

The School of Business And Public Management Institute of Brazilian
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The State of Minas Gerais Economy, Public Accounts
And Policies Adopted for the ICMS Revenue Recovery
From the Fiscal Chaos to the Perspective
of Primary Balance
1998 - 2000 - A Brief Exhibition

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#### I - General Introduction

Collection of the main Brazilian states' tax, the ICMS – Tax over goods circulation, and transportation and communications services - whose monthly average representativity reaches 90% of all the revenues of the State of Minas Gerais, presented successive variations between 1996 and 1998, with initial inflection in 1997, rebounding for the whole year of 1998. The country and the federated entities, with rare exceptions, were in a trice of apparent economic stagnation, associate to the increasing default, scarce credit and high interest rates, besides the aggravation of the international crisis, factors that devastated the levies of the tax on screen, due to its characteristics.

All this frame jeopardized excessively the accomplishment of the necessary fiscal adjustments, because the public deficit worsened each day, coming afloat the need of a fast and effective solution, the central point of which should be a profound expenses cut, allied to an increment in the collection. Aggregate to these factors, the State elections were in course and, in Minas Gerais' specific case, the situation has consolidated with the no re-election of the governor, being, thus, discarded any possibility of concrete actions until government's term end, in December 1998.

As of 1999, even with the occurrence of disturbing political facts at the beginning of the year, ICMS' collection in Minas Gerais started to present a strong and systematic growth, shifting itself from its historical platforms situated between 400 and 500 million of reals, in nominal values, to R\$ 586 million as early as in August 1999, growing systematically until to stabilize highly above the previous averages, around R\$ 700 million, as of August 2000.

Involving all this context, I will concentrate the focus of this work, which is to analyze the economic and fiscal frame of Minas Gerais, between 1998 and 2000. Such approach will be concentrated on the exhibition and evaluation of the State

Public Accounts, and on the very opportune adjustments made by the State Government and by the Finance Secretariat of Minas Gerais, in 1999 and 2000, when reversion of the revenue decreasing tendency started. Among these adjustments, I will highlight the deep expenses revision and its cuts, rising and revocation of unnecessary fiscal privileges and, mostly, the reorganization of the levying machine, through the austere policies implementation of fiscal control, via implementation of the named fiscal projects, seeking the balance of its accounts.

Finally, I will conclude this paper exhibiting the Minas Gerais ICMS revenues expectations for the years of 2001 and 2002, elaborated via ARIMA econometric model. This was the period in which the adopted policies are already consolidated or in advanced state of execution, thus showing, its real effectiveness.

It is important to frizzle that great part of the numbers which will be analyzed in this work are expressed in Brazilian Reals (R\$), once its conversion for American Dollars (US\$) would carry in a great distortion in the comparisons among values to be studied in the years between 1998 and 2000, due to the enormous devaluation suffered by Brazil's currency in January 1999. Therefore, the data expressed in Brazilian currency are in constant values, updated for the month of December of 2000, being sufficient, in case of necessity to convert it any time to American Dollars, just apply the exchange rate of this currency regarding the Brazilian real in this date, as presented in the table located in the appendix of this work.

### 1 – Overview of the Economy of Minas Gerais Between 1998 and 2000.

#### 1.1 - Historical

Minas Gerais' economic history has initiated with the exploration of gold, in the phase known as "gold cycle". The discovery of great mines in ends of XVII century attracted explorers' contingents, the villages and towns arising and creating conditions for the definitive occupation of the entire region.

After its apogee, around 1750, the mining activity entered in progressive decline, without having generated voluminous economic expansion. Its more important legacy was a rich cultural and architectural pile of the Minas Gerais State baroque, well known worldwide.

Concluded this phase, the isolation policy, at first imposed to the mining region as a form of exercising larger control on the stones and precious metals production, still inhibited the development of any other economic activity of exports, forcing the population to be dedicated to the agricultural activities of subsistence. For decades, despite advances reached in the sugar production, cotton and tobacco for the internal market, Minas Gerais remained restricted to the huge farms, autarchical and independent. The economic stagnation of the province, as well as of the entire colony, has only been broken with the appearance of a new and dynamic exporter activity, the coffee.

The introduction of the coffee exploration business occurred in early XIX century. It was located, initially, in the Zone of Mata of the State of Minas Gerais, where it spread quickly, transforming itself in the main activity of the province and the inductor agent of the population and of the development of the transportation

infrastructure. The prosperity brought by the coffee occasioned a first industrialization surge, reinforced, later, by the protectionist politics implemented by the Federal Government after the Proclamation of the Republic.

The industries, whose origin comes from this period, were little and medium sizes, concentrated, mostly, in branches of alimentary products (milk and sugar), textile and siderurgic products. In the agricultural sector, in smaller scale, other cultures developed, as the cotton, the sugar cane and cereals.

The predominance of coffee culture was only changed, gradually, in the period of 1930/50, with the affirmation of the natural state's tendency for the metallurgical production and with the increasing utilization of the abundant mineral resources. Still in the decade of 50, in the imports substitution process, the industry enlarged considerably its participation in the Brazilian economy. A factor that contributed for this new reality was the government's determination in the expansion of the infrastructure - above all in the energy and transport area - whose results translated in the creation, in 1952, of Minas Gerais' Energetic Company (CEMIG) and in the growth of the State roads, with highlight on the inauguration of Fernão Dias Highway, which connects Belo Horizonte to São Paulo, in the end of the decade.

In the 60's, the Government accomplished decisive role in the industrialization process, when establishing the institutional apparatus required to launch and to sustain the modernization effort of the Minas Gerais industrial structure.

The efficient and agile offensive for investment attraction, initiated at late 60's, found great resonance among the national and foreign investors. Already at the beginning of 70's, the State economy experienced a great industrial boom, with the countless projects implantation of wide socioeconomic range. The Minas

Gerais industrial park distinguished itself in the metal-mechanic sectors, electrical and transportation materials.

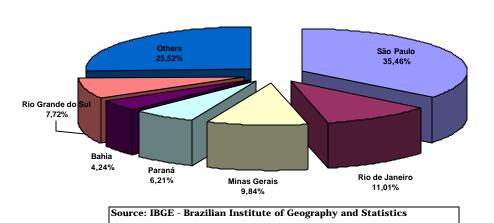
Between 1975 and 1996, according to foundation João Pinheiro, a Minas Gerais Government statistical enterprise, the State Gross Domestic Product (GDP) grew 93% in real terms. In equal period, according to IBGE (Brazilian Institute of Geography and Statistics) the country registered a growth of 65%. That important performance was verified, above all, in the transformation sector and in the industrial services of public utility. In the mineral extractive industry, the Minas Gerais supremacy lasted up to 1980, when Brazil proceeded exploring, among others, the mine of the Carajás complex. However, in 1995, the State was still responsive for 26% of the Brazilian mineral production of the metallic sector.

Today, Minas Gerais' economic structure is largely influenced by the industrial sector, responsible for 40,3% of the GDP of the State, while the agriculture contributes with about 9,2% and the services sector, with 50,5%, which includes the electric power and communications supply services.

#### 1.2 - Gross Domestic Product of Minas Gerais State

In the 90's, the participation of the Gross Domestic Product (GDP) of Minas Gerais, according to the Brazilian Institute of Geography and Statistics – IBGE, has been varying between 9,3% (in 1991) and 10,1% (in 1996) of Brazilian GDP. In 1998 - last year for which there exists available information -, The Minas Gerais GDP was equal to 9,79% of national GDP, which was calculated in R\$ 913.734 million, maintaining Minas Gerais at the third largest PIB among Brazilian States, behind São Paulo (35,46%) and Rio de Janeiro (11,01%) and ahead of Rio Grande do Sul (7,72%), Paraná (6,21%) and Bahia (4,25%), according the graphic below.





