

# Taxation of Goods and Services in the Informal Sector in Cameroon

Fomba Kamga Benjamin  
and  
Mvolo Bessala Claude Benjamin

Research Paper 416

AFRICAN ECONOMIC RESEARCH CONSORTIUM  
CONSORTIUM POUR LA RECHERCHE ÉCONOMIQUE EN AFRIQUE

# Taxation of Goods and Services in the Informal Sector in Cameroon

By

Fomba Kamga Benjamin  
Faculty of Economic Sciences and Management  
University of Yaoundé II-Soa, Yaoundé, Cameroon

and

Mvolo Bessala Claude Benjamin  
Directorate General of Taxation  
Ministry of Finance

AERC Research Paper 416  
African Economic Research Consortium, Nairobi  
January 2021

THIS RESEARCH STUDY was supported by a grant from the African Economic Research Consortium. The findings, opinions and recommendations are, however, those of the author and do not necessarily reflect the views of the Consortium, its individual members or the AERC Secretariat.

Published by: The African Economic Research Consortium  
P.O. Box 62882 - City Square  
Nairobi 00200, Kenya

ISBN            978-9966-61-111-6

© 2021, African Economic Research Consortium.

# Contents

List of tables

List of figures

List of abbreviations and acronyms

Abstract

1.	Introduction	1
2.	The Cameroonian tax system	7
3.	Literature review	13
4.	Methodological framework	15
5.	Data	19
6.	Empirical results	21
7.	Conclusion and implications for economic policy	29
	Notes	32
	References	34
	Annexes	36

## List of tables

1.	Non-agricultural structure of employment by branch of activity according to institutional sector (%)	2
2.	Comparison of IPU performance according to type of employment by area (monthly values in thousands of FCFA)	3
3.	Remuneration by area	4
4.	The growth of revenue from taxes 1999/2000-2008 (FCFA billion)	5
5.	Scale of PIT	7
6.	Class of licence and corresponding rates	8
7.	Tariffs for liquor licence contributions	8
8.	Global tax tariff	9
9.	Flat-rate amount of monthly BR owed by workers	11
10.	Mode of product acquisition	20
11.	Place (X) of acquisition of the product (S)	20
12.	Average expenditure per station and quintile of expenditure	22
13.	Share of total purchases in the informal sector	23
14.	Percentage of amount of purchase in the informal sector per branch of industry of household head and category of product	23
15.	Structure of consumption per quintile of expenditure	24
16.	Price and income elasticity in the formal sector (average values)	26
17.	Price and income elasticity in the informal sector (average values)	26
18.	Level of imposition compatible with efficiency	27
B1:	Consumed goods and services by groups	40
C1:	Estimated elasticities model of AIDS consumer goods in Cameroon – formal sector	43
C2:	Estimated elasticities model of AIDS consumer goods in Cameroon – informal sector	43

## List of abbreviations and acronyms

BR:	Broadcasting royalties
CCF	Contribution to the Building and Loan Association
CT	Corporation tax
ECAM	Cameroonian survey on household consumption
GTC	General tax code
GT	Global tax
IPU	Informal production units
LL	Liquor licence
LT	Land tax
MBO	Management by objectives
NFE	National Fund for Employment
NIS	National Institute of Statistics
PIT	Personal income tax
PWC	Public works construction
STI	Special tax on income
STOP	Special tax on oil products
TCA	Tax on turnover
VAT	Value-added tax

# Abstract

The reform of the Cameroonian tax system is an integral part of the adjustment policies adopted in the second half of the 1980s. The focal point of this tax reform was the introduction of value-added tax (VAT). However, the importance of the informal sector was not taken into account in this new fiscal scheme. The aim of this paper is to determine the optimal tax structure for the informal sector. It, therefore, extends the methodological framework used in the analysis of optimal taxation to both the formal and informal sectors. Based on data from the 2001 Cameroonian survey on household consumption and the Directorate General of Taxation, the paper finds that in the informal sector some goods and services, such as clothing, tobacco, drinks, and health products and services, are currently unduly exonerated from VAT, and then suggests that these goods and services be taxed.

JEL Classification: H21 (Efficiency, Optimal taxation); H26 (Tax evasion).

# Acknowledgements

This is a revised final report from a thematic project of the AERC, which we thank for the research grant. We also thank the resource person and researchers of group B for their comments and suggestions that have shaped this report. We are, however, responsible for all errors in the report.



# 1. Introduction

Following the example of other developing countries, Cameroon will have to face a significant decrease in tariff rates, following the policies of commercial liberalization. These policies, which were implemented within the framework of the regional integration zones, were followed by partnership agreements with the European Union. In the long term, commercial opening involved a decrease of almost 30% in the budget revenue of African countries (Chambas, 2005b). In order to preserve its level of public resources, Cameroon must adjust its fiscal-customs transition to compensate for the loss of tariff receipts (custom) by increasing internal tax revenues. Because of the constraints<sup>1</sup> related to direct taxation in Africa, indirect taxation, particularly value-added tax (VAT), seemed the preferred instrument to ensure the success of a fiscal-customs transition (Chambas, 2005a).

Reforms relating to VAT as well as its administration do not yet make it possible to increase the receipts of VAT to a level that would compensate for the foreseeable losses of tariff receipts (Baunsgaard and Keen, 2005). For many analysts, the existence of a significant informal sector constitutes a major hurdle for effective VAT implementation. Thus, according to Emran and Stiglitz (2005), in countries with a sizeable informal sector, VAT is the cause of significant intersectional distortions. It is, therefore, not inevitable that the substitution of tariffs with VAT would cause a reduction in these tax distortions or improve the collective wellbeing of a country. For some, like Araujo-Bonjean and Chambas (2005), the obstacle encountered by a sizeable informal sector cannot be underestimated and measures must be adopted to improve the taxation of informal activities.

In Cameroon, the informal sector has seen significant growth since the end of the 1980s. This growth was a consequence of a recruitment freeze in public administration, mass dismissals from the public and the formal private sector, and the closure of several state enterprises. In the absence of social security coverage (such as education, healthcare and housing), young jobseekers as well as “bachelors” (people who had lost their jobs) turned to income-generating activities that did not conform to the legislation in force, which was very complex.<sup>2</sup>

The survey carried out by the National Institute of Statistics (NIS) in 2005 allows us to measure the extent of the informal sector, and its contribution to GDP and economic growth. It also allows us to evaluate the place and role of this sector in the productive structure of Cameroon.

The main results of the survey show that the informal sector represents nearly 90.4% of employment in Cameroon.<sup>3</sup> From a rural/urban distinction, these results show that the informal agricultural sector dominates, as it constitutes 55.2% of aggregate employment and 72.9% of rural employment, while the informal non-agricultural sector makes up 35.2% of aggregate employment and 67.4% of urban employment. According to distribution by branch of industry (see Table 1), these results highlight the dominance of informal production units (IPU) in services (36.2%), followed by small industries (35.8%), and lastly trade (28%).

Table 1: Non-agricultural structure of employment by branch of activity according to institutional sector (%)

Branch of activity	Institutional sector			Whole
	Public	Private formal	Informal non-agricultural	
Industry	10.5	39.6	35.8	33.1
Agro-alimentary	0.2	16.3	18.0	15.9
Clothes industry	2.2	1.0	6.3	5.3
BTP	0.3	7.7	4.8	4.6
Other industries	7.8	14.6	6.3	7.3
Trade	-	10.9	28.0	23.3
Gross trade	-	5.8	2.1	2.3
Retail trade	-	5.1	25.9	21.1
Services	89.5	49.5	36.2	43.5
Transport	1.9	9	7.1	6.7
Restoration	0.2	2.8	9.6	7.9
Repair	-	1.8	4.6	3.8
Other services	87.4	35.9	15.3	25.1
Total	100	100	100	100

Source: NIS, EESI 2005, phase 1

A different reading of the survey results survey shows that IPU production and services are primarily aimed at satisfying households. The agro-alimentary sector represents three-fifths of industrial activities, with the local population as customers. Similarly, the clothing industry and public works construction (PWC), which each represents 10.9% and 8.7% of industrial activity, are mainly geared towards production adapted to the needs of the population. The commercial sector is directed towards the same type of need fulfilment, since it is dominated by retail business, which accounts for 94% of commercial activities. It first of all relates to agro-alimentary products (56%), clothing and accessories (22%), and other products meant for daily consumption by families. In addition, as the analysis of customers in the informal sector shows, nearly 90% of IPU promoters declare that households are their main customers, and this is true whatever the area of residence. Although the activities of the informal sector are

qualified as survival activities, the companies in this sector do generate income and have satisfactory financial results.

Table 2: Comparison of IPU performance according to type of employment by area (monthly values in thousands of FCFA)

	Turnover		Production		Added value		EBB	
	Descriptive statistics							
Type of employment	Average	Median	Average	Median	Average	Median	Average	Median
Auto-employment	133.8	47.0	77.0	36.0	43.7	19.0	43.0	19.0
Non-salaried	173.0	65.0	110.9	46.0	58.2	22.0	54.7	21.0
Salaried	704.3	300.0	529.9	200.0	328.3	122.0	254.3	85.0
Mixed	650.6	255.0	601.9	255.0	304.8	171.0	226.7	112.0
Ensemble	173.8	57.0	110.2	41.0	62.4	21.0	57.0	21.0
Urban areas								
Auto-employment	206.5	90.0	112.3	56.0	66.9	34.0	65.6	32.0
Non-wage	289.3	117.0	187.2	84.0	96.5	44.0	89.9	38.0
Wage	897.1	301.0	625.0	280.0	360.7	172.0	274.1	112.0
Mixed	689.7	311.0	643.7	311.0	326.9	197.0	241.1	120.0
Whole	275.2	105.0	168.3	69.0	95.5	41.0	86.5	37.0
Rural areas								
Auto-employment	83.2	31.0	52.4	26.0	27.6	12.0	27.2	12.0
Non-wage	109.1	45.0	68.9	37.0	37.2	16.0	35.3	15.0
Wage	463.5	200.0	411.2	150.0	287.8	100.0	229.5	61.0
Mixed	504.3	113.0	445.9	113.0	222.5	69.0	172.7	41.0
Whole	104.6	37.0	70.5	30.0	39.8	14.0	36.9	13.0

Source: INS, EESI 2005, phase 2

In the field of income distribution, the EESI (2005) survey shows that the informal sector represents nearly 90% of the local market regarding the provisioning<sup>4</sup> of products as well as the sale<sup>5</sup> of goods. Moreover, income in the informal sector often equals that of the formal sector. The analysis of average incomes (see Table 3) shows that the remuneration of a person active in the informal sector exceeds the minimum wage by approximately FCFA1,000 (FCA franc), which has been FCFA28,514 since 2008. If we consider median income, the owners of IPUs earn approximately three times more than the minimum wage and the wages of the employees of this sector exceed it by approximately 10%. Moreover, it is generally held that income earned through informal activities is complementary (ancillary activities). It is then probable that the overall income (formal + informal) is higher than the threshold level and thus taxable, whereas each of the incomes cumulatively could be lower than the taxable thresholds.

