



COLMOD*

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COUNTRY REPORT

COLOMBIA

(2014-2018)

David Rodríguez[†]

Federico Corredor[‡]

Angie Culma[§]

Paula Martínez^{}**

Andrés Avellaneda^{††}

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[†] PhD Student in Economics, Institute for Social & Economic Research (ISER), University of Essex

[‡] Researcher, Faculty of Economics, Universidad Externado de Colombia

[§] Assistant researcher, Faculty of Economics, Universidad Externado de Colombia

^{**} Assistant researcher, Faculty of Economics, Universidad Externado de Colombia

^{††} Assistant researcher, Faculty of Economics, Universidad Externado de Colombia



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ACRONYM

- **FSP:** (Pension Solidarity Fund) Fondo de Solidaridad Pensional
- **EPS:** (Health Promoting Entity) Entidad Promotora de Salud
- **IPS:** (Lending Institutions of Health Services) Instituciones Prestadoras de Servicios de Salud
- **RPM:** (Average Premium Scheme with Defined Benefit) Régimen de Prima Media con Prestación Definida
- **RAIS:** (Individual Savings with Solidarity Regime) Régimen de Ahorro Individual con Solidaridad
- **DIAN:** (Department for National Taxes and Customs) Dirección de Impuestos y Aduanas Nacionales
- **IBL:** (Base settlement income) Ingreso base de liquidación
- **CCT:** (Conditional cash transfer) Transferencia de efectivo condicional
- **SIC:** (Social insurance contributions) Cotizaciones a la seguridad social
- **CCF:** (Private social development funds) Fondos privados de desarrollo social
- **SENA:** (National learning service) Servicio nacional de aprendizaje
- **ICBF:** (Colombian Family Welfare Institute) Instituto Colombiano de Bienestar Familiar
- **ICA:** (Commerce and industry tax) Impuesto de Industria y Comercio
- **POS:** (Mandatory health plan) Plan Obligatorio de Salud
- **CREE:** (Income tax for equality) Impuesto sobre la renta para la equidad
- **UVT:** (Tax units) Unidad de valor tributario
- **CAN:** (Andean Community of Nations) Comunidad Andina
- **ENCV:** (Life National Survey) Encuesta Nacional de Calidad de Vida
- **DANE:** (National Administrative Department of statistics) Departamento Administrativo Nacional de Estadística
- **GEIH:** (Great Integrated Household Survey) Gran Encuesta Integrada de Hogares
- **RGA:** (Alternative Taxable base) Renta Gravable Alternativa



BASIC INFORMATION

1.1 Basic information about the tax-benefit system

- Colombian Peso is the national currency, US\$= \$3.249,75 COP in December 31st, 2018.
- The social security system recognises one of three kinds of pensions: old-age, invalidity or survivor pension. In no case, the monthly pension amount could be under the current value of the minimum wage.
- The contributory health system in Colombia is administered by both public and private Health Promoting Enterprises (Entidades Promotoras de Salud, EPS). Services are provided by Health Providing Institutions (Instituciones Prestadoras de Servicios de Salud, IPS). The system is administered and regulated by the Ministry of Health.
- Old age pension depends on the number of weeks of contributions to social security and age. For 2018 pension age was 57 years for women and 62 for men. Each worker has the right to choose one of two pension systems: public also called Average Premium with defined benefits regime (Régimen de Prima Media con Prestación Definida, RPM) or private consisting of individual saving accounts (Régimen de Ahorro Individual con Solidaridad, RAIS). This will affect future entitlements.
- Private Pension Funds are part of a fully funded system where contributions are deposited in a personal account administered by a private fund which uses them for financial investments. Future benefits depend on contributions and returns on investments. The Public Pension Fund is part of a pay as you go system where contributions are deposited in a public fund administered by a government agency (Colpensiones).
- The fiscal year in Colombia starts on January the 1st and ends on December 31st. The authority in charge of national taxes is the Department for National Taxes and Customs (Dirección de Impuestos y Aduanas Nacionales, DIAN). Local taxes are collected by each municipality and are levied on properties, vehicles and industrial and commercial activities (Impuesto de Industria y Comercio, ICA).
- Income is taxed individually in Colombia (see article 8 of Tax Code “*Estatuto Tributario*”).
- Until 2016, different income sources were aggregated for personal income tax calculations, independently of their origin (e.g., capital or labour income). From 2017 a schedular system of declaration was introduced.
- Withholdings are made for tax payments. According to the Tax Code (*Estatuto Tributario*), in case withholdings exceed personal income tax liabilities taxpayers can request reimbursement. In case withholdings are lower than tax liabilities, taxpayers need to fill in a tax form and pay the difference.



- There are no 'authentic' means-tested benefits in Colombia. There are two main safety net instruments, Más Familias en Acción a conditional cash transfer program to promote health and education among children and Colombia Mayor a non-contributory pension scheme. They use a system of proxy means-testing based on a composite welfare index, known as SISBEN (Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales, in english: Potential Identification System Beneficiaries of Social Programs).

1.2 Social benefits

The social protection and safety net in Colombia is divided in two exclusive systems: contributory and non-contributory. The contributory system is intrinsically connected to the formal labour market.

Old-age pensions (*Pensión ordinaria por vejez*): If a worker is in a private pension fund, he would receive a pension if his funds are enough to cover the monthly payment of 110% of a minimum wage regardless of age and number of contributions. If the age criterion is met and a minimum number of contributions has been made (1150 weeks) the worker could receive a minimum wage pension even if funds are not enough to finance it. This is because a fraction of the monthly contribution is used for insurance for this contingency. If the age criterion is met but not the number of contributions or capital required for the minimum wage pension, the worker can opt for one of two alternatives: continue contributing until reaching the necessary weeks or ask for the return of resources in the personal account plus any return on investments.

If a worker is in the public sector fund, future benefits will depend on the number of contributions made (a minimum of 1300 weeks is required), their monthly amount and meeting the age eligibility criteria. Pension amounts depend on IBL ("Ingreso base de liquidación: the income base from which contributions were made") during the last 10 years prior reaching the pension age and also on replacement rate (i.e. the percentage of income that will be paid). Replacement rate depends on income measured in minimum wages and number of contributions.¹ The more weeks contributed the higher the replacement rate, but higher income implies a lower replacement rate. If the age criterion is met but not the number of contributions, the worker could opt for one of two alternatives: continue contributing until reaching the necessary weeks or ask for a substitutive compensation, which is proportional to IBL and number of contributions. (Ministerio de Trabajo, 2014)

Invalidity pensions (*Pensión por invalidez*): A worker is considered eligible for invalidity pension with its pension fund if during the last 3 years contributed at least 50 weeks and he has been declared with a loss of at least 50% of labour capacity due to a non-labour related accident or illness. It is also considered

¹ As no pension could be less than the minimum wage and contributions have an upper limit of 25 minimum wages, the replacement rate is between 55% and 100%.



eligible for invalidity pension with its insurer if he has been declared with a loss of at least 50% of labour capacity due to a labour related accident or illness or to permanent partial invalidity compensation if he has been declared with a loss of between 5% and 49.9% due to a work related cause. For the latter, compensation is between 2 and 24 times the income from which contributions were made. (Ministerio de Trabajo, 2014)

Survivors' pensions (*Pensión de sobrevivientes*): Family relatives (spouse or children under 18 or other economic dependants) of a deceased worker or pensioner, due to a non-labour related accident or illness, are entitled to a pension only if the worker's contributions during the last three years prior to his death are at least of 50 weeks. If the death was a labour related accident or illness, relatives are entitled to a pension with its insurer. A monetary assistance equivalent to one month of labour income (but between 5 and 10 minimum wages) to cover the funeral expenses of a deceased worker due to a labour related accident or illness is also provided by the insurer.

Temporary sickness absence: When a worker is unable to work due to a work related cause, he is entitled to receive his full wage for each day of absence up to 180 days. The maximum period can be extended for another 180 days after evaluation of the insurer.

In the case of a non-labour related accident or illness, it consists of paid leave until recovery. The first two days of leave are assumed at a 100% of wage by the employer. From day 3 to 90 the payment is assumed by the EPS at 2/3 of daily labour income or daily minimum wage whichever is higher. From day 90 to 180 it is paid by the EPS at a 50% rate (same condition as before). After this period the worker should be considered for a pension unless there exist a possibility for rehabilitation in which case the period is extended for another 180 days.²

Maternity Leave: It consists of 14 weeks of paid leave for women, starting at least 2 weeks before expected childbirth. To be eligible, the worker must have contributed for the whole pregnancy period. The benefit consists on a payment in charge of the EPS, equivalent to the wage on the previous month of the leave.³

Paternity Leave: It consists of 8 working days of paid leave for men starting at childbirth. To be eligible, the worker must have contributed for the whole pregnancy period. The benefit consists on a payment in charge of the EPS, equivalent to the daily wage on the previous month of the leave.⁴

Severance pay insurance: On the event of unemployment, a person can withdraw the complete balance of its severance account. Partial withdraws from the account can also be made to finance house purchase or repairs, also to finance higher education studies for the worker or family members. On the event of a worker's death, family relatives are entitled to the balance of the severance account.⁵

² Decree 0780 of 2016

³ Colombian labour code, article 236.

⁴ Law 1468 of 2011

⁵ Law 50 of 1990, art 98



Colombia Mayor: is a state subsidised pension programme. It has its origins in 2003 as an in-kind and in-cash transfer programme for the elderly without much success. However, it was re-launched in 2012 as an only in-cash transfer supporting close to 1.5 million Colombians in old age in 2014. It consists of a monthly assignment of around COP\$45.000 -COP\$110.000 payable each two months for low income elderly.⁶ The programme is means-tested and beneficiaries also must be classified as SISBEN I or II and must have no more than 3 years less than the retirement ages which are 57 for women and 62 for men. Despite targeting poor elderly, the programme is not universal for this population. A person applies to receive the subsidy with its local authority and is kept in a waiting list. Her inclusion depends mainly on the availability of resources in the Solidarity Pension Fund.