The Minas Gerais per capita GDP oscillated, in the 90's decade, between 86,3% (in 1991) and 95,1% (in 1996) of the Brazilian per capita GDP, situating itself in 92,6% in 1998, what corresponds, in market prices of that year, to R\$ 5.647,66 (US\$ 4,675.60).

In the eight first years of the decade, the State GDP grew at an average rate of 2,85% a year (the growth was 2,51% a year in the quadriennium 1990-94 and 3,19% for year in the quadriennium 1994-98), lightly superior to the one observed

for the entire Brazil, of 2,66% a year (in the first quadriennium, the annual growth rate was 2,74%, superior to that of Minas Gerais, but, in the second quadriennium, the rate of 2,58% a year was lower than this state's).

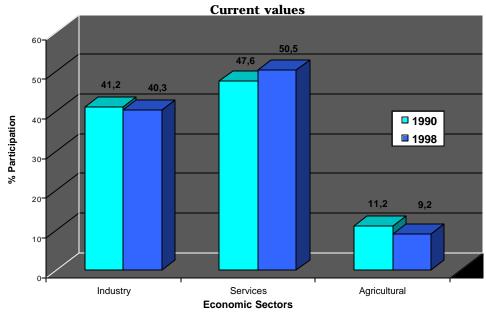
In 1999, still preliminary data show an elevation of the GDP in Minas Gerais of 1,2%, 50% above of the Brazil (0,79%); with that, in the period 1990-1999, the rate of average annual growth for the State would reach 2,67%. For 2000, as Minas Gerais proceeds having a superior performance to the national average, it is expected that GDP's expansion of the State will overcome the 4% estimate for Brazil.

In the period of 1990-1998, according to information from Fundação João Pinheiro, a state-owned organ of statistical studies, as mentioned before, the agricultural sector presented the biggest average annual rate of growth of the GDP: 5,06%, against 3,04% of the industrial sector and 2,32% of the services sector.

Completing what it was already exposed in the section of economic history of Minas Gerais, I will add that, due to the differentiated evolution of the prices, at the same period the participation of the services sector of the State in the GDP, in market prices, grew from 47,6% to 50,5%, at the expenses of the industrial sector and, mostly, of the agricultural, whose participations passed from 41,2% to 40,3% and from 11,2% to 9,2%, respectively, according, therefore, to the international tendencies, as it can be visualized in the graph in the next page.

In the period under analysis, therefore, little was the alteration in the Minas Gerais productive structure, with the services sector increasing its weight in detriment of the agricultural sector.





Source: FJP - Fundação João Pinheiro - MG

Note: 1998 is the last year in wich the Minas Gerais GDP was calculated.

Inside the industrial sector, the larger-weighting sectors are the transformation industry and civil construction. In the period 1990-1998, its participations in GDP of the State varied from 27,43% to 21,17% and of 8,93% to 13,16%, respectively.

The participation of the mineral extractive industry, which had grown from 1990 to 1993, proceeded falling to reach 1,4% in 1998. Also composing the industrial sector there is the industrial services of public utility, whose participation in GDP total passed from 3,48% in 1990 to 4,6% in 1998.

In 1998, five goods were responsible for 71,97% of GDP of the transformation industry of the State: metallurgy (21,82%), alimentary products (13,38%), material of transportation (12,93%), non-metallic minerals (12,13%) and chemical (11,70%). The sixth item of larger weigh – tobacco – presented a very inferior participation of 4,27%.

#### 1.3 - Performance of the Industrial Sector

For the years 1999 and 2000, as there are not yet disaggregated estimatives in terms of added value for the State, the industrial growth can only be evaluated in terms of the volume of physical production according to data from IBGE.

In 1999, the physical production in the Minas Gerais industry, which had retreated 4,06% in 1998, grew 1,09%. While the extractive industry indicated a decrease of 3,76% of the physical production, reverting growth tendency in the previous biennium (in 1998 had occurred growth of 3,97%), the transformation industry grew 1,45% (in 1998 there was a decrease of 4,63%).

Its important to emphasize that, in Brazil, the physical production of industry dropped 0,65% in 1999, that of the extractive industry grew 9,09% and of the transformation industry fell 1,62%. The behavior of the five main goods in the State was very variable.

Following this tendency, the physical production of the metallurgy, which dropped strongly in 1998 (-6,37%), recovered a little in 1999, presenting growth of 0,78%. The alimentary products items kept a strong growth: 13,02% in 1998 and 19,14% in 1999. The great downturn in the physical production of the transportation materials occurred in 1998 (-28,05%) was interrupted with an increase of 1,23% in 1999. The non-metallic minerals sector, which came growing in the previous biennium (2,73% in 1998), felt 3,54% in 1999. Finally, the physical production of the chemical items, which dropped 5,25% in 1998, retroceded 1,1% in 1999.

In 2000, still according to data from IBGE, the Minas Gerais industrial activity ended the year with a growth of 7,0% regarding the previous year. This result overcomes broadly the average growth verified in 1999, of 1,1%, and also

the national average, which was 6,5%. It is worth emphasizing that this was the best result of the last six years, losing only for the 8,4% reached in 1994. Moreover, it situated above the national average, which corresponded to 6,5%.

Among of the sixteen activity goods in the State, nine were the main responsible ones for the growth of the industry. The metallurgical industry, the one of larger significance in Minas Gerais' State, grew 10,7%, representing more than half the total growth. Other two economic branches that stood out positively in the year were the industry of alimentary products (8,0%) and material of transportation (14,9%). The sectors of non-metallic minerals (-4,2%) and chemical (-1,9%) presented more significant downturns.

Accompanying what occurred with the physical production, the revenue of the Minas Gerais industry grew 3,90% between January and December 2000, with highlight on the transformation industry, which obtained a revenue increment of the order of 6,02%, according to FIEMG (Federation of the Industries of the Minas Gerais State), emphasizing that in 1999 this rate was just 1,25%.

For the year 2001, according to data available up to now, the Minas Gerais' State is keeping the same tendency of 2000, presenting growth of 5,6% in the industrial physical production, against 6,9% of the consolidated number of Brazil.

However, according to the technicians of IBGE and FIEMG, there will be continuity of the economic growth, although with expectation of smaller industrial increment. They have said that the increase of the industrial production of 2001 will not be the same of 2000 (between 6,4% and 7%), but all these expectations were changed after the crisis of electric energy that started in Brazil on May 2001, changing completely the scenery which became unforeseeable.

#### 1.4 - Performance of the Agricultural Sector

Contemplating, at first, the Brazilian national context, one verifies that, since late1999, the evolution of the agricultural prices has been, in a general way, affected two opposite forces: the international prices, in the sense of downturns, and the climatic adversities, in the sense of the hights.

The maintenance of low levels of the international quotations of products as coffee, corn and wheat, regarding the historical standards, derives from the combination of the great output with the devaluation of euro regarding the dollar.

Most exports of agribusiness are targeted to the countries which compose the European Union: 40,5% in the period january-september/2000 (according to Production and Commercialization Secretariat/Ministry of Agriculture of Brazil). As the exports have been affected by the continuous devaluation of Euro, the imported products are becoming more expensive for the European consumer and their demand is getting reduced.

The Minas Gerais State, due to its geographical, climatic and cultural differences, occupies strategic position in the supply of the country. In 1999, 12,5% of the gross revenue of the Brazilian combined agriculture production (National Cooperative of Supply/Ministry of Agriculture) were generated in the State, a participation inferior just to the State of São Paulo (14,7%). The agricultural production answered for 60,7% of this revenue and the cattle breeding for 39,3%.