Table 3: Remuneration by area

	Douala	Yaoundé	Other cities	Urban	Rural	Cameroon
Average monthly income (thousand of FCFA)	43.2	63.4	30.4	41.9	21.0	29.6
Median monthly income (thousand of FCFA)	26.0	43.0	14.0	22.0	7.0	11.0
Average time income (in FCFA)	226.3	302.2	179.6	226.3	178.6	203.5

Source: NIS, EESI 2005, phase 2

However, the ground survey also highlighted a strong resistance to moving towards the formalization of activities. Two recurring factors run alongside this: lack of confidence in public administration, globally considered as corrupt, and the fear of the chief IPU or the auto-employee losing his freedom of action because of heavy and constraining administrative regulation. The strong resistance to formalization is especially justified by the actual or supposed level of taxation. In terms of taxes, only 23.9% of the urban IPU claim to have paid the local, licence or legal tender tax. However, this figure can be explained according to the information collected during the ground survey, by the systematic passage of tax agents into the city markets in order to recover at least the legal tender tax. When questioned about their willingness to contribute to the tax effort of the nation, it is estimated that fewer than half of IPUs are recording their activities, and only 15.8% would be ready to formally pay tax on this. Resistance to formalization is thus a real fact and not easily negotiable.

## Research question

During the last nine years, taxes recovered by the DGT<sup>6</sup> grew from FCFA457.10 billion during the fiscal year 1999/2000 to FCFA847 billion in 2008, that is, a relative increase of 85.45% (see Table 4). These results are essentially related to the various tax reforms and economic growth.<sup>7</sup> The reforms concerned the organization and management of the tax authorities, VAT reform – increasing it from 18.7% in 1999 to 19.25% in 2004 – the reform of personal income tax (PIT), the reform of recovery procedures, the reinforcement of the capacities of tax authorities' staff, and management by objectives (MBO).<sup>8</sup> Almost all these reforms led to an improvement in the taxation of the formal sector.

A decomposition of the fiscal receipts between 1999 and 2008 enables one to observe that direct taxes increased by 110%: from FCFA180 billion to FCFA378 billion. Indirect taxes increased during the same period by 79.26%, from FCFA251.7 billion to FCFA451.2 billion. During the fiscal year 2008, direct taxes accounted for 44.59% of fiscal receipts, while indirect taxes accounted for 53.23%.

Table 4: The growth of revenue from taxes 1999/2000–2008 (FCFA billion)

Domestic fiscal receipts	1999/2000	2000/2001	2002	2003	2004	2005	2006	2007	2008
Budget revenue	457.10	533.10	567.90	594.40	590.80	681.20	744.20	809.50	847.70
Direct taxes	180.00	228.00	259.70	254.40	234.90	310.40	318.10	360.60	378.00
TPPI	76.2	88.8	117.9	116.00	94.20	97.20	104.50	127.30	142.40
CT (except oil companies)	69.4	92.4	102.2	87.70	98.30	146.30	144.30	159.80	167.80
Forestry taxes	11.3	20.5	15.2	22.40	22.80	20.70	19.00	24.50	13.40
Right and recording taxes	11.7	13.5	13.8	14.30	6.20	23.10	24.70	26.80	29.20
Stamp rights	11.4	12.8	10.6	14.00	13.40	23.10	25.60	22.20	25.20
Indirect taxes	251.70	287.00	283.60	308.30	318.90	346.90	406.70	427.30	451.20
VAT	168.5	195.1	183.8	207.20	210.90	234.80	283.30	296.80	314.30
Excise rights	25.1	28.5	31.6	33.70	36.40	42.80	49.50	57.10	65.40
TSPF	58.1	63.4	68.2	67.40	71.60	69.30	73.90	73.40	71.50
Other taxes <sup>9</sup>	25.4	18.1	24.6	31.70	37.00	23.90	19.40	21.60	18.50
Non-budgetary receipts	50.26	n.a	n.a	n.a	n.a	n.a	29.68	27.56	21.31
Of which: Patent	2.94	-	-	-	-	-	1.53	1.36	1.51
Licence	1.31	-	-	-	-	-	0.34	0.32	0.25
Legal tender tax	16.14	-	-	-	-	-	2.36	2.66	1.25

Sources: Instrument panels of the MINFI and consolidated statistics of the DGT

A detailed analysis of the fiscal receipts shows that the positive results obtained are due to the improvement in the recovery of some taxes. These are, in decreasing order: excise duties, stamp duties, corporation tax (CT)<sup>10</sup>, PIT and VAT, which increased by 160.59%, 149.59%, 141.78%, 88.86% and 86.53%, respectively. However, in absolute value, the greatest contributor is VAT receipts, which grew from FCFA168.5 billion in 1999/2000 to FCFA314.3 billion in 2008.

Cameroon experienced tax pressure in 2008, when taxes raised accounted for around 15% of GDP (DGT, 2008). This rate is lower than the sub-regional average, which is 21.7%, and at the lower limit of the acceptable interval, which is 23% of GDP. The relative impression of high fiscal pressure is mainly explained by the fact that the quasi-totality of the fiscal charge is borne by the formal sector in spite of the importance of the informal sector. The reforms undertaken in recent years did not make it possible to correct this situation, and had negative consequences for equity and the system's efficiency. Indeed, it is noted that the contribution of the informal

sector, by way of global tax (GT)<sup>11</sup>, is too small and is decreasing year on year.<sup>12</sup> These receipts decreased from FCFA16.14 billion in 1999/2000 to FCFA1.25 billion in 2008, a variation of -92%. During 2008, GT accounted for 0.15% of total fiscal receipts. This contribution contrasts with the contribution of the informal sector to employment and GDP, leading to the following research question: Is the taxation of the informal sector in Cameroon optimal? In other words, what is (are) the imposition level(s) of goods and services compatible with tax system efficiency without increasing the tax burden on the formal sector?

## Objectives

The objective of this paper is to estimate a tax rate structure for goods and services in the informal sector in Cameroon. The analysis of tax collection is beyond the scope of the present paper. The above objective is broken down into the following secondary objectives, which are to:

- present Cameroon's tax system focusing on taxes paid in both formal and informal sector;
- determine the expense structure of households by type of goods and services;
- highlight the volume of transactions carried out in the informal sector;
- determine the optimal rates of taxation for goods and services in the formal and the informal sector.

## 2. The Cameroonian tax system

This section presents a general view of the Cameroonian tax system, notably the various duties and taxes. It will concentrate on the duties and taxes paid by each sector (formal and informal). It will look at direct taxes, indirect taxes and para-fiscal taxes.

### Direct taxes

Direct taxes are those which are paid directly by companies. They include CT, PIT, business licence (BL), liquor licences (LL), global tax (GT) and land tax (LT).

Corporation tax (CT): The CT is a tax established on every benefit or income realized by companies and other moral persons “exerting” in the formal sector in Cameroon, except for exemptions specially determined by the General Tax Code (GTC). The rate of this tax is 38.5% of taxable profit.<sup>13</sup>

Personal income tax (PIT): PIT is based on the aggregate net income realized by individuals “exerting” in the formal sector. This aggregate net income realized corresponds to the sum of the following categories of net income: treatments, wages, pensions and life annuities; income from movable capital; land income; benefits of artisans, industrial and commercial activities; benefit from agricultural exploitations and benefit from non-commercial and comparable professions.

The basis of PIT is the sum of the various categories of net incomes available to the taxpayer in one year of assessment. It is raised, if necessary, by the benefit of any lucrative operation he practises, after an abatement of a flat-rate amount of FCFA500.000, or 30% for the employee. The PIT is thus calculated by applying a scale to the aggregate net income, rounded to the lower thousand of FCFA, as presented in Table 5.

Table 5: Scale of PIT

Total net income (in F CFA)	Tax rate
From 0 to 2,000,000	10 %
From 2,000,001 to 3,000,000	15%
From 3,000,001 to 5,000,000	25%
More than 5,000,000	35%

Source: General Tax Code

Another (alternative) version of the TPPR is the special tax on income (STI). This tax is applied to the income of moral or physical persons domiciled outside Cameroon, paid by companies or establishments located in Cameroon, the State or the public decentralized territorial collectives.

Business licence (BL): Any physical or moral person of Cameroonian or foreign nationality who practises in Cameroon a trade, an industry, a profession not included in the exemptions specially determined by the GTC, or is subject to the contribution of licences. This contribution is fixed according to the annual turnover realized by the taxpayer, according to a rate fixed by the local public decentralized territorial collectives, recipients of the licensed product, inside a fork legally fixed by section of the turnover (see Table 6). This tax is borne by operators in the formal sector only.

Table 6: Class of licence and corresponding rates

Turnover intervals	Class	Fork of rates
TO $\geq$ 2 billion francs	1st	0.075% to 0.0875%
1 billion $\geq$ TO < 2 billion francs	2nd	0.0875% to 0.100%
500 million $\geq$ TO < 1 billion francs	3rd	0.100% to 0.108%
300 million $\geq$ TO < 500 million francs	4th	0.108% to 0.116%
100 million $\geq$ TO < 300 million francs	5th	0.133% to 0.150%
15 million $\geq$ TO < 100 million francs	6th	0.185% to 0.16%
5 million $\geq$ TO < 15 million francs	7th	0.283% to 0.400%

Source: General Tax Code

Liquor licences (LL): Any physical or moral person authorized to practise wholesale or retail trade with an unspecified title, or the manufacture of alcoholic beverages, wine or soft drinks, is subjected to the contribution of liquor licences. The contribution of liquor licences is due by importers, producers and outputting drinks giving place to the licence. It is annual and personal. It is also due per establishment according to the same rules as those applicable to the contribution of business licences. The liquor licence is fixed according to turnover, as Table 7 indicates.

Table 7: Tariffs for liquor licence contributions

Nature of the activity		Activities subject to license	Activities subject to GT
Licence class	Basic element	Contribution of licence	Amount of LL
1st class	Alcoholic beverages and other drinks	6 times the contribution of the licence	1.5 times the amount of GT
2nd class	Wines and hygienic drinks	4 times the contribution of the licence	1.0 times the amount of GT
3rd class	Hygienic drinks	2 times the contribution of the licence	0.5 times the amount of GT

Source: General Tax Code



General tax (GT): Taxpayers carrying out commercial or industrial activities concerning neither the modes of actual profits, or simplified benefit of imposition, nor the basic mode, are subjected to a global tax. This tax is exclusive to the payment of the licence, the TPPR and VAT. With the aim of taxing the informal sector, all taxpayers in this sector are subject to GT.