Más Familias en Acción: is a conditional cash programme (CCT) which aims at promoting human capital accumulation and alleviating and reducing poverty complementing income. It was launched in 2001 as a response to the economic crisis developed at the end of the nineties in the country. All households classified in SISBEN I with at least one child are eligible to receive the transfer. It consists of two components: Nutritional and educational. The nutritional (health) component is given one per family to families with at least one child under the age of six. It consists of a bimonthly payment conditional on children assisting to all relevant medical checks of growth and development for their age in their respective IPS. The education component is given one per student between the age of 4 and 18, but only for three children in the same family. It consists of a bimonthly stipend for children at primary education for children at secondary education (up to 8th year), for children at secondary education and at the last year of secondary education. It is conditional on two commitments: First, each child should attend at least to 80% of classes and not losing two academic years. Second, if one participant is 18 or 19 years old, he/she should be coursing at least 10 grade and if he/she is 20 years old 11^o.

Non-Contributory Health: Eligibility for non-contributory health depends on SISBEN scores. Households need to be classified as SISBEN I or II and not be able to pay for the contributory plan. In-kind benefits of subsidised health affiliation are defined in the POS. Since 2012 the services plan is the same for both regimes (contributory and non-contributory). Cash benefits, such as temporary sickness absence or paternity leave, are not provided in this regime.

1.3 Social contributions

Social insurance contributions: Social insurance contributions (SICs) finance pensions, and other contributory benefits (e.g. severance pay). Contributions in the past determine eligibility and amount of contributory benefits. There are eight SICs: Pension contribution, Health Contribution, Severance Payment, Private Social Development Funds, Pension Solidarity Fund contributions, Occupational risk insurance, National Learning Service (Servicio Nacional de Aprendizaje, SENA) and Colombian Family Welfare Institute (Instituto Colombiano de

⁶ Discretionary contributions from local governments could increase this amount.



Bienestar Familiar, ICBF). Contributions are based on payments made by employees and employers. Contributions shall not be based on labour income lower than the minimum wage and an upper limit is set for the base at 25 minimum wages. For independent workers, contributions are based on 40% of monthly income but within the upper and lower limits mentioned. In Colombia, minimum wage and contributions to the social security system do not differ across regions. Since the Law 100 of 1993, the system is managed by both private and public enterprises with government supervision.

Pension contribution: Mandatory for salaried and independent workers. It consists of a payment of 16% of labour income.^{7 8} For wage earners, contribution is divided between employee (4pp) and employer (12pp). For independent workers the contribution is entirely assumed by the worker.

Pension Solidarity Fund (Fondo de solidaridad pensional, FSP): FSP is a public fund established to subsidise pension contributions of vulnerable workers or to provide non-contributory pensions to poor elderly. It is funded through an additional contribution, an employee payroll tax of between 1-2% increasing in labour income, for incomes above 4 minimum wages.

Health contributions: Mandatory for salaried and independent workers. They consist of a payment of 12.5% of labour income. For wage earners, contributions are divided between employee (4pp) and employer (8.5pp). However, the 2012 tax reform eliminated employer contribution for most businesses and replaced it with CREE tax.⁹ For independent workers the contribution is entirely assumed by the worker.

Severance payment: Mandatory for salaried workers. The contribution is exclusively paid by the employer and is equivalent to one month of wage for each year of work. As the contribution is a lump-sum payment done once a year (usually at the start of calendar year) a yearly interest of 12% is recognised on the contribution. If labour contract is fixed-term the contribution and its interest are paid directly to the employee at the end of activities. On the other hand, if the contract is of indefinite duration the yearly payment plus interest are deposited to the worker's severance account, which in turns is administered by a financial company (public or private).

Contribution to Private Social Development Funds (Cajas de Compensación Familiar, CCF): Mandatory for salaried workers; it consists of a payment of 4% of monthly labour income exclusively paid by employers.¹⁰

Occupational risk insurance: Mandatory for wage earners and is paid fully by the employer. In the case of independent workers, it is voluntary unless required by specific contract clauses. The contribution is proportional to labour income.

⁷ In the RAIS the 16% contribution is divided as follows: 11.5 pp to the personal account, 3 pp for administration and premiums for invalidity and surviving dependants, and 1.5 pp to the guaranteed minimum pension fund (FGPM in spanish).

⁸ In the RPM the 16% contribution is divided as follows: 13 pp finances old age pension, the remaining 3pp finances administrative costs, invalidity and surviving dependants pension.

⁹ The 8.5% contribution is still mandatory for incomes above 10 minimum wages and for employers not liable to pay income tax (i.e government, education institutions, ONG etc.)

¹⁰ MinTrabajo, 2014



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The rate varies between 0.5% and 6% of monthly wage depending on the class of activity carried out by the worker, with higher rates for more risky activities.¹¹

SENA and ICBF: Mandatory for salaried and formal workers, must be in non-for profit enterprises or earning more than 10 minwages. Is paid fully by the employer. For SENA the contribution is 2% of monthly wage, and for ICBF the contribution is 3% of monthly wage.

1.4 Taxes

Overview: Colombian national government income comes mainly from two sources: taxes and oil. Due to recent fall in oil prices, taxes are becoming increasingly more important. Table 1 presents tax revenue sources for the year 2014. It is clear that despite most of the revenue coming from income tax (34.5%), personal income tax has a reduced share on total revenue (4.6%) with the biggest burden being on income tax for businesses (29.9%). Businesses also pay the Income Tax for Equality (Impuesto sobre la Renta para la Equidad, CREE) tax (11.3%), part of the wealth tax and several municipal taxes. However, the tax CREE was eliminated with the 2016 tax reform (Law 1819 of 2016) effective since 2017.

Table 1: Colombian Government Tax Revenue Sources, 2018

Tax	Share
Income Tax (IT)	47.1%
VAT	28.3%
Revenue Stamp	0.06%
Financial Transactions Tax	5.3%
Wealth Tax	0.33%
Consumption Tax	1.5%
Petrol and Diesel Tax	1.1%
Income Tax for Equality (CREE)	0.11%
External Sector taxes and tariffs)	15.9%
Total	100%

Source: Annual revenue DIAN (2018).

Personal income tax (*Impuesto a la renta de personas naturales*): In Colombia income is taxed individually. Incomes are converted to Tax Units (Unidades de valor tributario, UVT) because the amount payable relative to income for each band is established in these units. For 2018 1

¹¹ Law 100 of 1993, third book, chapter 1.



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UVT=COP\$33.156. The tax is levied on labour, pension, property income and since 2017 it includes income from dividends.

Property tax (*Impuesto predial*): It is a yearly tax levied on property that owners (natural and legal) pay to their municipality. Rates range between 0.2% and 3.3% of property value which is self-declared but must be at least equal to cadastral records.

Motor vehicle tax (*Impuesto a los vehículos*): It is a yearly tax levied on motor vehicles that owners (natural and legal) pay to their municipality. Rates range between 0.5% and 3.5% of vehicle value which is determined by the Ministry of Transport.

VAT (*Impuesto a las ventas*): An indirect tax on the purchase of all goods and services with three rates 0 (exempt) 5 (reduced rate) or 19 percent (general rate) as of 2016. The tax excludes some goods and services.

Consumption Tax (*Impuesto al Consumo*): An indirect tax on the purchase of the following goods and services: Restaurants, mobile services, cars and motorbikes.

2. SIMULATION OF TAXES AND BENEFITS IN COLMOD

2.1 Scope of simulation

Table 2.1 and table 2.2 present respectively, the tax and benefit components included in the model. The table differentiates between those components that are included in the model but not simulated and those that are simulated in COLMOD and provides the reasons why simulation was not feasible.

Table 2.1 Simulation of taxes and social contributions in COLMOD

	Variable name(s)	Treatment in COLMOD	Why not fully simulated?
		2014-2018	
Personal income tax	tin_s	S	
Extraordinary income tax	tinoy_s	E	No adequate information on extraordinary income gains in the data
Property tax	tpr	I	No information on property values in the data
Motor vehicle tax	tca	I	No information on vehicle values in the data
Employee health contribution	tsceehl_s	S	
Employee pension contribution	tsceepi_s	S	
Employee contribution FSP	tscee00_s	S	



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Self-Employment health contribution	tscsehl_s	S	
Self-Employment pension contribution	tscsepi_s	S	
Self-Employment FSP contribution	tscse00_s	S	
Employer Pension Contribution	tscerpi_s	S	
Employer Severance (Cesantias) Contribution	tscersv_s	S	
Employer ARL Contribution	tscerac_s	S	
Employer Health Contribution	tscerhl_s	S	
Employer CCF Contribution	tscer01_s	S	
Employer SENA Contribution	tscer02_s	S	
Employer ICBF Contribution	tscer03_s	S	
VAT	tva_s	S	
Consumption Tax	tco_s	S	

Notes: “-” policy did not exist in that year; “E” policy is *excluded* from the model as it is neither included in the microdata nor simulated; “I” policy is *included* in the microdata but not simulated; “PS” policy is *partially simulated* as some of its relevant rules are not simulated; “S” policy is *simulated* although some minor or very specific rules may not be simulated.

Table 2.2 Simulation of benefits in COLMOD

	Variable name(s)	Treatment COLMOD in 2014-2018	Why not fully simulated?
Old-age pension	poa	I	No data on contribution records
Invalidity pension	pdi	I	No data on contribution records
Survivors' pension	psu	I	No data on contribution records
Social Assistance Child CCT (Familias en Acción)	bsach_s	PS	Not possible to construct SISBEN scores, reporting as receiving used for eligibility



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Social Assistance Subsidised Pension (Colombia Mayor)	bsaoa_s	PS	Not possible to construct SISBEN scores, reporting as receiving used for eligibility
War and Natural Disaster Relief (Ayudas para desplazados por la violencia y desastres)	bwrwt	I	There is no fixed amount for the benefit

Notes: “-” policy did not exist in that year; “E” policy is *excluded* from the model as it is neither included in the microdata nor simulated; “I” policy is *included* in the microdata but not simulated; “PS” policy is *partially simulated* as some of its relevant rules are not simulated; “S” policy is *simulated* although some minor or very specific rules may not be simulated.



2.2 Order of simulation and interdependencies

Table 2.3 shows the order in which the policies in COLMOD are simulated. Social insurance contributions are simulated first as they are deducted from taxable income in the simulation of personal income tax. Benefits are then calculated and lastly income taxes.