This sector continues to be the main responsible for the employment and income generation in the majority of the Minas Gerais municipal districts. In 1998, the combined agriculture answered for 22,04% of the total employed population in the State, a value superior to that presented by the industry (19,44%). Between 1985 and 1998, the added value of the combined agriculture had an accumulated growth of 41,6%, for an average rate of 2,7% a year.

In spite of this, in the period, the participation of the this sector in the State gross domestic product (GDP), was reduced practically in a half, from 17,8% to 9,2%. That configures an international tendency, of long term, of relative important loss of the sector, as the economy develops. In spite of this, there is no doubt that, if it were not for internal macroeconomics instability and the unsteadiness between production prices and costs, the national and Minas Gerais' combined agriculture would be presenting very better results.

It is worth emphasizing that the expectations delineated by the great majority of the economic analysts for this economic branch, for the next years in the State, are not very optimistic, with expansion of planted area forecasted for just three of the thirteen main products of the State agricultural production (soya, corn, and potato). It is waited the same production space for cane, onion, tobacco, papaw and tomato, and losses for cotton, rice, beans and peanut.

Coffee should not suffer increases in harvested area in 2001 and 2002 because the increases in its production of 2000 did not present gains in average revenue. The low prices in the international market remained, at least in the first semester of 2001, due to the stock accumulation, awaiting elevation of its quotations in the international market.

#### 1.5 - Performance of the Services Sector

The services sector detained the significant portion of 50,5% of the GDP of the State of Minas Gerais in 1998, varying along the decade of 90's just 3,9%, values arising basically of the agricultural sector.

The relative importance of this sector in the total of the Minas Gerais economy is justified by the fact that very significant activities are incorporated in its calculation, such as electric power generation and supply, communications services, including broadcasting, open and cable television and press.

Therefore, for involving in its calculation services whose tariffs are controlled by the Government, as electric power and communications (before the telephonic service company being privatized in the midi 90's) whose price increases were constant last decade, the small positive variation presented by this economic branch is justified.

#### 1.6 - Performance of the Trade Balance of Minas Gerais

According to data supplied by the Brazilian Ministry of Industry and Commerce, the total volume of exports of the State amounted to US\$ 6.710 million in 2000, representing an increment of 5,15% regarding 1999, when volume amounted to US\$ 6.382 million. The balance of the trade balance in this same period amounted to US\$ 3.932 million, against US\$ 3.458 million in 1999.

Regarding to the total volume exported by Brazil in 2000, which grew 14,73% regarding 1999, Minas Gerais obtained the portion of 11,59%. The Country, however, presented negative result in its trade balance of the order of US\$ 697 million.

The relatively smaller growth of the Minas Gerais' exports regarding the Brazilian one can be explained, mostly, by the unfavorable result of the external sales of important products of its export list, such as coffee in grain, vehicles, materials of transportation and metallurgical products, among another.

Such fact occurs because the international demand for commodities is relatively inelastic as to the price, once this is given by the international market. Therefore, the recent cambial devaluation suffered by the Brazilian economy (in January, 1999) has impacted positively on the exports. This growth, however, was not able to compensate the revenue loss in dollars, once the exported volume grew less than proportionally to the downturn of the exchange rate of the real.

For 2001, according to data available for the period from January to May, supplied by the same source, the tendency of the Minas Gerais exports follows the same trajectory regarding Brazil, whose growth was 12,18%, with the accumulated amount of US\$ 23.885 million, against the downturn of 3,88% in Minas Gerais, presenting the exported value of US\$ 2.649 million.

According to the numbers shown in the table below, The United States answered for 18,1% of the Minas Gerais' total external sales (exports of US\$ 1.208 million in 2000), followed by Italy with purchases of the order of US\$ 709 million in the same year, differently from 1999, when Germany appears in the position of the second main market for the Minas Gerais products, with representativity of 11,09% of the total exported amount.

The Minas Gerais exports for Germany, in 2000, amounted US\$ 602,5 million, in other words, 8,98% of the total exports of the State and presented a downturn of 14,88% regarding 1999, a fact that is associate to the negative result of the external sales of coffee, once Germany is the main buyer of Minas Gerais' grain coffee.

Minas Gerais Exports 1999-2000 Main Destination Countries

US\$ 000 2000 1999 % Variation **Countries** % % US\$ FOB **US\$ FOB** 2000/1999 **United States** 1.208.315 1.161.041 18,19 4,07 18,01 **Italy** 709.469 10,57 649.977 10,18 9,15 Japan 637.714 9,50 541.041 8,48 17,87 Germany 602.465 707.792 11,09 -14,88 8,98 Argentine 443.085 6,60 411.862 6,45 7,58 Belgium 308.240 4,59 310.021 4,86 -0,57 China 236.946 3,53 234.557 3,68 1,02 **Others** 2.012.952 1.759.865 30,00 27,58 14,38 **Total of Main Countries** 6.159.186 91,78 5.776.156 90,51 6,63 **Total Exported for Minas Gerais** 6.710.829 100,00 6.382.001 100,00 5,15

Source: Brazilian Ministry of Commerce and Development (www.mdic.gov.br)

The external sector perspectives are not very optimistic for the coming periods. The imports will continue expanding mostly in function of purchasing of components for industry and of the high prices of the petroleum. The exports can face heavy barriers (that, in fact, retracted our exports in 2000 regarding 1999). They are: The low prices of the commodities and the expressive drawback of the growth of the American economy. Diversification of the list and increase of the aggregate value of the exportable products needed to be the objective number one of the private sector to compensate these factors.

# 2 - Public Accounts of Minas Gerais State and the Gradual Recovery of the Primary Fiscal Balance between 1998 and 2000

The positive scenery that could be observed in the Brazilian and Minas Gerais economies last year (2000) was demonstrated in the previous section, and resulted in economic expansion, increment of the production and recovery of the wages mass, which associate to the concentrated efforts by the Finance Secretariat of Minas Gerais seeking for the revenue recovery and unnecessary expenses cut, via maximization of the levies of the main of the taxes of the Brazilian states, the ICMS – Value added tax over goods circulation and transportation and communication services - reflected positively and directly on the public accounts, assisting in the retaking of the primary budgetary balance of the State of Minas Gerais.

Embodying these factors and actions' aggregation is the scope of present section of this dissertation, i.e., to expose the portrait of the public accounts of the State of Minas Gerais between 1998 and 2000, as much as expenses sphere, where there were adopted expenses contention measures, as, and mostly, that of the revenues, where there were implemented emergency projects in order to combat the tax evasion in the main revenue generator segments for the State public sector, which became directly responsible for the maximization of the collection of ICMS.

Such approach will enable the readers to have an overview of the real positive evolution of the financial situation of the State. For so and for didactic questions, I will consider, firstly, the State balancing, writing about the situation and important facts occurred in the total revenues, expenses and indebtednesses of the State. Afterwards, I will describe the main direct measures adopted by the Finance Secretariat of Minas Gerais for the recovery of its tax revenues and, then, the indirect ones, via revision and organization of its activities and methods.

#### 2.1 - Public Balance Sheet of The State of Minas Gerais

In 2000, Minas Gerais' budgetary deficit reached R\$ 352,6 million, a cipher lower that registered in the fiscal years of 1998 and 1999, respectively of the order of R\$687,4 million and R\$ 440,6 million, in constant values.

The total revenue of the State of Minas Gerais, embodying tax revenues, current transfers, credit operations, property alienation and other revenues grew 7,1%, in real terms, and the expenses increased 5,9% as compared with 1999, as demonstrated in the next page's table.

When compared with the values presented in 1998, the total revenues of 2000 show to have been 37,2% lower. In other words, they present nearby R\$ 8,753 million originated from bulky loans that constituted a common practice in the State, affecting directly the revenues and expenses, with the payments referring to the indebtedness carrying the public accounts of the State, at the end of 1998, to very high deficits of about R\$ 905 million a year in values up-dated for 2000, what represented more than 2 months of the State levies.