The GT is liquidated by the tax services following the tariff fixed by the local public decentralized territorial collective, and recipients of the product of this tax inside a fork fixed by category of activity as presented in Table 8.

Table 8: Global tax tariff

Category <sup>14</sup>	Amount of GT
A	From 0 to 20,000 francs
B	From 21,000 to 40,000 francs
C	From 41,000 to 50,000 francs
D	From 51,000 to 100,000 francs

Source: General Code Tax

Land tax (LT): LT is due annually on real estate, built or not, located in Cameroon, located in the major towns of administrative units and/or the agglomerations benefitting from infrastructure and urban services. The rate of TLB is fixed at 0.1% of the value of fields and construction as declared by the owner.

Indirect taxes: Indirect taxes are those that are collected by companies but supported by a third person, specifically the ultimate consumer. They include VAT, excise rights, special tax on oil products (STOP), and registration and stamp rights.

Value-added tax (VAT): VAT came into effect in Cameroon on 1 January 1999. It is an indirect tax paid by the ultimate consumer but collected by the producer, which replaced the turnover tax (TCA). Physical or moral persons, including government companies, are subject to VAT. To be subject to VAT, every physical or moral person must have a business licence. VAT is related to operations such as production, services, distribution and importation.

There are three modes of imposition: Real estate, which applies to moral persons, members of liberal professions, forest exploiters, and subjugated natural persons whose annual turnover is equal to or higher than FCFA100 million. The mode of simplified estate applies to subjugated natural persons whose annual turnover is between FCFA60 and 100 million. Nevertheless, they can choose the mode of reality, this option being irrevocable. Lastly, the basic mode applies to subjugated natural persons whose turnover is between FCFA15 and 60 million.

Global VAT is applied at a rate of 19.25%<sup>15</sup> of the cost price of the transaction (goods, services rendered, and exchanges). Certain goods and services that are considered to be basic needs are exempted from VAT. The legal debtor is the tax collector, the real debtor being the ultimate consumer.

The VAT to be transferred is equal to the difference between the crude VAT and deductible VAT. The latter strikes the purchase of goods or services carried out by the taxpayer who realizes chargeable operations: it is deducted from the VAT applicable to the taxable operations of the following month.<sup>16</sup>

**Excise duties:** In Cameroon, an ad valorem excise duty is levied on products known as luxury goods. The operative event of an excise duty is the supply of goods made by the producer, his distributor or the wholesaler, concerning sales and exchanges, and the release onto the import market. They are applied at a rate of 25% with a reduced rate of 12.5% for some products.

**Special tax on oil products (STOP):** STOP is levied on sales of super gasoline and fuel oil. Also subject to the STOP is the use of the aforesaid products by refining industries and oil terminal companies, within the framework of their exploitation, for their own or others' needs. The rates of STOP are FCFA120 francs per litre for super gasoline and FCFA65 per litre for fuel oil. This tax is added to the selling price of the aforesaid products and is consequently borne by the ultimate consumer.

**Registration rights:** These rights can be fixed or proportional, progressive or decreasing. They are classified according to bases and follow certain rules when recording the following activities: beams and hiring, marriage contracts, credits, deliveries of legacy, judgments, releases of mortgages, government and private contracts, divisions, extensions of time limits, receipts, rents, companies, expensive transmissions of personal property and real belongings, translative goodwill acts and new goods, transmissions between life's on a purely free basis and change by death, deduction of debts, values of naked-property and the usufruct.

**Stamp duties:** These are levied on all documents intended for civil legal acts where they can be produced in court and be used there. They are classified according to the bases and following the nature of the acts described therein.

## Para-fiscal taxes

Para-fiscal taxes are burdens in the form of tax borne by taxpayers but are intended for a specific and definite future use, and are managed by specialized public administrations. They include broadcasting royalties (BR), contributions to the Building and Loan association (CCF), contributions to the National Fund for Employment (NFE), communal taxes and national contributions.

Broadcasting royalties (BR): This tax is paid by all public employees: para-public and private sector. The natural or moral persons indebted by the contribution to licences are also subject to BR to the benefit of the Cameroonian Office of Broadcasting Television. This tax is intended to promote the development of audiovisual activity.

The base of calculation of the BR owed by employees is calculated according to the gross value of perceived wages. The contractual monthly amounts due are established according to the levels in Table 9:

Table 9: Flat-rate amount of monthly BR owed by workers

Gross Salary Bracket FCFA)	Amount of RAV(FCFA)
From 0 to 50,000	0
From 50,001 to 100,000	750
From 100,001 to 200,000	1 950
From 200,001 to 300,000	3 250
From 300,001 to 400,000	4 550
From 400,001 to 500,000	5 850
From 500,001 to 600,000	7 150
From 600,001 to 700,000	8 450
From 700,001 to 800,000	9 750
From 800,001 to 900,000	11 050
From 900,001 to 1,000,000	12 350
Above 1,000,000	13 000

Source: General Tax Code

For physical and moral persons who must pay licences, the flat-rate amount of BR is equal to the main contribution to licences owed by them.

Contribution to the Building and Loan Association (CCF): All employees and employers in the public and private sector are subject to the CCF, which is intended to fund the Cameroon Building and Loan Association, whose aim is to provide financial assistance to housing promotion projects. The deduction from employees is made up by the gross value of the sums retained for the calculation of the TPPR, and for employers by the amount of wages, allowances and emoluments, including advantages in kind paid or granted to personnel for their real amount.

The rate of deduction is fixed at 1% for employees and 2.5% for employers.

Contribution to the National Fund for Employment (NFE): All employers in the public, parastatal and private sectors are subject to contributing to the NFE, which is intended to fund the National Employment Fund, whose objective is the promotion of employment in Cameroon. The rate of deduction is fixed at 1% of the amount of wages, allowances and emoluments, including advantages in kind paid or granted

to personnel for their real amount.

**Communal taxes:** Communal taxes are annual standard charges instituted by the territorial decentralized collectives and taken from the inhabitants from an agglomeration. These include:

- Tax on water, which can be perceived in collectives where fountains or common water points exist, and in collectives where the council bears the expense of water transportation.
- Tax on lighting, which can be perceived in collectives where the council bears the expense of street lighting and other public places, or when it must undertake works for the lighting of such places.
- Tax for household refuse removal.
- Tax for operating municipal ambulances.
- Tax for electrification, which can be perceived when the council produces the electricity used in the agglomeration.

**National Social Insurance Fund (NISF):** NISF contributions due to the organization in charge of social welfare by the employers are issued, liquidated and collected by the tax authorities, under order and on behalf of the National Counter of Social Welfare. The basis of the deduction is made according to chargeable wages (maximized at FCFA300,000) in the following way:

- The Old Age, Disability and Death Pension (ODDP) is fixed at 4.2%;
- Industrial Accident (IA) is fixed according to the nature of the risk at 1.75%, 2.5% and 5%; and
- Family Allowances (FA) is fixed at 7%.

### 3. Literature review

Taxation of the informal sector is a legislative process whose objective is to intensify and improve relations between the state and this sector. It can be voluntary or repressive. However, in relation to the diversity of the activities of the informal sector, a differentiated and equitable raising of tax according to the ability to pay the tax is essential, so that the taxation of the informal sector does not lead to bankruptcy. In the literature, consensus has not been reached on the taxation of the informal sector.

The taxation of the informal sector was initially rejected by those who are opposed to the tax as a whole and who justify fraud. This rejection of tax is itself the result of the legitimacy of states in some developing countries. Subjecting this sector to tax would have gone against the principle of equity, which holds that each pays according to their ability. With this general argument against tax, issues more specific to the informal sector are explored. For the opponents to the taxation of the informal sector, taxing the incomes from informal origins amounts to taxing the least well-off in the population, and thus increases poverty and inequality. Accordingly, Latouche (1991) and Lautier (1994) show that income generated by the activities of the informal sector are survival incomes. Moreover, if the income drawn from an activity of the informal sector suddenly increased at an individual level, the process of solidarity, which binds individuals according to various criteria, would lead to the division of the additional income instead of individual enrichment or accumulation.

However, beyond the mechanical increase in fiscal receipts that a taxation of the informal sector would generate, the arguments in favour of this policy also rest on the advancement of greater social justice and the respect of the sovereignty of political power (Medahri Alaoui, 1989). The report by Thill (1991) justifies the taxation of the informal sector on the basis of transfer of a part of the fiscal charge from the formal sector towards the informal sector in order to ensure the tax system's efficiency. In Cameroon's case, the performance of the informal sector tends to support the taxation of this sector. How does one tax the informal sector while preserving the tax system's efficiency? Economic literature has tried to provide some answers to this question. In addition, informal and/or underground activities are sources of tax evasion and favour fiscal deficits (Feltenstein and Dabla-Norris, 2005).

Works on optimal taxation mainly build on the pioneering article by Ramsey (1927). All these studies consider that indirect taxes are wholly paid by consumers. This is notable because of the practical character of these taxes, where the impression is

given that consumers pay this tax. In his article, Ramsey calculates the optimal rates of indirect taxes aimed at maximizing consumers' utility while taking given receipts. Its principal recommendation is to increase the tax for goods where the demand is not very elastic, and decrease it for those goods where demand is inelastic.

Diamond and Mirrlees (1971) postulate that the choice of the consumers' utility is restrictive. This choice does not take into account other economic agents, notably the producer. They recommend that the determination of optimal rates should result from maximizing social being. The maximization of social being under the constraint of fiscal receipts would lead to obtaining indirect tax rates compatible with optimizing the tax system. Moreover, they integrate several consumers into the different structures of their consumption model. This distinction between consumers is a prerequisite for redistribution policies. This approach still remains incomplete as it considers only one good. However, in reality, although different, consumers deal with several types of goods and services.

Deaton (1977) was one of the first to determine an optimal structure of the taxation of goods and services. This approach is then followed by Ahmad and Stern (1984, 1987, 1991), Ray (1986), Ebrahimi and Heady (1987), Kaiser and Spahn (1989), Srinivasan (1989) and Murty and Ray (1989). Following those are the works by Navajas and Oporto (1994), Gautier (2001), Blomquist et al. (2001), Mayeres and Proost (2001), and Emran and Stiglitz (2005).