Table 2.3 COLMOD Spine: order of simulation

Policy	CO_2014	CO_2015	CO_2016	CO_2017	CO_2018	Description of the instrument and main output
Uprate_co	on	on	on	on	on	DEF: UPRATING FACTORS
ConstDef_co	on	on	on	on	on	DEF: CONSTANTS DEFINITION
lIsdef_co	on	on	on	on	on	DEF: STANDARD INCOME CONCEPTS
lIdef_co	on	on	on	on	on	DEF: INCOME CONCEPTS
TUDef_co	on	on	on	on	on	DEF: ASSESSMENT UNITS
yem_co	off	off	off	off	off	DEF: Minimum Wage (Salario minimo mensual)
tscee_co	on	on	on	on	on	SIC: Simulated SIC Employed (contribuciones a SS de empleados)
tscse_co	on	on	on	on	on	SIC: Simulated SIC Self-employed (contribuciones a SS de cuenta-propias)
tscpe_co	on	on	on	on	on	SIC: Simulated SIC Pensioner (contribuciones a SS de pensionados)
tscot_co	on	on	on	on	on	SIC: Simulated SIC Others (contribuciones a SS de no trabajadores ni pensionados)
tscer_co	on	on	on	on	on	SIC: Simulated Employers SIC (contribuciones a SS del empleador)
bsaoa_co	on	on	on	on	on	BEN: Social Assistance Subsidised Pension (Colombia Mayor)
bsach_co	on	on	on	on	on	BEN: Social Assistance Child CCT (Familias en Accion)



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bwrwt_co	off	off	off	off	off	BEN:War and Natural Disaster relief (Ayudas para Desplazados por la Violencia y Desastres)
toy_co	off	off	off	off	off	TAX: Occasional Income Gains Tax (Impuesto a las Ganancias ocasionales)
tinord_co	on	on	on	on	on	TAX: Income Tax-Ordinary Declaration (Impuesto a la renta de personas naturales-sistema ordinario)
tiniman_co	on	on	on	off	off	TAX: Income Tax-IMAN for EE declaration (Impuesto a la renta de personas naturales declaracion via IMAN para empleados)
tinimasee_co	on	on	on	off	off	TAX: Income Tax-IMAS for EE declaration (Impuesto a la renta de personas naturales declaracion via IMAS para empleados)
tinimasse_co	on	on	on	off	off	TAX: Income Tax-IMAS for SE declaration (Impuesto a la renta de personas naturales declaracion via IMAS para cuenta propia)
tinschedular_co	off	off	off	on	on	TAX: Income Tax Schedular System (Impuesto a la renta – declaración cedular) (2017-)
tin_co	on	on	on	on	on	TAX: Income Tax (Impuesto a la renta de personas naturales)
tva_co	on	on	on	on	on	TAX: Value Added Tax (IVA, impuesto a las ventas)
tco_co	on	on	on	on	on	TAX: Consumption Tax (Impuesto al Consumo)
output_std_co	on	on	on	on	on	DEF: STANDARD OUTPUT



2.3 Policy switches

None

2.4 Social benefits

2.4.1 Más Familias en Acción (bsach_s)

- **Definitions**

Más Familias en Acción (formerly known as Familias en Acción) is a conditional cash transfer programme of government, which was designed to alleviate poverty in the short run through the monetary incentive and in the long run through better health and increased human capital for targeted child. This conditional transfer has two components: health and educational. These components are not exclusive among them.

- **Eligibility conditions**

Más Familias en Acción has two components:

- Health: For families with at least one child no more than 7 years old. This component complements income of the families for to increase the spend in alimentation for children that live in extreme poverty and increase their health attention.
- Education: For families with child between 7 and 17 years old. This component try reduces absence and desertion of children in primary and secondary education.

- **Income test**

Más Familias en Acción is a proxy means-test benefit, that is, it is based on SISBEN a composite welfare index used for targeting population with needs. The index is based on a series of variables containing information on household characteristics such as Health, Education, Dwelling, Individual Vulnerability and Contextual Vulnerability.

In order to be eligible to this benefit each family must have the following SISBEN scores: Bogotá and other state capitals: between 0 and 30.56; other urban areas between 0 and 32.20; rural areas between 0 and 29.03.

- **Conditionality**

The health component is conditional on children assisting to all relevant medical checks of growth and development for their age and the children can not be beneficiaries of other programs of ICBF.

The education component is conditional on each child attending at least to 80% of classes in a cycle of two months and not losing two academic years or more. The children must attend primary or secondary.



- **Benefit amount**

The amount paid depends on each municipality category¹⁸ and on age eligibility also: at least one child of seven years or less per household with period medical checks. The model assigns the amount to the head of the household if the household declares receiving the transfer.

Table 2.4 Health and Education Component Familias en Acción (2014)

Group	Health	Education				
		Pre-primary school	1-5 Primary	6-8 Secondary	9-10 Post Secondary	11 Post Secondary
1	61.200	-	-	25.500	30.600	45.900
2	61.200	20.400	10.200	25.500	30.600	45.900
3	61.200	20.400	15.300	30.600	35.700	51.000
4	71.400	20.400	15.300	35.700	40.800	56.100

Source: (COLMOD, 2019)

Table 2.5 Health and Education Component Familias en Acción (2015)

Group	Health	Education				
		Pre-primary school	1-5 Primary	6-8 Secondary	9-10 Post Secondary	11 Post Secondary
1	63.525	-	-	26.475	31.775	47.650
2	63.525	21.175	10.600	26.475	31.775	47.650
3	63.525	21.175	15.900	31.775	37.050	52.950
4	74.100	21.175	15.900	37.050	42.350	58.225

Source: (Division of social and health protection-BID, 2015)

Table 2.6 Health and Education Component Familias en Acción (2016)

Group	Health	Education				
		Pre-primary school	1-5 Primary	6-8 Secondary	9-10 Post Secondary	11 Post Secondary
1	65.926	-	-	27.476	32.976	49.451
2	65.926	21.975	11.001	27.476	32.976	49.451

¹⁸ In the first group are families in Bogota city, in the second group families in any other departments(state) capital city. The third group is composed by families in towns with a multidimensional poverty index (IPM) less or equal than 70% and lastly the fourth group is composed by families in towns with an IPM higher than 70%.



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3	65.926	21.975	16.501	32.976	38.450	54.952
4	76.901	21.975	16.501	38.450	43.951	60.426

Source: (Own with data 2015 and (Consumer's price index) Índice de precios al consumidor, IPC lower income=3,78%)

Table 2.7 Health and Education Component Familias en Acción (2017)

Group	Health	Education				
		Pre-primary school	1-5 Primary	6-8 Secondary	9-10 Post Secondary	11 Post Secondary
1	70.012	-	-	29.470	35.370	53.041
2	70.012	23.571	11.799	29.470	35.370	53.041
3	70.012	23.571	17.699	35.370	41.242	58.941
4	82.484	23.571	17.699	41.242	47.142	64.813

Source: (Own with data 2015, IPC lower income=3,78% for 2016 and IPC lower income=7,26% for 2017)

Table 2.8 Health and Education Component Familias en Acción (2018)

Group	Health	Education				
		Pre-primary school	1-5 Primary	6-8 Secondary	9-10 Post Secondary	11 Post Secondary
1	74.750	-	-	31.150	37.425	56.075
2	74.750	24.925	12.500	31.150	37.425	56.075
3	74.750	24.925	18.750	37.425	43.600	62.275
4	87.175	24.925	18.750	43.600	49.825	62.275

Source: (Department for social prosperity, 2018)

- **COLMOD notes**

As it is impossible to distinguish the town for each family in ENCV (Encuesta nacional de Calidad de Vida, the group 1 is used for urban observations and 4 for rural observations. Currently the benefit is only part-simulated in COLMOD, meaning that eligibility to the benefit is based on actual receipt in the data.

2.4.2 Colombia Mayor (bsaoa_s)

- **Definitions**

Colombia Mayor is a state subsidised pension programme. It has its origins in 2003 as an in-kind and in-cash transfer programme for the elderly without much success. However, it was re-launched in 2012 as an only in-cash transfer supporting more than 1.5 million Colombians in old age as of 2016.



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Despite targeting poor elderly, the programme is not universal for this population. A person applies to receive the subsidy with its local authority and is kept in a waiting list. Her inclusion depends mainly on the availability of resources in the Pension Solidarity Fund.

- **Eligibility conditions**

- Beneficiaries must have at least 3 years less than the retirement ages which are 57 for women and 62 for men, that is 54 and 59 respectively.

- **Income test**

Beneficiaries must be classified as SISBEN I or II, must not receive any pension and family income must be below 1 monthly minimum wage.

- **Benefit amount**

It consists of an assignment of a monthly value of around COP\$45.000 - COP\$110.000 payable each two months.¹⁹

- **COLMOD notes**

As it is impossible to distinguish the town for each family in ENCV, Table 2.6 presents the monthly values obtained calculating the mode of payment by departamento (state). Currently the benefit is only partially-simulated in COLMOD, meaning that eligibility to the benefit is based on actual receipt in the data.

Table 2.9 Colombia Mayor transfers (2014-2018)

Department	Amount (COP)	Department	Amount (COP)
Antioquia	75000	Norte Santander	75000
Atlántico	75000	Quindío	75000
Bogotá	110000	Risaralda	75000
Bolívar	75000	Santander	40000
Boyacá	40000	Sucre	40000
Caldas	75000	Tolima	75000
Caquetá	75000	Valle	75000
Cauca	55000	Arauca	60000
Cesar	75000	Casanare	40000
Córdoba	60000	Putumayo	75000
Cundinamarca	75000	San Andrés	75000
Chocó	40000	Amazonas	40000
Huila	40000	Guainía	75000
Guajira	40000	Guaviare	45000
Magdalena	75000	Vaupés	75000
Meta	75000	Vichada	75000

¹⁹ Discretionary contributions from local governments could increase this amount.



Nariño	55000		
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2.5 Social contributions

Social insurance contributions in Colombia depend mostly on worker status: employed or self-employed. However, pensioners must contribute to health and to FSP and it is also possible to contribute without working in order to receive the package of services of contributory health.

- **Liability to contributions**

All workers are liable to pay social insurance contributions based on their labour income. However, in practice, a large share of workers does not pay SIC at all (informal workers). In the model employee income (yem) and self-employment income (yse) are divided into these two categories in order to account for SIC evasion. For formal incomes the ending re (registered) is used (yemre and ysere) while for informal incomes the ending nr (not registered) is used (yemnre and ysenr). Employers are liable to pay SIC for their employees. Pensioners are liable to Health and FSP contributions and lastly there are voluntary contribution of people not working that we define as others in the model.