However, as a real indicator of the evolution of the public finance of Minas Gerais, it is important to emphasize the final result of the state accounts in the proposed period, which presented a significant downturn in its deficit in 2000, as compared with 1999, on the order of 31,4%, and 65,9% as comparing 2000 with 1998, as demonstrates the table in the next page.

#### State of Minas Gerais Public Balance - 1998 - 2000

**RS Million** 

Description	Co	nstant Valu	ıes	Cı	urrent Value	Real			
	1998	1999	2000	1998 (2)	1999 (2)	2000 (2)	% Evolution		
	1990	1333	2000	1990 (2)	1999 (2)	2000 (2)	2000/1999	2000/1998	
Revenues	17849	11619	14118,4	23516	13782,4	14763,1	7,1	-37,2	
Expenses	18536	12059,6	14471	24421	14233	15072	5,9	-38,3	
Final Results	-687,4	-440,6	-352,6	-905	-450,6	-308,9	-31,4	-65,9	

Source: Central superintendency of General Bookkeeping - SEF/MG

Note: 1 - Monthly Correction by IGP-DI/Fundação Getúlio Vargas - December 2000=100

2 - In function of new Brazilian federal legislation, which prevents the state from take over new debts, the revenues of the years 1999 and 2000 do not contain values of loans arising capital revenues and financings, as well as the expenses and revenues that these would cause, what was not the 1998 year case in which these revenues were of the order of 8 billion and the same happening with the expenses, explaining thus the strong fall in the values in 1999 and 2000.

The primary result of the State, which excludes capital revenues and expenses from the calculation of the liquid result, thus enabling a selected vision of the State's own generation of resources, presented a R\$ 0,7 million deficit, against the R\$ 243,4 million surplus reached in 1999. One of the main causes of such deficit presented in 2000 was the salary improvement for some careers of the public servants, which caused a R\$ 100 million plus monthly increase in the payroll.

From the point of view of the public finances, the numbers reveal an advance regarding previous periods, as the primary and fiscal results are more favorable.

However, in spite of the strong control exercised by the Executive Branch, projections indicate a very delicate financial frame, which will demand a continuity of the austere measures implemented by the State Government and, mostly, by the Finance Secretariat, in the management of the State's finances, seeking after its budgetary primary balance that today seems, very practicable differently from two years ago.

#### 2.1.1 – State Total Revenues

In the year 2000, the total revenue of the State of Minas Gerais, which is composed by all the State-competent taxes, several revenues, transferences, credit operations and property sales, was 7,12% higher than that verified in 1999 as expressed in constant values and after already discounted for the inflation, as it can be observed in the table below.

The ICMS' Revenue, which is the most important source of the state revenue and will be treated in details further on, summed R\$ 7,441 billion, contributing with 52,7% of the total levied.

At constant prices, these levies represented a real growth of 5,3% regarding 1999, as it can be observed in the table below, representing the biggest value collected since 1996. The remaining own tributes of the State also registered positive results. In the total, collection grew 14,26% regarding the exercises of 1999 and 9%, as comparing 2000 with 1998, in real terms, already discounted for inflation.

State of Minas Gerais Main Revenue Sources 1998 - 2000

Revenues	Current Values (R\$ Million)			Constant Values (R\$ Million)			Relative % Participation			Real Evolution Rate %		
	1998	1999	2000	1998	1999	2000	1998	1999	2000	99/9	00/98	00/99
Tributary Revenue	6099,7	6890	8254,5	8036,4	8195,8	8637,3	34,17	59,47	58,51	1,98	7,48	5,39
ICMS	5452	6230	7441	7183,0	7375,9	7768,1	30,54	53,52	52,62	2,69	8,15	5,32
Others	648	659,5	813	853,7	819,9	869,2	3,63	5,95	5,89	-3,96	1,81	6,01
Federal Goven.Transferences	2243	2207	2482	2955,2	2423,9	2593,1	12,57	17,59	17,56	-17,98	-12,25	6,98
Credit Operations	5939	93,7	147,5	7824,6	110,4	155,7	33,27	0,80	1,05	-98,59	-98,01	41,03
Property Sales	1371	172,4	850,8	1806,3	203,1	893,2	7,68	1,47	6,05	-88,76	-50,55	339,78
Other Revenues	2196,6	2415,2	2383,6	2894,0	2849,2	2483,8	12,31	20,67	16,82	-1,55	-14,17	-12,82
Current	1570,7	1950,4	1973,8	2069,4	2298,5	2056,8	8,80	16,68	13,93	11,07	-0,61	-10,52
Capital	625,9	464,8	409,8	824,6	550,7	427,4	3,51	4,00	2,90	-33,22	-48,17	-22,39
RECEITA CORRENTE TOTAL	17849,3	11778,3	14118,4	23516,5	13782,4	14763,1	100,00	100,00	100,00	-41,39	-37,22	7,12

Source: State Finance Secretariat of Minas Gerais - SEF/MG

Note: Values up-dated by IGP-DI - Fundação Getúlio Vargas - Base Dec/2000=1

In this period, the resource transfers from the Brazilian Federal Government to the State grew, in real terms, 7% (17,6% of the total entered in the public accounts).

From the total amount of R\$ 2,482 billion transferred, 26% had source in "States Paticipation Fund" (increase of 11,2% in 2000). The income tax withdrew has participated with 19% (expansion of 12,7%). The quota of educational salary contributed with 5% (positive variation of 18,3%).

However, the Federal Government revenue transfers due from IPF Exportation (Federal tax over industrialized products), with an 11% participation, and from the Safe Revenue ("Kandir Law"), with participation of 15%, presented downturn of 13,6% and 12,6%, respectively, carried by the changes of percentile of relative participation of Minas Gerais in the total advanced amount.

The advances via covenants, with a 15% contribution from the total transferred by the Federal Government, had a 17,6% drawback. The biggest bound portion refers to the State Fund of Health. The significant downturn occurred in the covenant results from change of systematics of the Ministry of Health for advancing of the resources, which used to be sent to the States for posterior redistribution by them to the municipal funds of health, what now, occurs, directly, in function of its habilitation for the full administration of National Health System.

Externally, the inputs of resources via financing for specific projects continued. Regarding 1999, there was a drawback in the advances to the projects Jaíba II and Fund Prosam/IDB, which contributed for the 13,9% downturn in the external contractual operations.

In the period, aspects that contributed for the expressive expansion of the revenue were the privatizations and the property alienations, which grew 339,78% in 2000, regarding 1999, although much less than the amount of R\$ 1.806,3 million

verified in 1998, when the State banks Credireal and Bemge were privatized. Also, credit securities/rights sale related to the draining of the banks were counted in the amount of R\$ 185,7 million.

It becomes important to stress the significant downturn in the credit operations volumes, which passed from R\$ 7.824,6 million in 1998, to R\$ 155,7 thousands in 2000, an important step for the decrease of future commitments with interest rates payment of the State indebtedness.

#### 2.1.2 – State Total Expenses

All efforts are being undertaken by current administration, initiated in early January 1999, to control the public expenses, which were excessive until the final of 1998.

The real expenses with personnel increased 3,7% in 2000, as shown in the table below, resulting not only from the vegetative growth of the pay-roll, but of the salary-level rebuilding provided to the public servants in June of 2000.