All these works show that optimal rates must be different. The differentiated rates should make it possible to equitably and effectively set out the tax burden between the various types of goods and services. However, the reforms of indirect taxation in developing countries have generally led to the application of a uniform rate of VAT (two highest rates) and the exoneration of basic goods as well as social services (Abel, 1998; Tanzi and Zee, 2000). The application of a single rate is presented in the technical documentation as a condition for the success of the introduction of VAT in countries with low administrative capacity. The goal of the single rate is to improve the efficiency of the tax system by facilitating its administrative management and by limiting the possibilities of evasion (Cornély, 1995; Shome, 1995) and of fraud (Tanzi and Zee, 2000).

However, these results must be viewed with caution, because the effective rates, which are generally different from those envisaged by the law, are also influenced by subsistence consumption<sup>17</sup> similar to the existence of "informal" production and the marketing circuits of the goods and services in developing countries. The consumption of these goods probably varies with households' income in a decreasing way, which can then influence the efficiency and redistributive character of the tax. The consideration of subsistence consumption and goods and services of the informal sector in the determination of optimal rates is treated by Sahn and Younger (1999) and Gautier (2001). A modelling with this duality specific to developing countries makes it possible to improve the optimal structure of the imposition rates.

## 4. Methodological framework

The econometric estimate of the model presented below is inspired by the work of Gautier (2001) and will enable us to obtain numerical estimates of the optimal solutions for taxation rates as well as the deposit rates of the informal sector.

### General information on the model of optimal taxation

Our model is constructed in the tradition of the models of optimal indirect taxation within a multi-agent framework (Diamond and Mirrlees, 1971). We take as a starting point the works of Kaplow (1990) and Cremer and Gahvari (1993) to consider the duality between perfectly taxed formal goods and, on the other hand, informal goods imperfectly taxed in our model. The introduction of this duality between consumer goods adds a modification to the traditional assumptions in the literature concerning optimal taxation.

We suppose that the market for goods is characterized by  $n$  pairs of goods  $i$ . For each good  $i$ , there exists a good  $x_i$  produced by the formal sector and another good  $y_i$  produced by the informal sector. On the whole, there exists  $2n$  in the economy.

We suppose that the formal goods are taxed at the  $t_i$  rate. The informal goods are taxed at a rate of  $\beta_i t_i$ . The variable  $\beta_i$  represents the rate of taxation (or cover) of the informal sector in branch  $i$ . In other words,  $(1 - \beta_i)$  is the rate of "fiscal fraud" of the informal sector. Thus, if  $\beta_i = 0$ , the informal sector in branch  $i$ , completely evades tax. On the other hand, if  $\beta_i \rightarrow 1$ , the state has given itself the means to limit the tax evasion of informal micro-companies. The goods and services of the "informal sector" are taxed at a rate close to that of the formal sector. If, on the other hand,  $\beta_i > 1$ , goods and services of the informal sector should be taxed higher than those of the formal sector.

Thus, in the market for goods and services, the prices to the consumer can be written:

$q_{x_i} = p_{x_i} (1 + t_i)$  And  $y_i : q_{y_i} = p_{y_i} (1 + \beta_i t_i)$  where  $p_{x_i}$  and  $p_{y_i}$  are the prices to the producer.

Assuming pure and perfect competition, the prices to the producer are equal to the marginal cost and the consumers are “price-takers”. Due to the unavailability of data concerning supply, and by simplifying, one supposes that the prices to the producer are exogenous and thereafter normalized to 1. This assumption is all the more justified when the prices to the producer are supposed to be exogenous and, as we consider in this study, that indirect taxes are entirely borne by consumers, the producers entirely reflect the price of the indirect taxes in those to the consumers. Moreover, in pure and perfect competition, it is preferable to select a tax on final consumption rather than on the inputs (Diamond and Mirrlees, 1971). That makes it possible to avoid any distortion produced by the tax on the inputs in the behaviours of production.

For clarity, the following notations are used:  $X$  is the vector column of  $x_i$ ,  $Y$  is the vector column of  $y_i$  and  $B = (X, Y)$  is a matrix of the  $(n, 2)$  format. Thus, one will note the matrix line  $b_i$  is defined by the pair of goods  $(x_i, y_i)$ . In addition, for the whole of  $n$  branches of the economy, one will note  $\beta$  is the vector column formed by the unit  $\beta_i$ .

The direct utility of households is a consumption function of these pairs of goods. To simplify, it is supposed that work (leisure) and consumer goods are separate in the household utility function. Similarly, we will assume that households are pure consumers. These last two assumptions make it possible to suppose a linear budgetary constraint compared to the rate of taxation, which facilitates the analytical treatment of the model.

The indirect utility function is written as:

$$V^h = V^h(q_x, q_y, I^h, w^h) \quad (1)$$

With  $I^h$  as income and  $w^h$  the standard of wages of the household  $h$ ; both are supposed to be exogenous. We call  $W = W(V^1, \dots, V^H)$  the function of social utility. It is supposed that  $W$  is of the “Bergson-Samuelson” type, i.e. the utilities of each household are independent from one another. In theory, the state’s aim is thus to define the rates of taxation  $t_i$  and the deposit rate of informal units  $\beta_i$  so as to maximize the social utility function while achieving its goal of fiscal receipts. The programme of optimal taxation is then written as:

$$\begin{cases} \text{Max} W = W(V^1, \dots, V^H) \\ \text{s.c. } R_0 = \sum_{i=1}^n \sum_{h=1}^H (t_i x_i^h + \beta_i t_i y_i^h) - g(\beta) \end{cases} \quad (2)$$



and the Lagrangian function of this programme is given by:

$$L = W + \lambda \left[ \sum_{i=1}^n \sum_{h=1}^H (t_i x_i^h + \beta_i t_i y_i^h) - g(\beta) - R_0 \right]$$

## Optimal solutions of $(t_i, \beta_i)$

The Lagrangian first-order conditions make it possible to obtain the optimal solutions of  $(t_i, \beta_i)$ .

The first order condition compared to is written as:

$$\frac{\partial L}{\partial t_i} = 0 \Leftrightarrow \sum_h \left( \frac{\partial W}{\partial V^h} \left[ \frac{\partial V^h}{\partial q_{x_i}} + \frac{\partial V^h}{\partial q_{y_i}} \beta_i \right] \right) = -\lambda \left[ \sum_h (x_k^h + \beta_k y_k^h) + \sum_i \sum_h \left( t_i \frac{\partial x_i^h}{\partial q_{b_k}} + \beta_i^2 t_i \frac{\partial y_i^h}{\partial q_{b_k}} \right) \right] \quad (3)$$

We note that  $\partial q_x = \partial t_i$  and that  $\partial q_y = \partial t_i$  as the prices to the producer are supposed to be exogenous in the model. By using the properties of the Roy identity and the equation of Slutsky, we then simplify it, and Equation 3 can be written as follows:

$$\frac{\sum_h t_i S_{b_i, b_i}^h (1 - \beta_i^2)}{x_i + \beta_i y_i} = \left( \frac{\sum_h \left( \frac{\phi^h}{\lambda} \right) (x_i^h + \beta_i y_i^h)}{x_i + \beta_i y_i} \right) + \frac{\sum_k \sum_h t_i \left( x_k^h \frac{\partial x_i^h}{\partial I^h} + \beta_i^2 y_k^h \frac{\partial y_i^h}{\partial I^h} \right)}{x_k + \beta_k y_k} \quad (4)$$

The first-order condition compared to in the program of maximization under state constraint is written as:

$$\frac{\partial L}{\partial \beta_i} = 0 \Leftrightarrow \sum_h \left( \frac{\partial W}{\partial V^h} \frac{\partial V^h}{\partial q_{y_i}} \frac{\partial q_{y_i}}{\partial \beta_i} \right) = \lambda \left[ \sum_h t_i y_i^h + \sum_k \sum_h \left( t_i \frac{\partial q_{y_i}}{\partial \beta_i} \frac{\partial x_i^h}{\partial q_{y_k}} + \beta_i t_i \frac{\partial q_{y_i}}{\partial \beta_i} \frac{\partial y_i^h}{\partial q_{y_k}} \right) - g'_{\beta_i} \right] \quad (5)$$

By using the properties of the Roy identity and the equation of Slutsky, Equation 5 can be simplified and written as:

$$\beta_i t_i \sum_h \frac{\partial y_i^h}{\partial q_{y_i}} = \sum_h \left( \frac{\phi^h}{\lambda} - 1 \right) y_i^k + g'_{\beta_i} - t_i \sum_h \frac{\partial x_i^h}{\partial q_{y_i}} \quad (6)$$

## The empirical model

We define the functional forms of the social utility and demand functions in order to obtain the numerical estimates of the optimal solutions  $(t_i, \beta_i)$ . In a standard way, we have chosen to represent the social utility function according to the Atkinson function (Atkinson, 1970). The indirect utility takes a PILOG form, where the income is divided by the equivalent number of adults in the household. This form then makes it possible to use the AIDS function, like a request function for consumers. After simplification, the social weight of the individuals takes the following form:

$$\phi^h = \left[ \frac{v^1}{v^h} \right]^\varepsilon \quad (7)$$

where  $v^1$  is the utility of the poorest household in the society. Then, the model considers that in its collective welfare function, the government does not differentiate between citizens, that is  $\varepsilon = 0$ , which means that  $\phi^h = 1$ .

The compensated incomes unable to be observed in reality and the functional form of the optimal taxation programme does then not allow the integration of the Slutsky equation. The optimal solution of  $t_i$  is then represented by the following relation:

$$\sum_h \phi^h (x_k^h + \beta_k y_k^h) = \lambda \left\{ \sum_h (x_k^h + \beta_k y_k^h) + t_i \sum \left[ \frac{\partial x_i^h}{\partial q_{x_i}} + \frac{\partial x_i^h}{\partial q_{y_i}} + \beta_i^2 \left( \frac{\partial y_i^h}{\partial q_{y_i}} + \frac{\partial y_i^h}{\partial q_{x_i}} \right) \right] \right\} \quad (8)$$

The cover rate of the informal sector  $\beta_i$  is given by Equation 9:

$$\sum_h \phi^h y_i^h = \lambda \left[ \sum_h y_i^h + t_i \sum_h \left( \frac{\partial x_i^h}{\partial q_{y_i}} + \beta_i \frac{\partial y_i^h}{\partial q_{y_i}} \right) \right] \quad (9)$$

The governmental constraint is:

$$R_0 = \sum_i \sum_h (t_i x_i^h + \beta_i t_i y_i^h) \quad (10)$$

## 5. Data

The data used in this paper are from the ECAM<sup>18</sup> survey. This survey includes 10,992 households across the territory. The household expense branch was done using a notebook, in which the household had to record all their daily transactions for 15 consecutive days. The collected information was related to the consumed quantities, the unit price, place of acquisition, mode of acquisition and the total amount of the transaction. In general, the consumer expenditure in final consumables was classified by the National Institute of Statistics during the ECAM2 survey as follows: 1 Food-Drink-Tobacco, 2) Clothing and shoes, 3) Housing-Water-Electricity-Gas and other fuels, 4) Equipment and House Maintenance, 5) Health, 6) Transport and Displacement, 7) Leisure-Spectacles and Culture, 8) Education, 9) Hotel-Coffees and Restaurant, and 10) Other goods and services.