2.5.1 Health Contribution

Contributions bands are directly related to income in minimum wages with following rules:

Table 2.10 Health Contribution

	Employees	Employer	Self-Employed	Pensioner
Base	employee wage	employee wage	40% labour income	Pension income
Base in minimum wages	Health Contribution			
< 1	4%(minwage)	8.5%(minwage)	12.5%(minwage)	12%(minwage)*
≥ 1 and <25	4%(base)	8.5%(base)	12.5%(base)	12%(base)
≥ 25	4% (25 minimum wages)	8.5% (25 minimum wages)	12.5% (25 minimum wages)	12% (25 minimum wages)
Output	tsceeh1_s	tscerh1_s	tscsehl_s	tscpehl_s

*A minimum pension exists in Colombia equivalent to one minimum wage; however reported pension income may be lower for instance for survivor's pension.

- **Employers**

Employers must pay 8.5% of each employee wage for concept of health, this contribution only applies in the case their business is not liable to income tax, i.e. non-for profit enterprises, government. Additionally, they are liable to health contributions for each employee earning more than 10 minimum wages per



month. The same limits in the case of wages below a minimum wage and above 25 minimum wages apply.

- **Others**

People in this category are reported as not working or pensioners. They report paying Health and Pension contributions in the survey. Contributions are equal to 12.5% of a minimum wage unless a payment exceeding this amount is reported. The output variable is `tscotl_s`.

2.5.2 Pension Contribution

Contributions bands are directly related to income in minimum wages with the following rules:

Table 2.11. Pension Contribution

	Employees	Employer	Self-Employed
Base	Wage	employee wage	40% labour income
Income in minimum wages	Pension Contribution		
< 1	4%(minwage)	12%(minwage)	16%(minwage)
≥ 1 and <25	4%(base)	12%(minwage)	16%(base)
≥ 25	4% (25 minimum wages)	12% (25 minimum wages)	16% (25 minimum wages)
Output	<code>tsceepi_s</code>	<code>tscerpi_s</code>	<code>tscsepi_s</code>

- **Employers**

Employers must pay 12% of each employee wage for concept of pension. The same limits in the case of wages below a minimum wage and above 25 minimum wages apply.

- **Others**

Contributions for people not working or pensioners are equal to 16% of the minimum wage unless a payment exceeding this amount is available. This amount is simulated by scaling up the reported contribution to Health by 1.28 ($16/12.5=1.28$). The output variable is `tscotpi_s`.

2.5.3 Fondo de Solidaridad Pensional (FSP)

Contributions to this fund are mandatory for workers and pensioners with incomes above certain thresholds. These resources are used to finance the non-contributory pension system.

The contribution rate is increasing in income following the rules in tables 2.9 and 2.10 For Self-employment the base is 40% of labour income.

Table 2.12 FSP Contribution for employees and self-employed



	Employees	Self-Employed
Base	Wage	40% labour income
Income in minimum wages	FSP Contribution	
< 4	0%(base)	0%(base)
≥ 4 and <16	1.0%(base)	1.0%(base)
≥ 16 and <17	1.2%(base)	1.2%(base)
≥ 17 and <18	1.4%(base)	1.4%(base)
≥ 18 and <19	1.6%(base)	1.6%(base)
≥ 19 and <20	1.8%(base)	1.8%(base)
≥ 20	2.0%(base)	2.0%(base)
Output	tscee00_s	tscse00_s

Table 2.13 FSP contribution for pensioners

	Pensioner
Base	Pension Income
Income in minimum wages	FSP Contribution
< 10	0%(base)
≥ 10 and <20	1.0%(base)
≥ 20	2.0%(base)
Output	tscpe00_s

2.5.4 Labour risk insurance contribution

Employers are liable to labour risk insurance contributions. The rate depends on the level of risk, with an increasing rate as risk increases.

- Risk 1: rate of 0.522% for activities financier, office work, administrative, education centers and restaurants.
- Risk 2: rate of 1.044% for some manufacture process like rug fabrication, weave, clothing y artificial flowers and some agricultural work.
- Risk 3: rate of 2.436% for some manufacture process like needles fabrication, alcohol and leather articles.
- Risk 4: rate of 4.350% for some manufacture process like oils fabrication, beers, and glasses, galvanizing processes, transports and private surveillance services.
- Risk 5: rate of 6.960% for sands, asbestos management, firefighters, explosives management, construction and oil exploitation.

Table 2.14 ARL Contribution for employer

	Employer



Base	Wage
Base in minimum wages	ARL contribution
Contribution < 1	rate%(minwage)
≥ 1 and <25	rate%(base)
≥ 25	rate% (25 minimum wages)
Output	tscerac_s

- **Private Social Development Funds contribution (Caja de Compensación Familiar CCF)**

Employers are liable to CCF contribution for each employee as follows:

Table 2.15 CCF Contribution for employer	Employer
Base	Wage
Income in minimum wages	CCF contribution
< 1	4%(minwage)
≥ 1 and <25	4%(base)
≥ 25	4% (25 minimum wages)
Output	tscer01_s

- **Severance contribution (Cesantias)**

Employers are liable to severance contributions. Paying in total one month of wage per year plus 12% of interests. Employers are liable to Severance contribution for each employee as follows:

Table 2.16 Severance contribution for employer

	Employer
Base	Wage
Income in minimum wages	Severance contribution
< 1	1.12*(minwage)/12



≥ 1 and <25	1.12*(base) /12
≥ 25	1.12* (25 minimum wages) /12
Output	tscersv_s

- **Vocational training contribution (SENA)**

Employers must pay 2% of each employee wage for concept of SENA, this contribution only applies in the case their business is not liable to income tax, i.e. non-for profit enterprises, government or for each employee earning more than 10 minimum wages per month. The same limits in the case of wages below a minimum wage and above 25 minimum wages apply.

Table 2.17 SENA Contribution for employer

	Employer
Base	Wage
Income in minimum wages	SENA contribution
< 1	2%(minwage)
≥ 1 and <25	2% (base)
≥ 25	2% (25 minimum wages)
Output	tscer02_s

- **Child Care Institution contribution (ICBF)**

Employers must pay 3% of each employee wage for concept of ICBF, this contribution only applies in the case their business is not liable to income tax, i.e. non-for profit enterprises, government or for each employee earning more than 10 minimum wages per month. The same limits in the case of wages below a minimum wage and above 25 minimum wages apply.

Table 2.18 ICBF Contribution for employer

	Employer
Base	Wage
Income in minimum wages	ICBF contribution
< 1	3%(minwage)
≥ 1 and <25	3% (base)
≥ 25	3% (25 minimum wages)



Output	tscer03_s
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2.6 Personal income tax (tin_s)

Personal income tax is regulated by the Tax code (*Estatuto Tributario*). Major reforms to the income tax captured by the model were introduced by the Act 1607 of 2012 on Tax Reform which entered into force in 2013, the act 1739 of 2014 which entered into force in 2015, and by the act 1819 of 2016 which entered into force in 2017. For the year 2014 there were three different methods to calculate the income tax: ordinary system, IMAN (Impuesto Mínimo Alternativo Nacional: “National Alternative Minimum Tax”) e IMAS (Impuesto Mínimo Alternativo Simple: “Simple Alternative Minimum Tax”). And with the third reform in 2016 the system of “cédulas” (Schedular Tax System) for differences in the types of income of natural persons was implemented while all previous systems were eliminated. Incomes with this reform are divided into 5 categories: 1) labour income, 2) pensions, 3) capital income, 4) non-labour income and 5) dividends and participations.

2.6.1 Tax unit

Personal income tax in Colombia is assessed at the individual level.

2.6.2 Taxable income, Exemptions and deductions

In what follows, the structure for the ordinary system in place between 2014-2016 is presented, then the minimum tax systems: IMAN and IMAS in place for the same period are shown.

Table 2.19 Taxable income, exemptions and deductions

Category	Element	Description	Variables
Total Income	Labour Income		ils_earn
	+Income from previous jobs		Yot
	+Pension Income		ils_pen
	+Property Income		Ypr
	= Taxable Income		i_IT_taxableY
Deductions	-Annual Mortgage Interest	Up to 1200 UVT per year	i_IT_Ded1
	-Annual Expenditure-Child Care	Up to 32 UVT per month (384 UVT per year) or 10% of Gross Income	i_IT_Ded2
	-Annual Health Payments	Yearly payments to contrib. health Up to 16 UVT per month	i_IT_Ded3



		(192 UVT) plus complementary health for the household (full)	
	= Preliminary tax base		i_IT_baseY1
Exempt Income	-Vital Minimum	25% Income exempt	i_IT_Exe_1
	- Pension Income	Annual Pension income up to 1000 UVT per month (12000 UVT)	i_IT_Exe_2
	-SIC Pension Exempt	SIC Pension exempt	i_IT_Exe_3
	-Voluntary Pension Contribution and AFC	Annual Voluntary Pension contribution and AFC	i_IT_Exe_4
	= Tax Base		i_IT_baseY

Definition of Income: Total income is composed of labour earnings (including bonuses) pension income and incomes from properties (except dividends).

Deductions and exemptions: It is possible to deduct mortgage interest payments up to 1200 UVT per year, annual expenditure on dependants up to 192 UVT per year or 10% of gross income (whichever the lower), health payments to contributory health up to 192 UVT per year and lastly any contribution to complementary health. From the resulting taxable income, it is possible to deduct 25% of wage income considered as vital income, pension income up to 12000 UVT per year and pension contributions being this three considered as exemptions.

2.6.3 Tax base

The tax base for income tax calculations is defined as total income minus exemptions, minus deductions. The tax base must be transformed to UVT for the purpose of calculating tax liabilities

2.6.4 Tax schedule

Table 2.20. Personal income tax schedule, ordinary system, 2014-2016, in UVT

Bracket	Over	But below	rate
1	0	1090	0%
2	1090	1700	19%
3	1700	4100	28%
4	4100	More	33%

- **COLMOD notes**

Personal Income tax is simulated under the assumption of full compliance only for formal employment income.