**State of Minas Gerais** Main Expenses Sources 1998 - 2000

Expenses	Current Values (R\$ Million)			Constant Values (R\$ Million)			Relative Participation %			Rela Rate Of Growth%		
	1998	1999	2000	1998	1999	2000	1998	1999	2000	99/98	00/98	00/99
PERSONEL	6041,7	5983,9	7065,3	7959,9	7095	7354,3	32,6	49,8	48,8	-10,9	-7,6	3,7
COSTING	1937,7	2302,6	2696,7	2552,9	2692,4	2796,3	10,5	18,9	18,6	5,5	9,5	3,9
DEBT EXPENSES	2880	1290,4	1729,6	3794,4	1512	1808,6	15,5	10,6	12,0	-60,2	-52,3	19,6
Encharges	440,5	837,9	808,1	580,4	985,2	832,5	2,4	6,9	5,5	69,8	43,4	-15,5
Amortization	2439.5	452.5	921.5	3214.0	526.8	976.1	13.2	3.7	6.5	-83.6	-69.6	85,3
TRANSF to Cities	2008,4	1691,3	1979	2646,1	2018,4	2073,7	10,8	14,2	13,8	-23,7	-21,6	2,7
INVESTIMENTS	5432,9	739,8	911,7	7157,8	857	947,3	29,3	6,0	6,3	-88,0	-86,8	10,5
OTHER CAPITAL DEBTS	235,8	51,6	88,7	310,7	58,2	91,8	1,3	0,4	0,6	-81,3	-70,5	57,7
TOT CURRENT EXPENSE	18536,5	12059,6	14471	24421,8	14233	15072	100,0	100,0	100,0	-41,7	-38,3	5,9

Source: State Finance Secretariat of Minas Gerais - SEF/MG

Note: Values up-to-date by IGP-DI - Foundation Getúlio Vargas - Base Dez/2000=1

As a result of the expense increase, the public servants' pay-roll raised in 2000, representing 71% of the annual current net revenue.

Defrayment expenses went up 3,9%. This variation can be explained, in part, by the fact that in 2000 there was a normalization of the expenses, different from the curtailment context practiced in the previous years, 1998 and 1999.

Moreover, the expenses with consumption materials it had a strong height regarding 1999, mostly in the electric power items and combustible, as a result of the price readjustments practiced by the federal government for such segments. Even so, the expenses with costing in the State in 2000 were lower than those accomplished in 1998.

For payment of interest rates and amortizations of the State indebtedness contracted in previous years, there were expenditures superior to R\$ 1,7 billion, a value equivalent to 12% of the total expense and 19,6% superior to payments in 1999.

The amortized value in 2000, whose real variation was 85,3% as compared to the previous exercise, has enabled repayment of the R\$ 401,2 million graphic account. Such commitment was repaid with the amounts originated from the sale of the State-owned companies as well as with those resulting from credit indemnity as per Kandir Law and derived from constant alterations of Complementary Law n° 102, of July 11, 2000. Moreover, repayment of the second portion of eurobonds was made to the value of R\$ 184 million.

The responsibilities of the indebtedness decreased despite the increase of the implication of the real net revenue, which has passed from 12,5% in 1999 to 13% in 2000. In fact, last year the amount to be paid would have been larger if there had not occurred an atypical fact: the State was allowed to deduct repayment of the eurobonds from the monthly expenditure limits with the signature of the Fifth

Additive Term to the Renegotiation Agreement. In consequence, repayments of current responsibilities ceased.

The State public investments presented a 10,5% real increase, still insufficient to attend the constant. State demands. Most resulted of long-term financing of multilateral institutions (IDP, among others), destined for specific statual development projects.

#### 2.1.3 - State Indebtedness

The evolution of the State public indebtedness in 2000 is benchmarked by the position of the indebtedness at December 31, 1999.

The total indebtedness of the State of Minas Gerais, in nominal terms, increased 10,8% in the period between current Government's beginning, in 1999, until the final of 2000; it is important, however, to pay attention to the fact that when constant values are considered, the real growth rate is just 1%, if deflated as per IGP-DI/FGV (9,81%), a correction index widely adopted in Brazil.

The State indebtedness is classified in two large groups: floating and founded debts. In the exercise of 2000, from the total of the debts, 13,1% refer to the floating debts and 86,9% correspond to the founded one (debit balance).

The floating debt comprehends the commitments of the State with the maximum term of 12 months. They are indebtednesses with suppliers, contractors, December pay-roll, usually paid in January, overdue parcel of the 13th monthly salary, precatories, expenses of the indebtedness to pay, expenses registered as payable remainings, among others. At the end of 2000, the floating debt reached R\$ 3,846 billion, meaning a real increase of 6% and a nominal one of 16,2%.

Considering the registered amount for 2000, it is important to note that, in the beginning of 2001, some of these indebtednesses were already paid. For example, the entire December pay roll and the 13th salary are already paid.

Regarding the expenses of the indebtedness, from the R\$ 178,8 million total registered, R\$ 70 million were already liquidated in January. Such payments have already influenced the indebtedness, which, at the end of January 2001, wil reach values below the December total of the previous year.

Considering the constant commitments at the end of 1999, it is to be registered the voluminous payment of debits registered as payable remainings of 1998 and 1999 made to suppliers of services and goods, still remaining the entire portion to be paid to the great contractors.

Another item to stand out is the redemption of the second parcel of eurobonds, effected within the exercise of 2000, as well as repayments of overdue contractual debts.

The indebtedness with the Federal Government (R\$ 23,448 billion), comprises R\$ 14,336 billion referent to Law 9.496 and R\$ 6,802 billion to downsizing of the State financial system, corrected, respectively, by the rate of the economic index IGP-DI plus nominal interest rates of 7,5% per year and IGP-DI plus 6% per year in nominal terms.

Also regarding the indebtedness renegotiation agreement signed with the Federal Government (Law 9.496), it is important to register the decrease in the total indebtedness (in the so called "graphic account"), with the R\$ 401,2 million repayment, derived from alienation of the state-owned companies CASEMG and CEASA, and from credit indemnification relative to Kandir Law (Federal Complementary Law 87/1996). From the total of the graphic account, there are still

R\$ 128 million to be paid monthly up to 2002, according to the clause established in the Fifth Additive Term to the Renegotiation Agreement.

The profile of the external debts at the end of 2000 it has been modified regarding the structure presented in December 1999. The mobiliary debts decrease, and just contractual debts remain. The mobiliary indebtedness, comprehended by the Eurobonds, was closed with repayment of the second portion which fell due in February 2000.

Redemption of these titles, made in two installments, occurred in a distinct form. In 1999, the first portion, of R\$ 106 million, was quit with resources of the State and of the Federal Government. The amount complemented by the Federal Government is being paid in 30 monthly portion since February 2000, with the value up-dated per Selic rate.

The second portion that was due in February 2000, of R\$ 184 million, was quit with government's State resources as follows: part resultanting from debited values applied in the managed portfolio for payment of eurobonds and another with resources from sale of the Compensation Fund of Salary Variation (FCVS) from the extinct State Bank named Minascaixa.

The external contractual indebtedness had drawback of 1,4%, in nominal terms, regarding its position at the end of 1999. From the total of the foreign debt (R\$ 883,9 million), 86% correspond to the debits with the IDB, 13,5% with the THE OVERSEAS E.C.F (Project Jaíba) and 0,5% with private banks.

In 2000, there was little input of amounts deriving from the projects financed by IDB (Interamerican Development Bank) and important payment of these debits, reflecting in the reduction of the total indebtedness. Regarding THE OVERSEAS E.C.F., the ingresses applied in Jaíba project were much superior to the payments made.

Finally, it is worth registering that, in 1999 and 2000, the State of Minas Gerais paid R\$ 3,020 billion relative to the founded debt. Such amount, paid in just two years, is 35% larger than that paid along the whole previous government's term and without any new indebting by current administration. Even so, the indebtness value, which was of R\$ 18,651 billion in December 31, 1998, reached R\$ 25,473 billion in December 31, 2000, consequent to monetary corrections calculated by the very high interest rates prevailing in Brazil.