The variables used in the estimates are: final consumer expenditure, consumed quantities, unit prices, and the share of the expenditure in each final consumable in the total expenditure of households. The share of the expenditure in each category of product is the ratio of the expenditure in this category of product to the total expenditure in final consumables of the household.

The unit price available in the ECAM2 survey is related to the acquisition or measuring unit declared by the household. However, these units are very disparate, requiring the determination of another unit price. To do so, we brought back the units used by the households in a common unit. This stage made it possible to determine the quantities consumed by each household in conventional units and for each product. The unit price was finally obtained by submitting the ratio of expenditure to the quantity bought. This technique is adapted and is in conformity with the work of Deaton (1988), who points out that information about budget-consumption surveys often does not contain information about the prices, and the prices are approximated by the ratio of total expenditure to the consumed quantities.

Table 10 shows that the most widespread mode of acquisition of goods and services in Cameroon is purchase. This mode accounts for 87.21% of transactions carried out. It is followed by auto-production, which has a weight of 6.11% in the modes of acquisition. Gifts offered and receipts each occupy the third and fourth position, with 2.48% and 2.36% of the transactions carried out, respectively. Due to lack of information concerning production costs, the transactions acquired by auto-production or in the form of received gifts are accounted at market cost. The gifts offered are accounted as final consumption of the household, and are regarded as purchase or auto-production.

Table 10: Mode of product acquisition

No	Mode of acquisition	Number of transactions	Percentage (%)	Cumulative percentage (%)
1	Purchase	853,617	87.21	87.21
2	Auto-production	59,831	6.11	93.33
3	Taking away	9,091	0.93	94.25
4	Received gifts	23,066	2.36	96.61
5	Gifts offered	24,227	2.48	99.09
6	Other money exits	8,949	0.91	100
	Total	978,781	100.00	

Source: Authors from (20187)

Table 11 represents the places of acquisition by households. It allows us to evaluate the share of goods and services acquired in the informal sector. While conforming to the definition of the informal sector adopted in this work, which indicates that the activities of the informal sector are those which only attract GT, some observations can be made about the results of Table 11. Acquisitions by the formal sector are those carried out in: 2) supermarkets, 3) specialized stores, 6) hotels, bars or restaurants, 9) public service providers, and 10) clinics, laboratories or schools. The transactions of the formal sector represent a volume of 105,959 transactions, which is 11.49% of transactions carried out. Therefore, 88.51% of transactions are carried out in the informal sector.

Table 11: Place (X) of acquisition of the product (S)

No	Place of acquisition	Number of transactions	Percentage (%)	Cumulative (%)
1	Auto-production	59894	6.49	6.49
2	Supermarket	8063	0.87	7.37
3	Specialized stores	12739	1.38	8.75
4	Grocers/shops	161409	17.50	26.25
5	Markets	422697	45.83	72.08
6	Hotels/bars/ restaurants	69833	7.57	79.65
7	Transport sector	49996	5.42	85.07
8	Individual service providers	42133	4.57	89.64
9	Public service providers	4117	0.45	90.08
10	Clinics/laboratories or schools	11207	1.22	91.30
11	Travelling salesmen	59622	6.46	97.76
12	Other	20641	2.24	100.00
	Total	922351	100.00	

Source: Authors from ECAM 2 (2001)

## 6. Empirical results

In this section, the following results will be presented: distribution of household expenses between the various expenditures and the standard of living, distribution of this expenditure between the formal sector and the informal sector and the standard of living, estimates of elasticity, structure of taxation in Cameroon according to the various types of goods and sector (formal versus informal), and the optimal level of taxation for each sector and for each product.

### The consumption of goods and services by households

In 2005, annual household consumption in Cameroon was estimated at FCF595,350,000,000 (World Bank, 2005). The amount of average annual consumption per person is FCFA330,278, and varies widely according to the category of household. When one considers a typology of the households based on the socio-professional category of its head, consumption per person is FCFA500,896 for households whose head is active in the formal sector, and FCFA193,336 for households whose head is active in the informal sector. This result shows that households whose head is active in the formal sector consume close to 2.6 times more than those whose head is active in the informal sector.

Table 13 shows that the informal sector satisfies more than 76% of the total demand of households. However, this must be understood in the sense that it is the last chain of the marketing link, which goes from the producer to the consumer. Thus, this sector largely controls the distribution system of principal current consumer goods as well as services for households. The informal sector holds a quasi-monopoly regarding food (96.10%) and clothing (84.36%). It is thus not only present in the distribution of the goods it produces, but also acts as a relay in the distribution of goods produced by the formal sector. This result agrees with the report that commercial activities are definitely dominant in the informal sector (47%) and that all categories of products (primary education, artisanal and industrial) are distributed by this sector. However, the formal sector plays a significant role in the distribution of certain goods and services which, due to their nature, generally include more updated technology that still evades the informal sector. These are: capital equipment, telecommunications, education and health.

Table 12: Average expenditure per station and quintile of expenditure

Category	Standard of living				
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Food	313677.4 (208070.2)	416467.3 (288102.4)	502296.1 (338941)	575185.6 (411801.1)	695909 (759527.5)
Restaurant	36381.17 (42903.31)	48907.01 (65794.25)	69898.26 (88873.05)	104480 (126920.7)	172109.7 (243379.8)
Drinks	20104.54 (42768.04)	21597.34 (35348.02)	24785.92 (36654.58)	35269.31 (65263.42)	78586.94 (443415.7)
Tobacco	19118.38 (23661.19)	22504.01 (23372.91)	27515.05 (27869.91)	35064.45 (33817.76)	50015.1 (53652.75)
Clothing	45995.74 (48878.07)	63109.05 (74484.79)	83414.98 (98413.73)	105095.5 (112947.2)	195599.4 (375137.7)
Housing	138859.8 (81078.3)	175342.1 (114872.5)	214884.9 (140386.7)	257380.5 (187100.9)	415498.9 (679553)
Equipment	32763.41 (40322.83)	46647.86 (66351.26)	59710.03 (80168.13)	78334.05 (102600.3)	169849.8 (438061.3)
Transport and communication	39421.15 (46372.98)	64158.19 (83235.05)	98121.29 (142080.3)	145461.5 (222164.8)	465294.8a (1394540)
Education	31315.7 (41111.44)	53572.88 (75788.67)	87666.08 (114095.9)	133132.9 (170335.8)	265743.5 (439454.7)
Health	13589.64 (17044.97)	21532.37 (23785.33)	30877.51 (32896.59)	43271.99 (48987.61)	72483.3 (104427.4)
Leisure	10041.24 (14285.03)	16312.13 (26738.45)	27072.99 (69525.48)	40220.44 (86146.96)	111501.6 (351910.5)
Other goods and services	13857.37 (14396.09)	16564.72 (20129.2)	19458.85 (42769.89)	23192.08 (37079.98)	42184.84 (109730.2)

Source: Authors from ECAM2 (2001). Note that the values in parentheses are standard deviations

When one considers the typology of households according to the socio-professional category of the head of the household as mentioned above, one notices that if informal households demand more from this sector (Table 14), all the categories are contributors insofar as even the formal sector households have recourse to more than 60% (compared to the informal sector) to the acquisition of their goods and services. On the other hand, regarding the differential of income between these various household categories in favour of formal households, 50% of the final demand to the informal sector comes from the formal sector (public and private). Consequently, this sector drains a significant proportion of income from the formal sector, thus showing that in certain ways, these two sectors of the nation's economy progress in phases; the incomes distributed by the formal sector largely benefit the informal sector.

Table 13: Share of total purchases in the informal sector<sup>19</sup>

	1993	2001
Food	93.3	96.10
Restaurant	93.3	96.10
Drinks	93.3	96.10
Tobacco	93.3	96.10
Clothing	81.9	84.36
Housing	68.9	70.97
Household equipment	68.9	70.97
Transport	65.7	67.67
Education	44.4	45.73
Health	35.8	36.87
Leisure	44.4	45.73

Source: Authors from survey 1-2-3, phase 3 (1993) and ECAM2 (2001)

Table 14: Percentage of amount of purchase in the informal sector per branch of industry of household head and category of product

Category of goods and services	Branch of activity of household head				Total
	Public	Private formal	Private informal	Unemployed/inactive	
Food	88.5	86.2	95.7	95.9	96.10
Clothing	74.9	84.2	84.7	84.0	84.36
Housing	66.8	78.4	66.4	45.9	70.97
Equipment for maintenance of the house	65.0	46.9	79.0	68.2	72.50
Health, personal care	28.2	41.0	41.0	36.5	36.87
Transport, communication	54.4	64.1	74.7	76.5	67.67
Education, leisure	38.1	63.5	54.8	37.4	45.73
Total	62.1	71.1	78.4	70.6	73.95

Source: Authors from ECAM II

The weakness of prices constitutes the primary reason households turn to the informal sector, while households turn to the formal sector for the quality of the products it offers. That being so, these motivations of the choice of purchase sector, which highlights the quality-price arbitration, exposes another type of relation between the two sectors. An increase in income, for example, would benefit the formal sector more insofar as the households would operate a substitution between the goods of less good quality to those of more acceptable quality.

Ultimately, this investigation allows us to expose two somehow contradictory relations between these two sectors of the economy in relation to the market. A complementarity relationship inducing a growth in phase between them. The second is the relationship of competition between price and the quality, which causes the substitution phenomenon.

Table 15 makes it possible to present the evolution of the structure of household consumption according to income. It is observed that:

- the share of informal goods and services is high and is a decreasing function of household expenses. Thus, if it represents a little less than 79% of the first quintile of expenditure, this share is 74% for the last quintile. In addition to being mainly necessary goods, or even inferior goods, goods in the informal sector are also mass consumption goods. They are consumed by poor and rich people; and
- the consumer's choice evolves with their total expenditure. If the consumer goods are necessary goods, then clothing, equipment for the home, transport, education, health and leisure are obviously luxury goods. The share of housing decreases with household expenses. That is explained by the fact that rents were not charged to households that owned their housing.

Thus, the evolution of consumer preferences according to incomes could involve a vertical redistribution of tax on the goods and services of the informal sector. With constant fiscal receipts, increasing the tax burden borne by the taxpayers or the goods and services of the informal sector, on which only legal tender tax is paid, would reduce the tax contributed by taxpayers in the formal sector. In addition, more effective taxation of the products distributed in the informal sector would increase the revenues from taxes.