2.6.5 IMAN (2014-2016)

The 2012 tax reform introduced a minimum tax in order to prevent the excessive use of the abovementioned deductions in the ordinary system for salaried workers. In this system, the only possible deductions from total income are SIC payments: health and pension (including FSP). The resulting tax base is defined as taxable alternative base (RGA). The tax schedule in place for 2014-2016 is as follows:

Table 2.21. Personal income tax schedule, IMAN system, 2014

RGA in UVT		Tax in UVT	RGA in UVT		Tax in UVT	RGA in UVT		Tax in UVT
From	To		From	To		From	To	
0	1548	0	3339	3421	95.51	8145	8349	792.22
1548	1588	1.05	3421	3502	101.98	8349	8552	833.12
1588	1629	1.08	3502	3584	108.64	8552	8756	874.79
1629	1670	1.11	3584	3665	115.49	8756	8959	917.21
1670	1710	1.14	3665	3747	122.54	8959	9163	960.34
1710	1751	1.16	3747	3828	129.76	9163	9367	1,004.16
1751	1792	2.38	3828	3910	137.18	9367	9570	1,048.64
1792	1833	2.43	3910	3991	144.78	9570	9774	1,093.75
1833	1873	2.49	3991	4072	152.58	9774	9978	1,139.48
1873	1914	4.76	4072	4276	168.71	9978	10181	1,185.78
1914	1955	4.86	4276	4480	189.92	10181	10385	1,232.62
1955	1996	4.96	4480	4683	212.27	10385	10588	1,279.99
1996	2036	8.43	4683	4887	235.75	10588	10792	1,327.85
2036	2118	8.71	4887	5091	260.34	10792	10996	1,376.16
2118	2199	13.74	5091	5294	286.03	10996	11199	1,424.90
2199	2281	14.26	5294	5498	312.81	11199	11403	1,474.04
2281	2362	19.81	5498	5701	340.66	11403	11607	1,523.54
2362	2443	25.7	5701	5905	369.57	11607	11810	1,573.37
2443	2525	26.57	5905	6109	399.52	11810	12014	1,623.49
2525	2606	35.56	6109	6312	430.49	12014	12217	1,673.89
2606	2688	45.05	6312	6516	462.46	12217	12421	1,724.51
2688	2769	46.43	6516	6720	495.43	12421	12625	1,775.33
2769	2851	55.58	6720	6923	529.36	12625	12828	1,826.31
2851	2932	60.7	6923	7127	564.23	12828	13032	1,877.42
2932	3014	66.02	7127	7330	600.04	13032	13236	1,928.63
3014	3095	71.54	7330	7534	636.75	13236	13439	1,979.89
3095	3177	77.24	7534	7738	674.35	13439	13643	2,031.18
3177	3258	83.14	7738	7941	712.8	over 13.643 = 27%*RGA – 1.622		
3258	3339	89.23	7941	8145	752.1			



2.6.6 IMAS (2014-2016)

The reform also designed an alternative system. It has higher rates and it only applies for RGA below 4700 UVT for employees and 27000 UVT for self-employment. The tax schedule in place for 2014 -2016 was as follows:

Table 2.22. Personal income tax schedule, IMAS system for employees, 2014

RGA in UVT		Tax in UVT	RGA in UVT		Tax in UVT
From	To		From	To	
0	1548	0	2688	2769	75.24
1548	1588	1.08	2769	2851	84.3
1588	1629	1.1	2851	2932	93.35
1629	1670	1.13	2932	3014	102.4
1670	1710	1.16	3014	3095	111.46
1710	1751	1.19	3095	3177	122.79
1751	1792	2.43	3177	3258	136.13
1792	1833	2.48	3258	3339	149.47
1833	1873	2.54	3339	3421	162.82
1873	1914	4.85	3421	3502	176.16
1914	1955	4.96	3502	3584	189.5
1955	1996	5.06	3584	3665	202.84
1996	2036	8.6	3665	3747	216.18
2036	2118	8.89	3747	3828	229.52
2118	2199	14.02	3828	3910	242.86
2199	2281	20.92	3910	3991	256.21
2281	2362	29.98	3991	4072	269.55
2362	2443	39.03	4072	4276	282.89
2443	2525	48.08	4276	4480	316.24
2525	2606	57.14	4480	4683	349.6
2606	2688	66.19	4683	4700	382.95

Table 2.23. Personal income tax schedule, IMAS system for self-employment, 2014

Economic Activity	RGA in UVT from	Tax in UVT
Agriculture, forestry and fishing	7143	1.23%(RGA in UVT - 7143)
Wholesale Trade	4057	0.82%(RGA in UVT - 4057)



Retail trade	5409	0.82%(RGA in UVT - 5409)
Trade in motor vehicles, accessories and related products	4549	0.95%(RGA in UVT - 4549)
Building	2090	2.17%(RGA in UVT - 2090)
Electricity, gas and steam	3934	2.97%(RGA in UVT - 3934)
Manufacture of mineral and other products	4795	2.18%(RGA in UVT - 4795)
Manufacture of chemical substances	4549	2.77%(RGA in UVT - 4549)
Timber, cork and paper industry	4549	2.30%(RGA in UVT - 4549)
Food Manufacturing	4549	1.13%(RGA in UVT - 4549)
Manufacture of textiles, clothing and leather	4303	2.93%(RGA in UVT - 4303)
Mining	4057	4.96%(RGA in UVT - 4057)
Transport, storage and communications service	4795	2.79%(RGA in UVT - 4795)
Hotel, restaurant and similar services	3934	1.55%(RGA in UVT - 3934)
Financial services	1844	6.40%(RGA in UVT - 1844)
Sports activities and other recreational activities	4057	1.77%(RGA in UVT - 4057)

The process to determine the amount of income tax payable is as follows: First the ordinary system is compared with the IMAN system, the higher amount between these two systems is the tax due. Employees with taxable base below 4700 UVT or self-employment workers with taxable base under 27000 UVT have the possibility to compare the tax due for this last procedure with the amount due under the IMAS system and choose which one to pay. In the model we assume they rationally choose the lower amount to pay.

2.6.7 Schedular System (2017-)

The 2016 tax reform changed the way in which income tax of households is determined as from 2017. The deputation of the income corresponding to each of the schedules will be carried out independently. The result will constitute the schedular tax base. The concepts of income, costs, expenses, deductions, exempt income, tax benefits and other items that can be subtracted for the purpose of obtaining the liquid income of the schedule, may not be subject to simultaneous recognition in different schedules or generate double benefit. Deputation will be done in the following schedules:

- Labour income



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- Pensions
- Capital income
- Non-labour income
- Dividends and participations

Table 2.24 Taxable income, exemptions and deductions

Category	Element		Description	Variables
Labour Income Schedular System Tax	Total Income	+Labour Income		i_IT_taxableY1
	Exemption 1 (exe1)	-All SIC are exempt	All SIC (ingresos no constitutivos de renta- pagos a seguridad social)	i_IT_Exe_1
	Exemption 2 (exe2)	-Voluntary contributions to pensions and AFC payments	Reported pension and AFC payment, or up to 3800 UVT per year or 30% of Labour Income	i_IT_Exe_2
	Deduction 1 (ded1)	-Expenditure on health	Yearly payments to contrib. health Up to 16 UVT per month (192 UVT) plus complementary health for the household (full)	i_IT_Ded1
	Deduction 2 (ded2)	-Expenditure on dependent relatives	Up to 32 UVT per month (384 UVT per year) or 10% of Gross Income	i_IT_Ded2
	Deduction 3 (ded3)	-Annual Mortgage Interest	Up to 1200 UVT per year	i_IT_Ded3
	Tax base (preliminary)	= Tax Base Labour (ingreso laboral)	Labour income – exe1-exe2-ded1-ded2-ded3	i_IT_baseY1_0
	Exemption 3 (exe3)	-Vital Minimum (Tax base labour = 0 required)	25% of preliminary tax base exempt up to 240UVT per month	i_IT_Exe_3
	Limits on exemptions	The minimum of all exemptions and deductions (not including		i_IT_Lim_Ded_Exe



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	and deductions (lime&d)	SIC) or 40% of base min us SIC. With an upper limit of 5040 UVT per year		
	Tax Base	= Tax Base Labour (labour income)	Labour income - exe1- lime&d	i_IT_baseY1
Pension Income Schedular System Tax	Total Income	+Pension Income		i_IT_taxableY2
	Exemption 4 (exe4)	- All SIC conditional	All SIC if not used in Labour Income	i_IT_Exe_4
	Exemption 5 (exe5)	- Pension Income	Annual Pension income up to 1000 UVT per month (12000 UVT)	i_IT_Exe_5
	Tax Base	Tax Base Pension Income (Rentas de pensiones)	Pension income - exe4 - exe5	i_IT_baseY2
Capital Income Schedular System Tax	Total Income	+Capital Income		i_IT_taxableY3
	Exemption 6 (exe6)	- All SIC conditional	All SIC if not used in Labour or Pension Income	i_IT_Exe_4
	Tax Base	= Tax Base Capital (Rentas de capital)	Capital income - exe6	i_IT_baseY3

LABOUR INCOME

Definition: Income from this schedule is the exclusive income from labour, those obtained by natural persons for wage, commissions, social benefits, per diem, representation expenses, fees, ecclesiastical emoluments, compensation for personal services.

Deductions and exemptions: The exceptions and deductions that can be made in this schedule are: mandatory payments to SIC are exempt income. Voluntary contributions to pensions and AFC (Ahorro y Fomento a la Construcción: “Savings and Construction Promotion”) payments. 25% of labour income are exempt. Expenditure on health i.e. prepaid medicine is deductible. Expenditure on dependent relatives and mortgage interest are also deductible.

Taxable base for labour income: To establish the tax base for this schedule, from the total income of this schedule obtained in the taxable period, the abovementioned deductions and exemptions are subtracted provided they do not exceed 40% of income or do not exceed 5040 UVT per year.



PENSION INCOME

Definition: Retirement, disability, old-age, survivors and occupational risk pensions are income from this schedule, as well as those coming from compensations replacing pensions or refunds of pension savings balances.

Deductions and exemptions: The exceptions and deductions that can be made in this schedule are mandatory payments to SIC if not used in previous schedules. For exempt income, pension income must be taxed only in the part of the monthly payment that exceeds 1,000 UVT.