### 2.2 – Statual Tax Revenues and the Concentrated Efforts of the Finance Secretariat to Maximize Them

The State finance system is composited by the Secretariat of Finance (SEF) and its bounded organs, purpose-made to accomplish, in an integrated and articulated form, the administration of the State Public Finance in the global strategy of policies of economic and social development of Minas Gerais.

SEF's operational goal is to plan, organize, direct, run and control the activities of levies necessary for administration of the economic and financial resources of the state, formulating and running the fiscal and tax policies necessary to its social-economic development.

Following this work guideline and facing the structural and acute crisis in which current government has found the State finances, as demonstrated in the previous section, the Finance Secretariat of State Minas Gerais was tasked to revert the deficient situation of the State treasure as a form of making possible the government's Plan.

For such, in 2000 SEF gave continuity to some actions initiated in 1999 and is developing an activities set which seek to strengthen the managerial and operational capacity of execution, improve administrative procedures and, mostly,

restore the levying capacity of the State as a form of enlarging the financing capacity of the public sector and to recover its inductor role aiming a sustainable development.

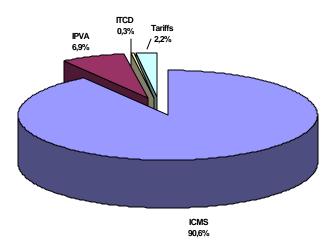
To demonstrate these attitudes, I will firstly describe briefly what are tax revenues and its taxes, with focus on ICMS, the evolution of its levies in the proposed period and, more important, the direct and indirect actions implemented by Finance Secretariat for maximization of its levies.

It is worth stressing to the readers that if one compares the values of the tax revenues that will be exhibited in this part of the work with the treaties in the subsection of the public balance sheet, there will be small divergences, which occur due to the fact that the figures there exhibited, are derived from the financial system of the State, being dynamic, open to input or withdrawal along the time, and the values here treated are selected by the taxation system, consolidated and blocked every month, for divulging and posterior managerial treatment, being, therefore, static.

#### 2.2.1 – Profile of the State Tax Revenues

The set of the levies of the State in Brazil, via tributes, is composite by the taxes named **ICMS** – Value-added tax over goods circulation and over communication and transportation services - **IPVA** – Tax over the Property of Automotive Vehicles, the **ITCD** – Tax over heritage transmission of Goods or Right, besides the **State Tariffs**, as it can be observed in the graph below.

#### State Tax Revenues Composition Minas Gerais - 2000



Source: Finance Secretariat of State of Minas Gerais

The ICMS' incidence over the operations with goods and services occurs with aliquots varying from 7% to 25%, representing, on the average, 90% of all the tax revenues of the State, being, therefore, its main income source, as it can be observed in the graph above. Its taxpayers are, according to the regulation of such tax (Minas Gerais Statual Decree no. 38.104/1996), "any physical or juridical body, which performs merchandise circulation operation or service rendering, described as generator fact of the tax".

One should have in mind that this is a very brief presentation of the tax, because of its regulation has more than 200 articles, twenty-five attachments, distributed in two volumes, each one with more than 500 pages, presenting countless cases of no incidence, exemptions, special regimes, calculation base reductions, among another, what turns the joint of rules of this tax very dense and of very hard absorption.

The IPVA is charged annually on the owners of automotive vehicles or someone's acquisition of a new vehicle, with aliquots varying from 1% to 4% of the

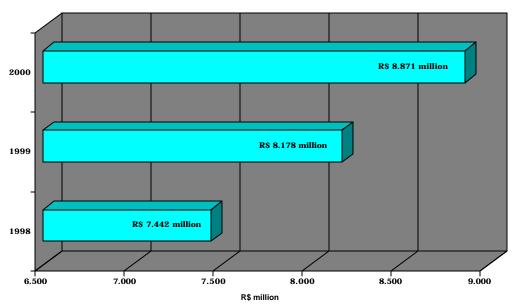
market value of the good. It has participation around 7% of the tributes revenue of the State.

The ITCD, which represents just 0,5% of the annual State collection, is charged on heirs in the descent of lawful property or executorships, on donators, in the acquisitions by donations, on the assignees in the free cessions and on usufructuaries, with aliquots varying from 1% and 7% over the value of the property conveyed.

Finally, the State tariffs, which have representativity around 2% of the tax revenues of the State, are split up in Expedient Rate, charged on the exercise of special activities of State organisms, Judiciary Rate, incident on the lawsuits taken to any judgment or court, Public Safety Rate incident over public safety service rendering by the State, specific administrative services of the public safety sphere.

In this context, I show in the graph on the next page the evolution of the tax revenues of the State of Minas Gerais between 1998 and 2000, where it reached, last year, the cipher of R\$ 8,871 million, with real growth, already discounted the inflation, of 8,5% regarding 1999 and even more significant was the increment of 19,20% of year 2000 as compared with the one accomplished in 1998. In these values are included all the taxes and tariffs above cited, besides the fines, interest rates and tributes registered in active indebtedness, in lawsuit of judicial execution for collecting unpaid taxes.

#### Total Tax Revenues Evolution State of Minas Gerais - 1998 - 2000 Constant Values



Source: Finance Secretariat of State of Minas Gerais Note: Constant Values - IPCA-IBGE - Base: Dec/2000=100

## 2.2.2 – Evolution of the ICMS Revenues between 1998 and 2000 and Direct and Indirect Actions Adopted by Finance Secretariat for Their Maximization

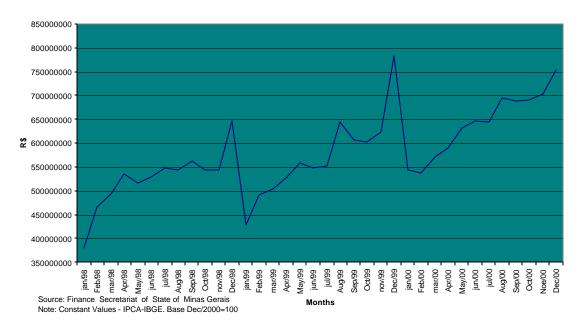
#### 2.2.2.1 – ICMS Collection Evolution in Minas Gerais

ICMS' Collection of the State of Minas Gerais was in critical platforms in 1998, amounting to around average R\$ 500 million monthly during that year, with a minimum platform in January, when it only R\$ 379,3 million were levied.

This situation occurred, on the one hand, because of the economic situation in which the country lived and, on the other hand, in function of the political frame experienced by the State at that time, when were in course the State elections, which culminated with the defeat of the governor in his re-election attempt, making unfeasible the implementation of any plan for revenue maximization, due to total

lack of political wish for this. These observations can be checked in the graph below.

ICMS Revenue Evolution State of Minas Gerais 1998 - 2000 - Constant Values



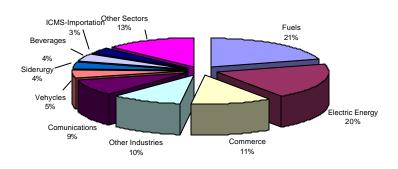
Such situation pointed to an imminent fiscal chaos, since the expenses increased fastly without the counterpart of ICMS collection evolution, unless energetical measures for the reversion of this scenery.

This need culminated in the implementation of impact measures by the new government, inaugurated in January of 1999, when efforts were directed for the final purpose of Taxation and Tax Administration, whose central target was the revenue recovery of ICMS, where State Revenue Superintendence has begun the actions delineated by the "Inspection Plan" implemented as of September 1999.

This plan has adopted as basic presumption the forces concentration of the tribute-controller's actions in the economic sectors of larger economic

representativity, with elevated participation in the total ICMS revenues of the State, since any revenue growth would affect quickly the set of the State levies, as was the case of the fuels sector, which alone detains the participation of 21% of the total ICMS revenues, followed by the electric power sector with 20%, commerce with 11%, industry with 10% and communications with 9%, among another, as shown in the graph below.