Table 15: Structure of consumption per quintile of expenditure

Quintiles of expenditure	1	2	3	4	5
Food	.472579	.46627	.4393942	.4059891	.316041
Restaurant	.0555679	.0591838	.0632945	.0785712	.1048599
Drinks	.027306	.0224434	.0194247	.0232739	.0241169
Tobacco	.0307998	.030042	.0281831	.0304453	.0338497
Clothing	.069155	.0671615	.0687448	.0689695	.0769699
Housing	.2361129	.2103325	.1982724	.1866191	.1701089
Housing equipment	.0494276	.0493232	.0489909	.0511192	.0574587
Transport	.055874	.0635312	.0741938	.0853774	.1268722
Education	.043688	.0492674	.0600303	.0675246	.077563
Health	.0207026	.0238863	.0259651	.027801	.0296278
Leisure	.0143118	.0161141	.019249	.0223913	.0342843
Share of informal goods	.7860225	.7821004	.7715508	.7628202	.7412936

Source: Authors from ECAM II (2001)

These results need to be confirmed by the elasticity of the demand function of the various products for both the formal and the informal sector.



## Estimate of AIDS functions

The elasticities used in the framework of this paper are obtained from the estimated parameters of the AIDS model. The relationships between the parameters of this model and various elasticities are as follows:

$$E_R = 1 + \frac{c_b^h}{w_b^h} \text{ for price elasticity}$$

$$E_i = -1 + \frac{d_{b,b}^h}{w_b^h} - c_b^h \text{ for direct price elasticity}$$

$$E_k = -1 + \frac{d_{b,k}^h}{w_b^h} - \frac{c_b^h}{w_k^h} w_k^h \text{ for cross-price elasticity}$$

As for the cross-price elasticities between goods in the formal sector and those in the informal sector, Gautier (2001) proposes the use of the expression

$$1 - \left| \frac{1}{2} - \frac{q_y y_i}{q_x x_i + q_y y_i} \right| \text{ when the incomes devoted to both goods are 50\%. However,}$$

in this specific case, this formula is verified for leisure and education goods. In the case of other goods, the elasticity used is the average of the cross-price elasticities in both sectors.

The data in the transverse section always pose the problem of heteroscedasticity. This problem was corrected by the method of White. The results of the estimate of various elasticities are given in Tables 16 and 17. From these tables, we can calculate the median values of cross-price elasticities, which will be used to determine the optimal solution for the rate of taxation, as well as the deposit rate of the informal sector. From the estimated parameters of the AIDS model, it is easy to calculate price elasticities, cross-price elasticities, and income elasticities. These elasticities are obtained via the following expressions: Tables 14 and 15 show that the share of goods and services from the informal sector decreases with the income of households but remains important. Informal goods thus appear as first-need goods, while those of the formal sector are luxury goods. This result corroborates that of DIAL-DSCN (1993), which showed that those informal goods sectors were selected for the reasonableness of prices, whereas those of the formal sector were selected for quality. The analysis of various elasticities shows that goods in the formal sector are generally less sensitive to price increases than those in the informal sector. As for income elasticity, we notice that it is weaker in the informal sector and is often lower than 1. This result is close to that found by Cogneau et al. (1996) for Cameroon, which confirms the fact that goods in the formal sector are luxury goods.

Table 16: Price and income elasticity in the formal sector (average values)

No	Type of goods and services	Elasticity		
		Income elasticity	Direct price elasticity	Cross-price elasticity
1	Food	0.77	-0.635	0.05
2	Restaurant	1.11	-0.60	-0.018
3	Drinks	1.135	-0.805	0.04
4	Tobacco	1.704	-1.43	0.069
5	Clothing	1.103	-1.175	0.1
6	Housing	1.16	-1.045	-0.013
7	House equipment	1.16	-1.30	-0.022
8	Transport	1.56	-1.15	-0.001
9	Education	1.26	-0.45	0.08
10	Health	1.00	-1.00	-0.037
11	Leisure	1.22	-1.35	-0.002

Source: Authors from ECAM II (2001)

Table 17: Price and income elasticity in the informal sector (average values)

No	Type of goods and services	Elasticity		
		Income elasticity	Direct price elasticity	Cross-price elasticity
1	Food	0.68	-0.73	0.075
2	Restaurant	0.97	-0.69	0.02
3	Drinks	0.88	-0.92	0.048
4	Tobacco	1.01	-1.50	0.09
5	Clothing	0.77	-1.22	0.13
6	Housing	0.90	-1.11	0.024
7	House equipment	0.85	-1.43	-0.018
8	Transport	1.02	-1.29	0.00
9	Education	0.92	-0.52	0.101
10	Health	0.86	-1.21	-0.012
11	Leisure	1.06	-1.35	-0.02

Sources: Authors from ECAM II (2001)

Having obtained the necessary parameters for resolving optimal solutions, simulations are now possible.

## Levels of optimal taxation of goods and services

Within the framework of this paper, the given levels of taxes are those which will make it possible for the Cameroonian tax system to be efficient. This is why we fix  $\varepsilon = 0$ , enabling the exclusion of the equity criterion from our results. Table 18 gives

the levels of impositions fixed by the legislation in force. These are the tax rates determined by the General Tax Code (GTC). It would have been judicious to use the effective tax rates, because they are closer than those proposed by the GTC. Indeed, in developing countries, notably Cameroon, where corruption is endemic in public administration, goods and services in the formal sector very often escape tax. These practices partly underlines why the actual rates are different from the effective rates. The results obtained within the framework of our simulations need to be interpreted with caution. Their implementation must take into account the cost of tax collection in the informal sector which, within the framework of this paper, was supposed to be null ( $g(\beta) = 0$ ) because of the absence of information about it.

Table 18: Level of imposition compatible with efficiency

No	Type of goods and services	Formal goods and services		Informal goods and services	
		GTC taxes	Optimal taxes	GTC taxes	Optimal taxes
1	Food	0.00	0.5	0.00	0.1
2	Restaurant	19.25	10.38	0.00	3.00
3	Drinks	19.25	24.62	0.00	20.67
4	Tobacco	19.25	19.20	0.00	10.8
5	Clothing	19.25	18.08	0.00	20.02
6	Housing	19.25	6.10	0.00	2.24
7	House equipment	19.25	15.7	0.00	8.61
8	Transport	19.25	12.13	0.00	-0.23
9	Education	0,00	6.56	0.00	-0.4
10	Health	0.00	13.33	0.00	18.05
11	Leisure	19.25	17.156	0.00	3.21

Source: Authors from ECAM II (2001)

It is evident that optimal taxes of consumer goods are not different from current levels. It thus seems logical that the authorities adopt a null rate of taxation for these goods (zero rate). This result is practical insofar as food products are classified as basic goods. This consideration is explained by the fact that when they are imported these same goods do not attract any customs duty and benefit from the governmental measures in favour of the fight against an expensive life.

As for restoration goods, they deserve to be taxed if the Cameroonian tax system wants to be efficient. Indeed, the level of optimal taxation for restoration goods is 10.38% in the formal sector and 3% in the formal sector. The cost of tax collection in the informal sector could result in the non-taxation of restoration goods in the informal sector, because it would be unprofitable for the tax authorities. Moreover, this result confirms that restoration goods in the informal sector are consumed by that part of the population with a low income. On the other hand, restoration goods in the formal sector are regarded as luxury goods and consequently deserve to be taxed.

Clothing, drinks, tobacco, health, and equipment for houses coming from the informal sector have to be taxed at the rates of 20.02%; 20.67%; 10.8%; 18.05%; 8.61%, respectively. These rates are close to the current rates for clothing, drinks and health goods. A tax reform would thus consist of imposing a tax on clothing coming from the informal sector, at least at the current rate of 19.25%. This policy could increase the price of clothing in the informal sector and reduce the import of second hand clothing from northern countries. Moreover, such a policy could allow Cameroon to boost its local textile industry (increase in production, job creation, and other things) and make it a bedrock of its development policy.

Tax on healthcare in the formal and informal sectors deserves special attention. Sanitary goods and services are consumed by poor and rich persons, and are often demanded at a low price. However, these goods come from smuggling, counterfeiting, and medical products for the public sector being diverted from their destination. Informal sanitary services are offered by people who often do not have the required authorization. By taxing medical goods and services in the informal sector at a rate higher than those of the formal sector, the prices of both sectors could be equalized and the population (rich and poor) could prefer the goods and services of the formal sector because of their quality. Moreover, revenue from this tax could be directed towards medical departments in the form of subsidies, and could support the treatment of poor people in the formal public sector.

Conversely, goods in the informal sector, such as education and transport, deserve to be subsidized. The Cameroonian public authorities abolished school fees for primary education. However, in spite of this exemption, households still pay non-institutional school fees levied by school directors. Households in urban areas prefer to send their children to schools in the private sector, where the cost of schooling is high. Moreover, other products necessary for education (school books, school uniforms, bags, and other school materials) are distributed by the informal sector.

## 7. Conclusion and implications for economic policy

In this paper, we presented an analysis that allows taxing of goods and services in the informal sector in Cameroon in an optimal way. After presenting the various taxes of the Cameroonian tax system, the taxes paid by the informal sector, and the performance of this tax system, the paper developed a methodological framework to determine the structure of an optimal tax on the goods and services of the informal sector. The results obtained made it possible to highlight the importance of the informal sector and to show through the structure of household expenses that goods and services coming from this sector are consumed by both poor and rich households. The results obtained by maintaining only the criterion of tax system efficiency made it possible to show that it is desirable to maintain a null rate of taxation on basic goods such as food, restoration in the informal sector, and housing. On the other hand, it would be desirable for goods such as education and transport in the informal sector to benefit from subsidies. How to implement the taxation of the informal sector? This question remains alarming and its answer(s) is (are) likely to make practical suggestions from the results of this paper.

### Conditions for taxation in the informal sector

The constraint of goods and services in the informal sector constitute a major reform that would modify in an important way the distribution of income between social categories. The direct losers of the reform would be urban consumers. The winners of the reform should be rural consumers, who are often without voice. A reform as important as a widening of the tax base to include the informal sector can elicit strong opposition as public opinion will spontaneously perceive the harmful effects of the reform and that taxation easily constitutes a federator argument of the opposition to the authorities. It would be pretentious to claim that in this paper all the necessary conditions and the way forward have been determined for the widening of the tax base in general and VAT in particular towards goods and services in the informal sector to be acceptable: the alchemy of the tax is too complex for that.