Taxable base for pension income: Of the total income the no constituent income attributable to this schedule is subtracted and exempt income.

Table 2.25 Tax schedule for labour and pension income

Bracket	Over	But below	Marginal rate
1	0	1090	0%
2	1090	1700	19%
3	1700	4100	28%
4	4100	More	33%

CAPITAL INCOME

Definition: Income from this schedule is obtained from interest, financial performances, leases, royalties and exploitation of intellectual property.

Deductions and exemptions: The exceptions and deductions that can be made in this schedule are mandatory payments to SIC if not used in previous schedules and the costs and expenses frequently and borne by the taxpayer. All exempt income and deductions attributable to this schedule may be subtracted, provided they do not exceed 10% of the previous result, which in any case cannot exceed one thousand (1000) UVT. In the case of the model we only are able to include SIC payments.

NON-LABOUR INCOME (NOT SIMULATED)

Definition: Income from no-labour income is consider to be all those that are not expressly classified in any of the other schedule. The fees received by natural persons who provide services and who hire or link at least 90 continuous or discontinuous days, two or more workers or contractors associated with the activity, will be income from the no-labour income schedule.

Deductions and exemptions: The exceptions and deductions that can be made in this schedule are mandatory payments to SIC and the costs and expenses frequently and borne by the taxpayer. All exempt income and deductions attributable to this schedule may be subtracted, provided they do not exceed 10%



of the previous result, which in any case may not exceed one thousand (1000) UVT.

Table 2.26 Tax schedule for Non-labour and Capital income

Bracket	Over	But below	Marginal rate
1	>0	600	0%
2	>600	1000	10%
3	>1000	2000	20%
4	>2000	3000	30%
5	>3000	4000	33%
6	>4000	more	35%

INCOME FROM DIVIDENDS AND PARTICIPATIONS (NOT SIMULATED)

Definition: Income from this schedule are those received by way of dividends and participations, and constitute taxable income at the head of the partners, shareholders, community members, associates, subscribers and the like, who are resident natural persons and illiquid successions of causes that at the time of death they were residents, received from distributions from national companies and entities, and from foreign companies and entities.

Deductions and exemptions: The exceptions and deductions that can be made in this schedule are income received in the member countries of the Andean Community of Nations (CAN), by natural persons resident in Colombia and companies whose shares are publicly traded.

Table 2.27 Tax schedule for dividends and participations

Bracket	Over	But below	Marginal rate
1	>0	600	0%
2	>600	1000	5%
3	>1000	More	10%

It is important to point out that for effects to the simulation in the model will not have into account the schedules of non-labour income and, dividends and participations, because to information available in the survey.

2.7 Indirect Taxes

2.7.1 VAT

VAT is an indirect tax on sales of all goods and services of the economy and is applied to national operations as well as imported ones. Currently, there are three types of goods: taxed, exempt and excluded. Since 2012 there are three different rates, 0 percent (exempt rate) 5 percent (reduced rate) and 16 percent (general rate), however, since 2016, the general rate increased to 19 percent (see Act



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1819 of 2016). There are also some goods and services excluded for the tax (see Art. 423-427 E.T for goods excluded, and 476-486 E.T for services excluded).

Excluded items mainly consist of non-processed food and essential services such as Health and Education.

Differential VAT rate is 5 percent for certain products of the family basket, specifically:

- Corn flour and other flours
- Pasta
- Other cereals
- Cold meats and sausages
- Sugar
- Coffee
- Chocolate
- Private insurance
- Protection services inside and outside the home
- Complementary health payments

The remaining items have the general rate 16% up to 2015, and 19% for the period 2016-2018.

2.7.2 Consumption Tax

The tax reform of 2012 created the consumption tax. The Article 512-1 of the Tax Code (*Estatuto Tributario*) specifies that the tax is generated by the sale to the final consumer or the import by the final consumer of the following services and goods:

- Mobile telephony, internet and mobile navigation.
- Cars, ships, airplanes.
- Prepared food and drinks (service on bars, restaurants, cafeterias, etc.).

The current national consumption tax has the following rates: 4, 8 and 16 percent for the following items:

- 4 percent rate: Mobile phone service
- 8 percent rate: Restaurant and bar service; family-type motor vehicles whose FOB value is less than USD \$ 30,000, motorcycles with piston greater than 200 c.c.; yachts and other boats and pleasure or sport boats.
- 16 percent rate: Family-type motor vehicles whose FOB value is equal to or greater than USD \$ 30,000; pick-up whose FOB value or the equivalent of the FOB value, is equal to or greater than USD \$ 30,000; aircrafts (helicopters, airplanes, balloons and airships).



3. DATA

3.1 General description

For COLMOD Quality of life National Survey (Encuesta Nacional de Calidad de Vida, ENCV) is used. Especially due to the expenditure modules which allow constructing deductions in the income tax and including information on paid taxes also, especially car and property taxes which are impossible to simulate due to lack of information.

ENCV is a national household survey carried out each year by the National Administrative Department of Statistics (Departamento Nacional de Estadística, DANE) which focuses on measuring people's well-being. It has a detailed information in the Health and Education modules and a work-force module with information on earnings. It interviews approximately 20,000 urban and rural households, 70,000 individuals only once (cross-section). The target population is restricted to the non-institutional resident civilian population throughout the country, excluding the rural area of San Andrés and the Orinoco-Amazon. (DANE, 2015).

Features for the model: Despite not having a detailed module to capture non-labour income, it allows for the identification of the two subsidies namely: MFA and Colombia Mayor and their respective amounts at household level. The labour income questionnaire is very similar to that in the Great Integrated Household Survey (GEIH, Gran Encuesta Integrada de Hogares) the main labour survey in Colombia also used for the analysis of poverty and income inequality.

Table 3.1 COLMOD database description

COLMOD database	CO_2014_a1
Original name	ENCV 2014
Provider	National Administrative Department of Statistics (Departamento Nacional de Estadística, DANE)
Year of collection	2014
Period of collection	08-2014/10/2014
Income reference period	2014
Sample size	20,141 households / 67,548 individuals

3.2 Data adjustment

Adjustments to the data and variables are kept to a minimum. Individuals recorded as domestic employees in a household have been dropped, as information about their own household (e.g. number of children, expenditures, etc.) is not available. In total 216 individuals (0.32% of the sample) were dropped from the original sample but no households were dropped. No adjustments to the weights were done as a result of these drops.



Some data cleaning has been done to ensure that the relationship between household members is consistent. In particular partner's identifiers had to be generated based on information about identifiers of mothers and fathers, relationship to the head of the household, gender and age of individuals. Such adjustments concern mostly households where multiple couples are observed.

3.3 Imputations and assumptions

For labour incomes (employment and self-employment) and old age pension income, cases with non-response, extreme values and false-zeros of a monetary value were imputed using Hot-Deck methodology following MESEP-DANE-DNP (2010) documentation for the imputation of incomes for poverty and inequality measures²⁰.

3.3.1 Time period

Information about demographic variables in ENCV refers to the time of the data collection. Information on employee earnings refers to the last month. Similarly, information about pensions and benefits refers to receipts in the most recent relevant period (e.g. month or last 12 months, etc.) before the interview. Self-employment income is based on the last 12 months in rural areas and last month in urban areas. Investment income is based on the last 12-months. For expenditures, information is collected differentiating between daily, monthly, 3-month, 6-month and yearly expenditures.

All monetary amounts in the ENCV are expressed in monthly terms, as required for the COLMOD database. In COLMOD calculations it is implicitly assumed that income is received at the same rate throughout the year. However, it should be remembered that this may not be the case and in particular that income tax (based on annual income) simulations do not take account of changes that may happen during the year.

3.3.2 Gross incomes

Labour Income

Labour Income depends on employment condition: employee or self-employed. For the microsimulation model this income is also divided in formal and informal using the social security definition, this distinction is made in order to simulate social insurance contributions (SIC) correctly. All formal workers pay SIC and informal workers do not.

Employee

For employees labour income is the result of wages and other labour compensations. For the Colombian case those compensations are:

²⁰ The results of the imputations are in an annex table.



Employment bonuses: Primas mensuales, de servicios, de navidad, de vacaciones y bonificaciones anuales.

Employment benefits: Subsidios de alimentación, vivienda y familiar.

Self Employed

For those self-employed labour Income is defined as the net profit received. For urban workers the survey asks for monthly income received. For rural workers the net profit from the harvest or business for the last 12 months. For those Self-Employed net incomes is transformed to Gross-Income (before taxes) by adding SIC and income tax as reported in the survey.

Additional Jobs and labour income from past jobs

Income from a second job. It is not possible to determine if working as employee or self-employment, it is not possible to distinguish if paying SIC for this job or not. It includes labour income received the month before from past jobs if not currently working.

Non Labour Income

It comprises income from:

Investment: layoffs, interest layoffs, interest on loans o CDT (Certificado de Depósito a Término: “Term Deposit Certificate”) and raffles.

Private Transfers: Money aid from others homes or institutions and alimentary pension.

Properties: Rents of houses, apartmens, recreational farms, allotment, vehicles, machines and equip.

Sale: Sales of properties, houses, buildings, allotment, machines, vehicles, home appliances. etc.

3.4 Updating

COLMOD is available for the years 2014-2018

4. VALIDATION

4.1 Aggregate validation

COLMOD results have been validated against external benchmarks. Detailed comparisons of the number of people receiving a given income component and total yearly amounts are shown in Annex 1. Both market incomes and non-simulated taxes and benefits in the input dataset as well as simulated taxes and benefits are validated against external official data. The main discrepancies between COLMOD results and external benchmarks are discussed in the following sub-sections. Factors that may explain the observed differences are also discussed.



4.1.1 Validation of incomes inputted into the simulation

Table 6.2 in Annex 1 shows the number of employed, unemployed and out of the labour force in the dataset used for COLMOD simulations against GEIH (Gran Encuesta Integrada de Hogares: “Great Integrated Household Survey”) the main labour survey. The database only slightly under represents the number of people in work. On the other hand, there is a more important under estimation of the number of people in unemployment close to 20% of GEIH. Working age population is almost identical in both datasets. Discrepancies could be a result of the set of questions used to define these populations groups and of the timing of questionnaires being GEIH a year around survey also.