Economic Branches Sharing in the Total ICMS Revenues State of Minas Gerais - 2000



Source: Finance Secretariat of State of Minas Gerais

With that, they overcame all the growth goals of the foreseen revenue for the exercises of 1999 and 2000. The evolution observed in ICMS' levies was very important, jumping from a monthly average of R\$ 513,4 million in the quarter before implementation of the plan (June to August/99) to a monthly average of R\$ 655,5 million from August to October period 2000, concluding the year in the platform of R\$ 782, 9 million.

Facing this evolution scenery, Minas Gerais presented one of the largest levies growths of ICMS of the country, with a 15,7% evolution in year 2000 regarding 1999, overcoming the national average of 14,4%, as it can be seen below, and maintaining its position as the third-ranking State in Brazil's Economy, with 9,3% of the whole ICMS generated in the Country in 2000, and about to

resume the second place, lost, some years ago, to State of Rio de Janeiro. The success can be assigned, mostly, to the improvement of the fiscal-taxing control looking for the revenue recovery and for the effectiveness of the sectorial actions that made it possible to control tax evasion.

ICMS Levy Evolution - Main Brazilian States 1998 - 2000

R<u>\$ 1.000</u>

States		Real % Evolution							
States	1998	% Brazil	1999	% Brazil	2000	% Brazil	00/99	00/98	99/98
MG	6.476	9,2	6.600	9,2	7.638	9,3	15,7	17,9	1,9
SP	26.852	38,3	26.754	37,2	30.619	37,2	14,4	14,0	-0,4
RJ	7.325	10,4	7.662	10,7	8.170	9,9	6,6	11,5	4,6
RS	4.873	6,9	4.939	6,9	5.624	6,8	13,9	15,4	1,3
PR	3.373	4,8	3.661	5,1	4.335	5,3	18,4	28,5	8,5
BA	3.110	4,4	3.204	4,5	3.764	4,6	17,5	21,0	3,0
Others	18.141	25,9	19.124	26,6	22.109	26,9	15,6	21,9	5,4
Brazil	70.149	100,0	71.945	100,0	82.279	100,0	14,4	17,3	2,6

Fonte: Cotepe - Permanent Technic Commission of ICMS - Finance Ministry - Brazil

Notes: constant values - IPCA - IBGE - Base Dec/2000=100

MG - Minas Gerais, SP - São Paulo, RJ - Rio de Janeiro, RS- Rio Grande do Sul,

PR - Paraná and BA - Bahia.

It is worth stressing that the significant inflections verified in the evolution graph situated at the beginning of this session, occurred systematically in December every year, derive from the anticipations of ICMS which the politicians used to do with the big enterprises, as a political issue, whose central goal was the payment of the thirteenth salary of the public servants among other expenses by year end.

Such mechanism consisted of elaboration of a State law conceding benefits so that the companies advanced ICMS' future collections (due in January, February of followings year, and so on) to December. With that, the levies of the first months of each year collapsed to very low platforms. It became a routine until the year 2000, when that subterfuge for the payment of the year's final State accounts was not used, and registered the levies platform of the ICMS was of the order of R\$ 753,9 million, the highest one reached until then by normal ways of collection.

### 2.2.2.2 - Direct Actions Looking to Maximize ICMS Revenues - The Inspection Projects

From the whole of the implemented inspection projects, which are directly responsible for the fast recovery of the ICMS revenue of Minas Gerais, which I will introduce now, the one that introduced more significant performance in terms of levies was the Fuels Project, which, besides seeking the tax recovery, objectifies combating the big incidence of frauds verified in its economic segment, monitoring the combustibles distribution in Minas Gerais territory and controlling the operations of the sector, notedly the interstate ones. These and other details for all the projects will be described below, in this section. It is important to frizzle that the descriptions below will be an overview of its projects, because of its necessary secrecy, furthermore, it represents the point of view of the author of this paper, not necessarily representing the exactly official one from the Finance Secretariat.

### 2.2.2.2.1 - Philosophy of the Developed Inspection Projects by the Finance Secretariat of Minas Gerais

The State Fiscal Projects are a direct fruit of the understanding of the need to implement the planned, coordinated and continued actions of the several available fiscal instruments, allied to the new administration techniques, data information and crossing now, used by the about 1.500 tax inspectors in exercise nowadays in Minas Gerais' State.

Concomitantly to all these actions, there is the support provided by the investments addressed to physical investiments (computers, vehicles, programs and improvements in the installations, mainly on the merchandises transit inspection stations), nowadays in process in SEF/MG, within the National Program to the Fiscal Modernization promoted by the World Bank.

In this sense, actions were implemented in some specific sectors, in a "Pareto-optimal state" perspective, where the control of more important sectors, in terms of levies, would maximize the performance of the scarce human resources of the inspection.

Of course the sectors that are not framed in these segments were not "abandoned"; however, in consequence of its small relevance, they were allocated to local projects of each Finance Administration (regional units of the Finance Secretariat) or punctual and sporadic actions.

Before starting to discuss the fiscal projects properly, we will do a fast digression about the important role played by the merchandises transit inspection stations in the whole of it actions.

First, it is worth emphasizing that the State of Minas Gerais is served by Brazil's largest highway mesh, attending, usually, to the goods circulation inside the State and connection to the others, accomplishing the corridor mission, linking the Southern and Southeast regions to the Northern, Northeast and Middle-west regions of the country.

Therefore, to scorn such a rich potential of clues and information rising (invoices, etc) offered by the transit of goods, would be temerarious. Thus, I can not forget that the points of inspection of goods transit are the positions in which the inspection shows constant presence and, because of this, presents the biggest visibility of the public treasury, since given the shortage of tax inspectors it would be impossible to allocate them for duty activities close to every taxpayer.

Within this entire context, the actions implemented in the more important economic sectors for the State economy or that presented larger tax evasion, were known as Fiscal Projects, which will be briefly described below.

### 2.2.2.2.2 - Fuels Project

Today Brazil is considered the second largest fuel distribution sector of the world, according to Petrobrás (Brazil's government-owned petroleum company), bringing with that the unfavorable reality of perhaps also being one of the largest places in the tax evasion in this segment.

The number of distributors of combustible grew significantly in Brazil after the occurred opening in this market branch in 1995, whose goal was to allow the free competition, eliminating the existing oligopoly from the fuels distribution activity.

If on one side this opening contributed, through larger competition, for the decrease of the high rates of return of the great fuels distributors (Shell, Texaco, Esso, among other multinationals), on another it is undeniable that the sector became more vulnerable to company opening with doubtful interests.

The situation is that, today, tax evasion is an important factor in the contention of this market, and in Minas Gerais they identified several forms of fiscal evasion, such as generalized use of false invoices, sales of adulterated fuel, among others, what it carried the State to an alarming monthly loss of revenues.

Facing this frame, the State Fiscal Authorities have adopted several measures of inspection, which in its whole passed to be called "Combustible Project", with the final purpose of maximizing ICMS' Revenues of this sector to acceptable levels, because of its importance in the set of the State levies.

Its main tonic resides in establishing the focus of the inspection in a restricted number of taxpayers, where there are tax evasion concentration and high ICMS revenue potential, which in the case of this specific project, are the Petroleum Refineries (only one in Minas Gerais, operating in the city of Betim), the

about thirty Combustibles Distributors and the Mobile Resellers, which are not but mobile wholesalers, not existing a more regular procedure close to the Gas Stations, which amounts today in Minas Gerais to about three thousand and five hundred, complicating, this way, its control.

It is worth mentioning that the inspection of the refinery is based, mostly, in the current control of its activities and accounting, constantly and closely accompanied. Finally, I emphasize, again, the importance of the inspection of Transit of Goods in this segment, where are inhibited, all at once, the combustibles adulteration, before its arrival to the gas stations, and the combustibles circulation without the due taxes collection.