## An active pedagogy of reform within a democratic framework

Democracy is entrenched in African countries, and not considering the fiscal consequences would carry the risk of failure. Pedagogy bound for the taxpayers is an essential dimension of the reform. Accurate information and the quantified effects of the reform must be available to clarify decision-making and to allow justification for the reform. Diffusion in an adapted form to the various categories concerned is desirable. In this respect, the search for synergy between financial administration, the regrouping of economic operators of the formal and informal sectors, as well as the local political authorities, is crucial.

## Evaluation of tax expenditure

The level of revenue from taxes in Cameroon is eroded considerably by various exemptions. These exemptions are mainly directed towards the goods and services consumed by the poorest, and for the benefit of certain lobbies with economic and social incentive aims. The multiplication of the exemptions, their superposition, made the tax system extraordinarily complex. A fundamental task, the “obvious” condition of increasingly necessary transparency (Brix, 2004), is to assess all exemptions, and to evaluate their impact on the receipts (evaluation of tax expenditure). It is appropriate from the data gathered to determine whether the tax expenditure and the difficulties of consecutive application of the tax to exempt the informal sector are economically and socially justified. It is also necessary to appreciate whether alternative methods, such as targeted direct subsidies, would not be more efficient to achieve the stated goals. The experience of Morocco, which produced a report on public expenditure annexed to the finance law of 2006, proved the possibility of such a step for African countries.

## Impact studies on the reform

In order to avoid the a priori rejection reactions, and to allow for the drafting of a relevant policy, it is essential that the effects of taxation of the informal sector are subject to quantified studies, which should be as rigorous as possible.<sup>20</sup> The methodology employed by these studies must allow the dissemination of results to all decision-makers. An adapted diffusion of the results of these studies towards public opinion must be carefully prepared. These studies can make it possible to identify the groups affected in a negative way and to institute compensation measures, if necessary. They must also clearly highlight the advantages for other groups with a widening of VAT towards the informal sector.

For example, it is clear that producers in the informal sector benefiting from this reform clearly perceive its advantage: they will more easily accept the constraint of

VAT on their activities and will act in favour of the reforms towards the other groups. In this respect, the policy of tax reform can be facilitated when the actors of the informal sector are organized. The composition and schedule of the taxation programme of the informal sector must be carefully prepared. It is about avoiding excessive shocks and inconsistencies. Thus, the suppression of VAT exemption relating to intermediate consumption must have as a corollary the constraint of the product in order to allow the application of the mechanism of deductibility.

## The choice of favourable context

The widening of the VAT base must take into account the socioeconomic and political context. Any tax measure and subsequent measures leading to the taxation of mass consumption goods is likely to cause very strong sociopolitical reactions. It is essential to act in a conducive climate, when there are no shocks, delicate electoral deadlines, and other such incidences. Therefore, in order to minimize the apparent shock of the reform, it is judicious to implement it during a period of stability, such as a fall of the international prices of mass consumption goods expressed in local currency. As Cameroon is in the process of suppressing customs duties, it becomes more complex to impose a tax on goods and services in the informal sector. This complexity is indicated by Emran and Stiglitz (2005), who show that the suppression of customs duties is ineffective in countries where the informal sector occupies a dominant position.

# Notes

1. These constraints are relative to the level of development of African industries, the structure of African economies, the administrative management of tax, and other factors.
2. The complexity of the legislation, which encouraged the development of the informal sector, is relative to administrative burdens and delays, the number of steps necessary to create a formal company, and the tax costs related to the creation of a formal company, among other things.
3. The public sector and the formal private sector account for 4.9% and 4.7%, respectively, of employment in Cameroon.
4. More than 90% of IPU chiefs declare that they buy their raw materials from other informal actors.
5. 5 Informal-sector companies indicate that only 5.6% of their sales turnover is from trade with companies in the formal sector.
6. The DGT is the tax head office. This administration deals only with interior taxation. International business tax is collected by the customs head office.
7. The growth rate of the Cameroonian economy was close to 5% between 1997 and 2007. It is thus logical to consider that a part of the increase in fiscal receipts is a consequence of economic growth.
8. Management by objectives is a policy adopted by the tax authorities since the introduction of VAT, which consists of fixing a minimum monthly receipt for each divisional tax centre. This minimum takes into account the economic potential of the geographical area for which the divisional centre is responsible.
9. These taxes are: BIC, BNC, BA, mining tax, inspection tax on fishing and breeding products, land revenue, registration tax, certificates, and audiovisual royalties.
10. The CT in this case does not take into account the CT of oil companies.
11. It is useful to note that some of the taxes paid by the informal sector are collected by regional authorities.
12. Partly global taxes and some small taxes paid to regional authorities; the informal sector



does not pay others taxes such as VAT, PIT, patents, and liquor tax.

13. The taxable profit is the clear benefit determined according to the overall performance of operations of any nature carried out by the companies during a period-basis being used for the tax.
14. See Annex A for details on categories.
15. This rate was 18.7% between 1999 and 2004.
16. Only taxpayers of the mode of real estate and simplified reality are authorized to carry out deductions.
17. Concerns the consumed part of the production of the households.
18. Households Cameroonian Survey (2017)
19. Compared to the data of the Dial 1-2-3 survey, phase 3 of 1993, one notes a growth in the informal sector. This is an increase of about 3%.
20. This study focused only on the level of optimal tax.

## References

- Ahmad, E. and N. Stern. 1984: "The theory of reform of Indian indirect taxes". *Journal of Public Economics*, 25: 259–98.
- Ahmad, E. and N. Stern. 1991: *The Theory and Practice of Tax Reform in Developing Countries*. Cambridge: Cambridge University Press.
- Ahmad, E. and N. Stern. 1987: "Alternative sources of government revenue: Illustrations from India, 1979–1980". In D. Newberry N. and Stern, eds, *The Theory of Taxation for Developing Countries*. Oxford: Oxford University Press for the World Bank.
- Araujo-Bonjean, C. and G. Chambas. 2005. "Taxing the urban unrecorded economy in sub-Saharan Africa". In J. Alm and J. Martinez, eds, *Taxing the Hard-to-Tax: Lessons from Theory and Practice*. Elsevier.
- Atkinson, A.B. 1970: "On the measurement of inequality". *Journal of Economic Theory*, 2:244–63.
- Baunsgaard, T. and M. Keen. 2005: "Tax revenue and (or?) trade liberalization". IMF, FAD, Draft.
- Brixi, P.B., C.M.A. Valenduc and Z.L. Swift. 2004: *Tax Expenditures – Shedding Light on Government Spending through the Tax System: Lessons from Developed and Transition Economies*. Directions in Development series. Washington, D.C.: World Bank.
- Chambas, G. 2005a: "Afrique au sud du Sahara: quelles strategies de transition fiscale?" *Afrique contemporaine*, 213.
- Chambas, G. 2005b: *Afrique au sud du Sahara. Mobiliser des ressources fiscales pour le développement*. Paris, Economica.
- Cornély, J-P. 1995: "Conditions pour la réussite d'une TVA en Afrique". Fiche pour les journées d'études Coopération Française, Banque Mondiale et FMI, Mai.
- Cremer, H. and F. Gahvari. 1993: "Tax evasion and optimal commodity taxation". *Journal of Public Economics*, 50: 261–75.
- Diamond, P.A. and J.A. Mirrlees. 1971: "Optimal taxation and public production 1: Production efficiency and 2: tax rules". *American Economic Review*, 61: 8–27 and 261–78.
- Emran, M.S and J. E. Stiglitz 2005. "On selective indirect tax reform in developing countries". *Journal of Public Economics*, 89: 599–623.
- Feltenstein, A. and E. Dabla-Norris. 2005. "The underground economy and its macroeconomic consequences". *Journal of Policy Reform*, 8: 153–74.
- Gautier, J-F. 2001. "Taxation optimale et réformes fiscales dans les PED: Une revue de littérature tropicalisée". Document de Travail DT/2001/02, Dial.
- Kaplow, L. 1990: "Optimal taxation with costly enforcement and evasion". *Journal of Public Economics*, 43: 221–36.

- Navajas, F. and A. Porto. 1994. "Budget shares, distributional characteristics and direction of tax reform". *Economic Letters*, 45(4): 475–9.
- Ramsey, F. 1927. "A contribution to the theory of taxation". *Economic Journal*, 37: 47–61.
- Ray, R. 1986. "Sensitivity of 'optimal' commodity tax rates to alternative demand functional forms". *Journal of Public Economics*, 31: 253–68.
- Sahn, D. and S. Younger. 1999. "Fiscal evidence in Africa: Microeconomic evidence". Cornell University Working Paper No. 91, October.
- Blomquist, S., M. Eklöf and W. Newey. 2000. "Tax reform evaluation using non-parametric methods: Sweden 1980–1991". *Journal of Public Economics*, Vol. 79.

# Annexes

## Annex A: List of activities by category, global tax

### Category A

• Travelling hairdresser
• Travelling Gargotier
• Gargotier without arranged room
• Travelling salesman for drinking water and aerated beverages; by tri-car, rickshaw or auto-cycle
• Tailor or dressmaker with fewer than 5 machines, apprentices or employed or working only
• Owner of a mill
• Travelling merchant selling various articles
• Travelling engraver
• Hairdresser with residence
• Owner of terminal fountains, by terminals fountain
• Holding a hairdressing salon with 1 to 3 employees
• Craftsman or manufacturer without average mechanics
• Engraver in residence
• Owner of cafeteria
• Soya salesman
• Transporter of people by auto-cycle (motor bike-taxis)
• Road haulage operator by rickshaw
• Tenant of a school canteen
• Clock and watch maker
• Retailer of food products (bayam-sallam) without means of transport
• Travelling salesman of various goods
• Owner of photocopier, machine for typing or computer for text processing without a room and by photocopier, machine to be typed or computer;
• Travelling shoemaker
• Wine salesman: raffia or palm
• Wood carver
• Blacksmith
• Basket maker

continued next page

## Category A Continued

• Craftsman of leather goods
• Salesman of flowers
• Book peddler
• Non-paid retailers of tickets or lottery tickets and PMUC;
• Repairer of television sets and other audiovisual equipment, but not selling spare parts
• Battery chargers, repairer of wheels
• Collector of animal skins
• Firewood merchant with the detail
• Travelling salesman of cassette radios, watches and clocks
• Newspaper kiosk
• Live-in landlord
• Charcoal merchant to the detail
• Owner of games of chance to three charts
• Reporter
• Food manufacturer of yoghurt or lollipops, not on an industrial scale;
• Taxpayers concerned with agricultural benefit whose annual sales turnover is lower than a million CFA;
• Travelling seller who makes pastries
• Merchant of stakes, bamboo and boards
• Travelling salesman of cassettes with recorded music, and video cassettes
• Owner of a laundry with a water meter and guarding
• Non-salaried sales representative

