the tax collect, where the principal target to reforms has to be the personal income tax, especially to avoid the tax evasion.

Respect the benefit incidence both as transfers in kind as monetary transfers have had a good performance during the period, where their redistributive effect on the final family incomes has increased continuously. But at the same time their redistributive effect is insufficient in accordance with the country necessities. For the Mexican case the transfers in kind have had a protagonist role, while the monetary transfers are secondary, this fact shows a low level of development of the welfare state, where for industrialized countries the monetary transfers are the principal distributive element. In this sense is necessary to increase the social expenditure, to privilege the progressive program and to re-formulate some social institution, for example to universalize the social security, medical care and education. As well is necessary to correct or disappear the inefficient programs like the electricity subsidy, scholarships and pensions.

Finally the whole redistributive effect produced by the tax system and public transfers on the final family income has been increasing during the time, that effect for 2002 was 11.7%. Comparing against developed countries this value seems quite poor, because those countries can improve their income distribution between 40% and 60%. At least is possible to stress that the public transfers performance is following the right way. Since, only between 2.8 and 6.3% of the whole Mexican household final income is redistributive across families, put in evidence the low degree of solidarity across families, and therefore the poor results obtained by the public policies to make income redistribution.

Thus, in accordance with the results is necessary to re-make all the public policies and to reform the institutions involved¹⁷

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