Table 6.3 in Annex 1 presents the aggregate amount of employment and self-employment income obtained with COLMOD and with the external data of GEIH. For employment income, aggregate value, mean, median, 25 and 75 percentiles are very similar, differences not exceeding 5%. For self-employment differences are more marked. Mean income in ENCV/COLMOD for self-employment is 14% higher than in GEIH, nevertheless median 2,5 and 75 percentiles are lower for COLMOD 5%, 25% and 3% respectively. Lastly, aggregate income is 10% in COLMOD than in GEIH.

4.1.2 Validation of outputted (simulated) incomes

Table 6.4 Compares Simulated benefits in COLMOD with external statistics from DPS (2014) which administers Familias en Accion Ministry of Labour (2015) which administers Colombia Mayor. For the former programme COLMOD underestimates the number of beneficiaries by 13% and especially when considering families (20%). However, results for mean family payment are only 7% lower than official statistics. In the case of Colombia Mayor, while the model underestimates the number of beneficiaries by 18% it is above the reported value of the programme by 5%. Lastly, the mean payment is 28% higher than in the external data. This last result could be due to the additional contribution of municipalities which is not considered in the value of the programme for the central government. It is worth highlighting that in ENCV we are unable to identify the town for each observation. This is a likely driver of the mentioned discrepancies as both cash transfers amounts depend on location. We were unable to validate emergency/displacement assistance.

Table 6.5 in Annex 1 presents a comparison of monthly payments of Social Insurance Contributions and Income Taxes in COLMOD and External data from GEIH and National Accounts (DANE). While the number of payers is similar for SIC in COLMOD and GEIH, total amounts in COLMOD underestimate reported contributions in national accounts. SIC for employees are only a 69% of those reported by DANE while income tax for individuals is 75% of the DANE’s reported value.

4.2 Income distribution

The results presented in this section focus on income inequality and poverty. They are computed for individuals according to their household disposable



income (HDI) using the “modified OECD” equivalence scale, which is the approach used to calculate poverty in developed economies. The weights in the OECD equivalence are: first adult=1; additional people aged 14+ = 0.5; additional people aged under 14 = 0.3. In COLMOD HDI is calculated as the sum of all income sources (including simulated benefits) of all household members net of simulated income tax and social insurance contributions. For the ENCV database HDI uses reported benefits, taxes and social insurance contributions instead of their simulated counterparts. Lastly, for GEIH-MESEP data, HDI does not deduct SIC and taxes payments as they are not recorded for the survey. Additionally, for this dataset incomes were imputed by the DANE following MESEP-DANE-DNP (2010) procedures to estimate poverty.

4.2.1 Poverty rates

Table 6.6 in Annex 1 presents statistics on poverty in Colombian for different age groups. For all cases, the relative poverty line is defined as 60% of median equivalised disposable income. For COLMOD this poverty line is COP 265,666, for ENCV COP 269,578 and for GEIH-MESEP COP315,357.²¹ The latter figure being higher as a result of not deducting SIC and taxes and also of income imputation.

Total poverty is around 28% being higher for under 18 years old (35%) and above 65 years old (34%). Despite these differences, our measure of relative poverty is quite similar for the three databases, being no more than 5% different of the external data for the different age groups studied.

4.2.2 Income inequality

Table 6.6 also compares income inequality from COLMOD results with those of ENCV and the external database. Gini coefficients were 0.53, 0.55 and 0.51 for COLMOD, ENCV and GEIH-MESEP respectively. Income inequality obtained with COLMOD matches very well these two datasets, being below ENCV by 3% and above GEIH-MESEP by 4%.

4.3 Summary of “health warnings”

- Pension payments in ENCV are recorded in a single variable. In order to provide specific information of different types of pensions income (e.g. old-age pensions, disability pensions, survivor’s pensions, etc.) the information from ENCV was disaggregated based on personal characteristics of the recipients of pension payments. There will be inevitably some bias due to benefit splitting.
- There is underrepresentation of people with higher incomes in the ENCV survey, which are likely to result in an underestimation of personal income tax.

²¹ USD\$141.4, USD\$143.5 and USD\$167.8 respectively.



- The household income concept used for calculations of official poverty statistics differs from the concept of household disposable income used in COLMOD. The comparison of poverty and inequality results should therefore be taken with care.
- Poverty rates for certain groups based on COLMOD simulated disposable income are quite similar to those in the external data despite differences in the definition of disposable income.

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6. ANNEX 1: MACROVALIDATION TABLES

Table 6.1: Imputations

Variable	Original mean (COP)	Final mean (COP)	Variation (%)	Variable	Original mean (COP)	Final mean (COP)	Variation (%)
1 yem	998.798	1.001.040	0,2%	21 x0010	6.246	6.246	0,0%
2 yse	798.725	780.910	-2,2%	22 x0011	3.891,2	3.892	0,0%
3 ypr	641.005	644.097	0,5%	23 x0012	8.984	8.980	0,0%
4 ypt	158.139	157.227	-0,6%	24 x0013	10.358	10.352	-0,1%
5 yiy	172.562	211.474	22,5%	25 x0014	7.075	7.074	0,0%
6 yot	448.021	444.593	-0,8%	26 x0015	5.217	5.216	0,0%
7 poa	1.372.176	1.350.364	-1,6%	27 x0016	6.643	6.642	0,0%
8 psu	1.045.680	1.026.387	-1,8%	28 x0017	7.236	7.233	0,0%
9 yembo	155.304	155.916	0,4%	29 x0018	7.409	7.412	0,0%
10 ywl	1.706.002	1.706.883	0,1%	30 x0019	4.862	4.860	0,0%
11 yaj	415.365	415.199	0,0%	31 x0020	7.711	7.713	0,0%
12 x0001	8.007	8.006	0,0%	32 x0021	7.416	7.419	0,0%
13 x0002	11.809	11.806	0,0%	33 x0022	80.853	80.905	0,1%
14 x0003	6.325	6.325	0,0%	34 x0023	17.299	17.304	0,0%
15 x0004	19.385	19.379	0,0%	35 x0024	59.084	59.054	-0,1%
16 x0005	13.312	13.317	0,0%	36 x0025	7.613	7.613	0,0%
17 x0006	14.348	14.345	0,0%	37 x0026	962	962	0,0%
18 x0007	8.232	8.231	0,0%	38 x0027	34.333	34.335	0,0%
19 x0008	6.443	6.444	0,0%	39 x0028	43.310	43.273	-0,1%
20 x0009	14.568	14.566	0,0%	40 x0029	37.243	37.227	0,0%
Variable	Original mean (COP)	Final mean (COP)	Variation (%)	Variable	Original mean (COP)	Final mean (COP)	Variation (%)
41 x0030	25.965	25.952	0,0%	61 x0053	20.771	20.771	0,0%
42 x0031	4.725	4.725	0,0%	62 x0054	59.767	59.738	0,0%
43 x0032	7.090	7.089	0,0%	63 x0060	213.950	213.909	0,0%
44 x0033	9.008	9.005	0,0%	64 x0061	122.086	122.082	0,0%
45 x0034	53.911	53.936	0,0%	65 x0062	22.317	22.323	0,0%
46 x0035	70.882	70.849	0,0%	66 x0063	54.032	53.938	-0,2%
47 x0036	5.190	5.192	0,0%	67 x0064	296.463	296.857	0,1%
48 x0037	78.262	78.262	0,0%	68 x0065	48.087	48.079	0,0%
49 x0040	45.076	45.068	0,0%	69 x0066	105.181	105.202	0,0%
50 x0041	27.720	27.706	0,0%	70 x0067	132.287	132.232	0,0%
51 x0042	10.267	10.265	0,0%	71 x0068	20.294	20.293	0,0%
52 x0043	18.022	18.055	0,2%	72 x0069	125.166	125.185	0,0%
53 x0044	8.085	8.087	0,0%	73 x0070	173.508	173.508	0,0%
54 x0045	40.250	40.475	0,6%	74 x0071	1.006.449	1.006.271	0,0%
55 x0046	22.361	22.360	0,0%	75 x0072	1.771.605	1.770.420	-0,1%



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56	x0047	96.445	96.430	0,0%	76	x0073	233.600	233.511	0,0%
57	x0048	420.556	421.129	0,1%	77	x0074	118.896	118.861	0,0%
58	x0049	38.894	38.941	0,1%	78	x0075	798.008	798.515	0,1%
59	x0050	486.863	485.270	-0,3%	79	x0076	1.195.877	1.219.729	2,0%
60	x0051	28.009	27.985	-0,1%	80	x0077	1.702.633	1.698.006	-0,3%

	Variable	Original mean (COP)	Final mean (COP)	Variation (%)		Variable	Original mean (COP)	Final mean (COP)	Variation (%)
81	x0078	7.871.787	7.865.097	-0,1%	101	x0108	38.792	38.792	0,0%
82	x0080	432.279	426.700	-1,3%	102	x0108	38.792	38.794	0,0%
83	x0083	727.887	727.828	0,0%	103	x0108	38.794	38.794	0,0%
84	x0084	228.391	228.146	-0,1%	104	x0108	38.794	38.785	0,0%
85	x0085	398.015	417.918	5,0%	105	x0108	38.785	38.785	0,0%
86	x0086	2.023.230	2.019.737	-0,2%	106	x0111	36.296	36.264	-0,1%
87	x0087	364.093	363.897	-0,1%					
88	x0088	814.367	814.230	0,0%					
89	x0089	124.734	124.688	0,0%					
90	x0090	378.073	377.956	0,0%					
91	x0091	504.157	504.157	0,0%					
92	x0092	421.177	421.203	0,0%					
93	x0093	1.018.056	1.017.877	0,0%					
94	x0094	465.384	465.384	0,0%					
95	x0095	1.092.399	1.092.399	0,0%					
96	x0101	53.653	53.635	0,0%					
97	x0102	273	273	0,0%					
98	x0103	19.733	19.604	-0,7%					
99	x0104	12.046	11.991	-0,5%					
100	x0105	29.416	29.416	0,0%					

Source: (COLMOD, 2019) Note: the mean was obtained from values different to zero in each variable.