## Category B

• Owner of a photocopier, machine to be typed on or computer for text processing, with a room and by photocopier, machine to be typed or computer
• Healer
• Tradesman with a sales turnover lower than CFCA5 million
• Gargotier with arranged room
• Person renting out bicycles with fewer than 10 bicycles
• Merchant of smaller livestock and poultry, with a sales turnover lower than CFCA5 million
• Owner of a film theatre
• Person renting out covers, chairs or crockery whose sales turnover does not exceed CFCA5 million
• Retailer of food products, with a vehicle
• Owning a hairdressing salon with 3 to 5 employees
• Transporter of people by vehicle to the periphery of urban centres
• Photographer in a studio
• Owning a workshop for cloth printing
• Professor of dance or music, sports, physical education, or monitor of gymnastics
• Kiosk selling tobacco
• Firewood merchant, with a vehicle
• Soft drink merchant not giving place to license
• Conjuror or illusionist
• Owner of a phone booth with a sales turnover annual lower than CFCA5 million
• Mechanic, sheet-iron merchant, auto-electrician without average mechanics
• Owner of a hygienic bar giving place to license and whose sales turnover is lower than CFCA15 million
• Owner of a laundry with a water meter and guarding of a vehicle
• Camera peddler

### Category C

• Midwife providing care at home
• Male nurse or masseur
• Mixed transport of people and goods on the periphery of urban centres
• Tradesman with an annual sales turnover ranging between CFCA5 and 10 million
• Person renting out bicycles with 10 to 20 bicycles
• Restoring, not classified
• Person renting out auto-cycles, with fewer than 10 auto-cycles
• Drudge with a sales turnover ranging between CFCA5 and 10 million
• Merchant travelling by motor vehicle
• Collector of basic products
• Merchant of cattle and poultry with a sales turnover ranging between CFCA5 and 10 million
• Owner of taxi and by taxi
• Owner of bar hygienic and wines whose sales turnover is lower than CFCA15 million
• Tourist guide
• Hardcore and gravel, sandman
• Owner of a phone booth with an annual sales turnover ranging between CFCA5 and 10 million
• Person renting out covers, chairs or crockery whose sales turnover is between CFCA5 and 10 million

### Category D

• Alcoholic and other beverage seller whose sales turnover is lower than CFCA15 million
• Tradesman with an annual sales turnover ranging between FCFA10 and 15 million
• Merchant of cattle and poultry with a sales turnover ranging between FCFA10 and 15 million
• Person renting out bicycles, with more than 20 bicycles
• Person renting out auto-cycles, with more than 10 auto-cycles
• Manicurist or chiropodist providing beauty services
• Owner of bars hygienic and selling wine whose sales turnover is between FCFA10 and 15 million
• To stop not having refrigerating means selling fewer than 100 animals per annum
• Urban transport of mass by vehicle
• Owner of a phone booth with a sales turnover between FCFA10 and 15 million
• Person renting out covers, chairs or crockery whose sales turnover is between FCFA10 and 15 million
• Drudge with a sales turnover ranging between FCFA5 and 15 million

## Annex B

Table B1: Consumed goods and services by groups

Groupe de produit	Poste de dépense
Food	• Cereals and cereal products
	• Starch and starch
	• Vegetables and legumes
	• Fruit and nuts
	• Milk, milk products and eggs
	• Oils, fats, sugar and sweets, condiments
	• Meat, poultry and insects
	• Fish and shellfish
	• Meals, beverages made in the home
Restaurant	• Ready meals consumed outside the home
	• Light meals consumed outside the home
Drinks	• Alcoholic beverages consumed outside the home
	• Non-alcoholic beverages consumed outside the home
	• Hot drinks (and tea) consumed outside the home
	• Dried tobacco leaf
Tobacco	• Crushed tobacco snuff
	• Chewing tobacco
	• Non-industrial cigarettes
	• Local tobacco and cigarettes
	• Imported tobacco and cigarettes
Clothing	• Outerwear man
	• Women's outerwear
	• Outerwear child (0 to 14 years)
	• Underwear, socks man
	• Lingerie, hosiery woman
	• Lingerie, hosiery child (0 to 14 years)
	• Clothing accessories
	• Fabric costs, sewing and haberdashery
	• Man footwear
	• Women's shoes
	• Shoes child (0 to 14 years)
	• Accessories for shoes
• Ressemelage and repair of footwear	

continued next page



Table B1 Continued

Groupe de produit	Poste de dépense
Lodging	• Rent of dwelling
	• Ground rent for housing
	• Mineral water (invoice, purchase at the dealer, ...)
	• Electricity
	• Fuel and other energy sources
House equipments	• Home furnishings
	• Items of furniture and household linen
	• Household appliances
	• Household utensils
	• Gardening tools and DIY
	• Products maintains
	• Domestic policy
	• Materials for construction, repair and construction of house
Transportation	• Means of transport (vehicles and animal transport, etc.)
	• Spare parts, accessories, fuel and oil
	• Maintenance and repair of means of transport
Education	• Materials and supplies
	• Tuition
	• Other materials and costs of education
Health	• Medical consultations
	• Pharmaceuticals and medicines
	• Hospitalization and medical care
	• Rehabilitation equipment
Leisure	• Electro-acoustic devices
	• Musical instruments
	• Music accessories
	• Hardware
	• Materials and photography services
	• Cinema equipment
	• Sporting equipment (not including shoes and clothing)
	• Events and sports contributions
	• Hardware and accessories for games
	• Miscellaneous games

continued next page

Table B1 Continued

Groupe de produit	Poste de dépense
Other goods and services	• Toiletries and personal care
	• Postage/courier
	• Telecommunications
	• Watches
	• Jewellery
	• Leather
	• Eyewear, non-medical
	• Personal smokers
	• Other property not classified elsewhere
	• Maintenance and repair of goods
	• Molding seeds and other food products
	• Other miscellaneous services not classified elsewhere

Compiled by Author

## Annex C

Table C1: Estimated elasticities model of AIDS consumer goods in Cameroon – formal sector

Variables	Category of goods and services										
	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
Prix_B1	-0,635	0,04	-0,24	-0,15	0,00	0,01	0,01	0,02	0,00	0,00	-0,18
Prix_B2	0,08	-0,60	-0,17	0,10	0,01	0,00	0,00	0,05	0,01	0,02	-0,11
Prix_B3	0,03	-0,01	-0,805	-0,06	0,38	0,02	0,00	0,13	0,29	-0,18	-0,05
Prix_B4	0,25	-0,10	0,06	-1,43	0,43	0,18	0,04	0,15	0,36	-0,16	0,31
Prix_B5	0,01	-0,09	0,77	0,60	-1,175	0,03	0,02	0,16	-0,11	-0,09	0,13
Prix_B6	0,00	0,00	0,00	0,37	0,01	-1,045	0,11	-0,42	0,01	0,01	0,09
Prix_B7	0,02	0,01	0,01	0,07	0,02	0,17	-1,30	-0,17	-0,10	-0,13	0,19
Prix_B8	0,00	0,10	0,27	0,1	0,11	-0,67	-0,21	-1,15	0,00	-0,1	0,01
Prix_B9	-0,06	-0,10	-0,19	-0,23	-0,06	0,00	-0,14	-0,01	-0,45	0,03	-0,20
Prix_B10	0,04	0,07	-0,22	-0,2	-0,10	-0,02	-0,12	-0,06	0,04	-1,00	-0,21
Prix_B11	0,13	0,29	0,11	0,09	0,20	0,15	0,07	0,14	0,30	0,23	-1,35
Revenue	0,77	1,11	1,135	1,704	1,103	1,16	1,16	1,56	1,26	1,00	1,22

Source: Authors from ECAM2 (2001)

Table C2: Estimated elasticities model of AIDS consumer goods in Cameroon – informal sector

Variables	Category of goods and services										
	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
Prix_B1	-0,73	0,05	-0,26	-0,17	0,00	0,01	0,01	-0,06	-0,08	0,00	-0,18
Prix_B2	0,09	-0,69	-0,20	0,11	0,01	0,00	0,00	0,10	0,20	0,25	-0,15
Prix_B3	0,04	-0,01	-0,92	-0,08	0,42	0,03	0,00	0,15	0,34	-0,20	-0,09
Prix_B4	0,28	-0,13	0,07	-1,5	0,48	0,20	0,04	0,17	0,40	-0,19	0,37
Prix_B5	0,01	-0,12	0,76	0,67	-1,22	0,04	0,02	0,19	-0,14	-0,09	0,13
Prix_B6	0,00	0,00	0,00	0,40	0,03	-1,11	0,15	-0,44	0,03	0,06	0,10
Prix_B7	0,11	0,06	0,16	0,21	0,20	0,17	-1,43	-0,19	-0,13	-0,18	0,12
Prix_B8	0,08	0,11	0,30	0,14	0,13	-0,38	-0,19	-1,29	-0,01	-0,09	0,01
Prix_B9	-0,08	-0,13	-0,24	-0,28	-0,07	0,05	-0,16	-0,012	-0,52	0,04	-0,24
Prix_B10	0,06	0,07	-0,24	-0,22	-0,13	-0,05	-0,14	-0,08	0,06	-1,21	-0,25
Prix_B11	0,16	0,30	0,13	0,10	0,23	0,17	0,09	0,15	0,34	0,28	-1,35
Revenue	0,68	0,97	0,88	1,01	0,77	0,90	0,85	1,02	0,92	0,86	1,06

Source: Authors from ECAM2 (2001)



## Mission

To strengthen local capacity for conducting independent, rigorous inquiry into the problems facing the management of economies in sub-Saharan Africa.

The mission rests on two basic premises: that development is more likely to occur where there is sustained sound management of the economy, and that such management is more likely to happen where there is an active, well-informed group of locally based professional economists to conduct policy-relevant research.

[www.aercafrica.org](http://www.aercafrica.org)

## Learn More



[www.facebook.com/aercafrica](https://www.facebook.com/aercafrica)



[www.instagram.com/aercafrica\\_official/](https://www.instagram.com/aercafrica_official/)



[twitter.com/aercafrica](https://twitter.com/aercafrica)



[www.linkedin.com/school/aercafrica/](https://www.linkedin.com/school/aercafrica/)

## Contact Us

African Economic Research Consortium  
Consortium pour la Recherche Economique en Afrique  
Middle East Bank Towers,  
3rd Floor, Jakaya Kikwete Road  
Nairobi 00200, Kenya  
Tel: +254 (0) 20 273 4150  
[communications@ercafrica.org](mailto:communications@ercafrica.org)