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Table 6.2: Number of employed and unemployed (in thousands)

	COLMOD		External				Ratio			
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Number of employed	19.789,0	21.503,0	22.017,0	22.156,0	22.383,0	0,92	0,90	0,89	0,88	0,88
Number of unemployed	1.704,0	2.151,0	2.156,0	2.249,0	2.314,0	0,79	0,79	0,76	0,74	0,71

Source External: DANE-GEIH (2014-2019)

Note: It includes family workers and workers in firms but without remuneration

Table 6.3: Market income in COLMOD: number of recipients (in thousands)

	COLMOD/ENCV		External				Ratio			
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Employment income	10.068,0	10.372,0	10.783,0	10.865,0	10.838,0	0,97	0,94	0,93	0,93	0,93
Self-employment income	9.722,0	10.085,0	10.427,0	10.553,0	10.723,0	0,96	0,95	0,93	0,92	0,91

Source External: DANE-GEIH (2014-2019)

Table 6.4: Market income in COLMOD: annual amounts (in millions)

	COLMOD					External					Ratio				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Employment income	139,800	146,200	156,500	167,400	177,300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employment income	98,153	102,700	109,700	117,500	124,500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source External: DANE-GEIH (2014-2019)

Table 6.5: Tax–benefit instruments included but not simulated in COLMOD: number of recipients/payers (in thousands)

	COLMOD					External					Ratio				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Old-age pensions	1.460	1.460	1.460	1.460	1.460	1.193	1.230	1.262	1.296	1.343	1,22	1,19	1,16	1,13	1,09
Disability pensions	24	24	24	24	24	73	82	93	103	107	0,33	0,29	0,26	0,23	0,23
Survivors' pensions	376	376	376	376	376	286	307	329	345	357	1,31	1,22	1,14	1,09	1,05
(FEST)	134	134	134	134	134	43	43	43	35	33	3,12	3,15	3,12	3,83	4,04

Source External: Superintendencia Financiera (2019), Informes de gestión Departamento para la Prosperidad Social (Programa Familias en su Tierra-FEST)



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Table 6.6: Tax–benefit instruments included but not simulated in COLMOD: annual amounts (in millions)

	COLMOD					External					Ratio				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Old-age pensions	23.662.953	24.751.987	26.484.645	28.338.576	30.010.533	21.465.501	22.847.411	24.910.191	27.382.287	29.345.207	1,10	1,08	1,06	1,03	1,02
Disability pensions	265.111	277.313	296.725	317.495	336.227	436.402	503.280	593.849	700.709	766.221	0,61	0,55	0,50	0,45	0,44
Survivors' pensions	4.625.332	4.838.203	5.176.881	5.539.263	5.866.076	2.576.491	2.858.012	3.285.476	3.697.111	4.092.504	1,80	1,69	1,58	1,50	1,43
War and natural Disasters Relief	163.240	170.752	182.705	195.494	207.028	92.408	106.208	123.622	119.417	119.722	1,77	1,61	1,48	1,64	1,73

Source External: Superintendencia Financiera (2019), Informes de gestión Departamento para la Prosperidad Social (Programa Familias en su Tierra-FEST)

Table 6.7: Tax–benefit instruments simulated in COLMOD: number of recipients/payers (in thousands)

	COLMOD					External					Ratio				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Benefits															
Colombia Mayor	1.201	1.201	1.201	1.201	1.201	1.469	1.474	1.500	1.504	1.528	0,82	0,81	0,80	0,80	0,79
Familias en acción	2.458	2.458	2.458	2.458	2.458	2.676	2.553	2.508	2.492	2.399	0,92	0,96	0,98	0,99	1,02
Taxes and social contributions (SICs)															
Income tax	552	562	590	552	568	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employee SIC	5.890	5.890	5.890	5.890	5.890	6.347	N/A	N/A	8.590	8.730	0,93			0,69	0,67
Self-employed SIC	988	988	988	988	988	1.077	N/A	N/A	274	N/A	0,92	N/A	N/A	3,61	N/A
Employers SIC	5.890	5.890	5.890	5.890	5.890	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VAT	13.701	13.701	13.701	13.701	13.701	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Consumption tax	10.482	10.483	10.483	10.483	10.483	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source External: Ministerio del trabajo (2014), informes de gestión Departamento de Prosperidad Social (Más Familias en Acción), Asocajas

Table 6.8: Tax–benefit instruments simulated in COLMOD: annual amounts (in millions)

	COLMOD					External					Ratio				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Benefits															
Colombia Mayor	979.478	979.478	979.478	979.478	979.478	1.039.384	1.224.734	1.228.079	1.232.715	1.248.737	0,94	0,80	0,80	0,79	0,78
Familias en acción	2.398.499	2.489.955	2.584.068	2.716.655	2.925.781	2.267.076	1.976.540	1.997.610	1.897.521	1.806.167	1,1	1,3	1,29	1,43	1,62
Taxes and social contributions (SICs)															
Income tax	5.838.341	6.426.942	6.993.420	5.933.773	6.377.123	6.125.000	6.452.000	7.180.000	N/A	N/A	0,95	1,00	0,97		
Employee SIC	7.536.620	7.883.218	8.435.325	9.025.504	9.558.003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-employed SIC	3.648.462	3.816.375	4.083.524	4.369.371	4.627.162	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Employers SIC	28.431.572	29.740.071	31.826.198	34.049.439	36.058.333	40.876.000	43.448.000	46.769.000	N/A	N/A	0,70	0,68	0,68	N/A	N/A
VAT	11.406.579	12.179.700	12.879.717	15.779.627	16.281.014	28.313.654	29.598.672	30.686.589	37.516.564	40.856.078	0,40	0,41	0,42	0,42	0,40
Consumption tax	1.128.216	1.208.820	1.286.860	1.344.117	1.387.193	1.744.718	1.824.553	1.844.428	2.107.892	2.214.402	0,65	0,66	0,70	0,64	0,63



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Source External: Prosperidad Social: Dirección de Ingreso Social (DIS)/Dirección de Transferencias Monetarias Condicionadas (DTMC), Dian /DANE-CEI (2019)

Table 6.9: Absolute poverty rates and income inequality

	COLMOD					External					Ratio				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Poverty															
Total	38,2%	38,7%	39,0%	37,8%	36,6%	28,5%	27,8%	28,0%	26,9%	27,0%	1,34	1,39	1,39	1,41	1,35
Urban	28,4%	28,8%	29,1%	28,0%	26,8%	24,6%	24,1%	24,9%	24,2%	24,4%	1,15	1,19	1,17	1,16	1,10
Rural	71,7%	72,3%	72,8%	71,5%	69,7%	41,4%	40,3%	38,6%	36,0%	36,1%	1,73	1,79	1,88	1,99	1,93
0-18 years	48,8%	49,3%	49,6%	48,2%	46,6%	40,4%	39,4%	39,8%	38,7%	38,7%	1,21	1,25	1,25	1,25	1,21
19-64 years	31,9%	32,3%	32,6%	31,6%	30,4%	22,4%	22,1%	22,4%	21,4%	21,8%	1,43	1,46	1,46	1,48	1,39
65+ years	38,2%	38,7%	39,1%	38,5%	37,6%	21,3%	20,4%	20,4%	18,9%	18,8%	1,80	1,90	1,92	2,04	2,00
Extreme Poverty															
Total	12,8%	13,4%	14,9%	13,5%	12,8%	8,1%	7,9%	8,5%	7,4%	7,2%	1,58	1,70	1,75	1,83	1,78
Urban	7,3%	7,7%	8,8%	7,8%	7,3%	5,1%	4,9%	5,6%	5,0%	4,9%	1,44	1,57	1,58	1,55	1,49
Rural	31,4%	33,0%	35,5%	33,1%	31,4%	18,0%	18,0%	18,1%	15,4%	15,4%	1,75	1,83	1,96	2,15	2,04
0-18 years	16,5%	17,4%	19,3%	17,5%	16,4%	12,4%	12,2%	13,1%	11,5%	11,3%	1,33	1,43	1,47	1,52	1,45
19-64 years	10,0%	10,5%	11,6%	10,5%	9,9%	5,8%	5,8%	6,1%	5,4%	5,3%	1,73	1,81	1,91	1,95	1,87
65+ years	17,0%	17,7%	19,5%	18,4%	17,9%	6,0%	5,6%	6,2%	5,2%	5,1%	2,83	3,15	3,15	3,53	3,52
Inequality															
Gini	0,547	0,547	0,547	0,550	0,550	0,538	0,522	0,517	0,508	0,517	1,02	1,05	1,06	1,08	1,06

Source External: GEIH - MESEP (2014-2018)

Table 6.10: Relative poverty rates by region and age

	COLMOD					External					Ratio				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Relative Poverty (Different thresholds)															
40% of median HDI	15,2%	15,2%	15,3%	15,4%	15,4%	14,9%	14,1%	13,8%	13,1%	13,5%	1,02	1,08	1,11	1,17	1,14
50% of median HDI	21,1%	21,0%	21,1%	21,1%	21,2%	21,3%	20,7%	20,0%	19,4%	19,9%	0,99	1,02	1,06	1,09	1,06
60% of median HDI	27,3%	27,3%	27,4%	27,4%	27,4%	27,7%	27,2%	26,7%	26,2%	26,4%	0,99	1,00	1,02	1,05	1,04
70% of median HDI	33,6%	33,6%	33,7%	33,7%	33,7%	34,0%	33,6%	33,2%	33,0%	32,9%	0,99	1,00	1,01	1,02	1,03
Relative Poverty by subgroups (60% median HDI)															
Urban	18,5%	18,5%	18,5%	18,6%	18,6%	18,3%	17,7%	18,1%	17,9%	18,1%	1,01	1,05	1,02	1,04	1,03
Rural	57,2%	57,3%	57,4%	57,5%	57,6%	59,0%	58,9%	55,9%	54,4%	54,8%	0,97	0,97	1,03	1,06	1,05
0-18 years	33,2%	33,2%	33,3%	33,3%	33,3%	36,9%	36,1%	35,7%	35,1%	35,4%	0,90	0,92	0,93	0,95	0,94
19-64 years	22,8%	22,9%	22,9%	22,9%	22,9%	22,4%	22,2%	21,8%	21,4%	21,7%	1,02	1,03	1,05	1,07	1,06
65+ years	34,3%	34,4%	34,5%	34,8%	34,9%	26,5%	25,7%	25,0%	24,4%	24,3%	1,29	1,34	1,38	1,43	1,44

Source External: GEIH - MESEP (2014-2018)