Before we start analyzing the numbers which show the result obtained with this "Project", it is worth showing to the reader how the taxation on the fuels in Brazil is operated, considering shown its already importance and amount.

When any consumer of combustible fills his car's fuel tank, is already embedded in the price of the combustibles a portion of ICMS, a tribute of State competence, one of the objects of this work, which is divided into State and municipal districts in the proportion of 75% and 25%, respectively.

Also embedded in its price formation are two federal contributions, PIS (Program of Social Integration) and COFINS (Contribution to Finance the Social Security).

Withholding and collection of the tributes that incides on the operations with gasoline (inclusive of anhydrous alcohol which in Brazil is mixed in the type gasoline A – pure) and with the diesel oil, from the production until the final consuming, has its liability over the refineries, obligation instituted by law, through the institute of the tax burden transference, treated further in this work, while the distributors have the obligation of retention of the taxes incident on the moisturized alcohol.

The aliquots which incidence over the tributes, except for the alcohol in which one the price is free and certain by the market, are applied about a base of presumed calculation, established by the federal government.

In the case of Minas Gerais, the gasoline and the alcohol are taxed by ICMS at an aliquot of 25%, while the diesel oil is 18%.

In the table below I will show the taxation for each liter of gasoline sold in Minas Gerais, in values related to December 2000.

### Demonstrative of the Composition Price of the Gasoline State of Minas Gerais - December/2000

Description	R\$
1- Initial Price of Petrobrás Refinery (base price)	R\$ 0,534
2 – Specific Prices Parcel (PPE)	R\$ 0,260
3 – PIS/COFINS (Federal Taxes)	R\$ 0,201
4- Departure price in the refinery for the gasoline - Certain in	R\$ 0,9949
Ministry Bill (Finance Ministry and Mining and	
Energy Ministry of Brazil)	
5 – Aggregation margin in the interstate operations (certain	138,82%
in interstate covenant – COTEPE – to calculate the tax	
burden transference to the petroleum refinery, as	
explained above).	
6- Value of the liter of gasoline (R\$ 0,9949 x 2,3882)	R\$ 2,376
This value will be multiplied per 0,80 because of the	
mixed of 20% of anhydrous alcohol that is made in the	
refinery before to go to the consumers)	
7 – Unitary value of gasoline C (regular), over which we	R\$ 1,90
setup in the gasoline the mixed with 20% of anhydrous	
alcohol. (R\$ 2,376 * 0,80)	
This is the calculum base to the ICMS. Over it will occur	
The incidence of ICMS due to the aliquot of 25%.	
8- Total amount of ICMS in each liter of gasoline sold (R\$ 1,90 * 25%)	R\$ 0,475

Sources ANP - National Agency of the Petroleum - www.anp.gov.br

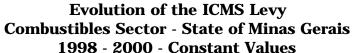
Brazilian Ministry of Mining and Energy – www.mme.gov.br Regulation of the ICMS – State Finance Secretariat of Minas Gerais

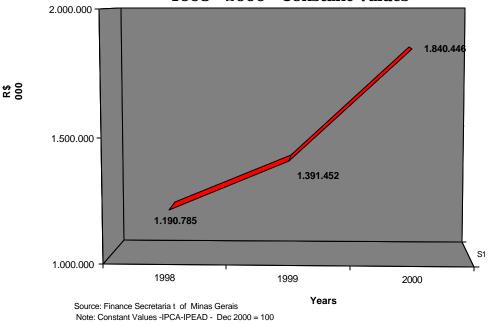
Note: Formation Base Prices from December 2000

After presenting the price of the gasoline, demonstrated in the picture above, it shows up that, included in each liter of gasoline sold in the retail in Minas Gerais at R\$ 1,90 in December 2000, R\$ 0,936 or 58,5% of its final value are PIS taxes, COFINS, PPE (federal contributions) and ICMS (State), this last one being responsible for R\$ 0,475.

In consequence of this elevated tax burden, any fault which occurs in the fiscal control of the sector results in significant revenue downturn for the State, associated to the immediate disorganization in the competition of the sector, because of the tax evading distributors start working with a radically smaller prices than the taxpayers who operate legally, taking them out of the market due to the lack of consumers.

As a direct consequence of this need of ostensible control, and after the implementation of the combustible project in Minas Gerais, in 1999, as can be verified in the next graph, ICMS' revenue proceeded showing successive elevations, from the platform of R\$ 1.191 million levied in 1998, to R\$ 1.391 million already in 1999. In the following year, 2000, with the fiscal procedures in course for more than one year, the revenue of the segment jumped to the impressive cipher of R\$ 1.840 million at the end of that year, representing a real increment, already discounted the inflation, of 32,3% regarding 1999 and of 54,6%, if compared with ICMS' Revenue select in 1998, before the implementation of the Project, showing, this way, its total effectiveness and the State tax inspector's total commitment to the task.





Illustrating and decomposing this growth in the revenue of the sector, it is worth to stress that there are studies in DTI/DIEF (Division of the Information Treatment – Office of Fiscal and Economic Information's of the Finance Secretariat of Minas Gerais) which isolate the effects of the variables prices, quantities and margin of aggregated value - variables which influence directly over the levies of the combustible sector when they oscillate – which we denominate "quantum", and which demonstrate the existence of important positive variation in the levies, not explained by the cited variables. It shows to be a direct result from the new tax inspection on this sector, combating the endemic tax evasion which was dominant in this segment until 1999.

Using the variations of the **quantum** (**Price** x **Q**uantity sold x **M**VA - Aggregated Value Margin), pondered by the weight of the monthly estimated debit by the estimated debit of the sector, the DIEF justifies the evolution of the revenue in 7,97% (December 98/97), 66,30% (December 99/98) and 0,07% (December 2000/99).

However, when they compare with the real variation of the revenue, it actually demonstrated an index of 12,37% (December 98/97), 57,79% (December 99/98) and 17,60% (December 2000/99), according to the table below.

However, there are some difficult control factors in the determination of the not explained variation, among them: Increase of the combustibles export for other Brazilian States, fiscal actions, etc., what allows us to conclude that the increase or the real downturn of the revenue not justified by the variables of the quantum belonged to the order of 4,08% for 98, -5,12% for 99 and 17,52% for 2000, in other words, for this last year 17,52% of the increment in the levies of this economic segment are not direct consequence of the variations verified in the variables price, quantity and margin of aggregate value, which one can assign as cause the Finance Secretariat inspection efforts.

# Demonstrative of Variation of the ICMS Revenue x Quantum Fuels Sector Minas Gerais State 1998 - 2000

Period	Quantum variation	Revenue variation In the year	Variation of the revenue not explained by the Quantum
1998	7,97 = 1,0797	12,37 = 1,1237	((1,1237/1,0797)-1)*100 = 4.08%
1999	66,30 = 1,6630	57,79 = 1,5779	((1,5779/1,6630)-1)*100 = -5.12%
2000	0,07 = 1,0007	17,60 = 1,1760	((1,1760/1,0007)-1)*100 =

Source: Finance Secretariat of Minas Gerais

**Fiscal and Economic Information Office** 

### 2.2.2.2.3 - Beverages Project

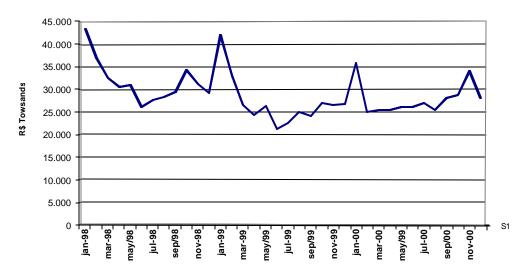
The Beverages Project was proposed in June 1999, after the verification of elevated drop in the levies of this important sector of the Minas Gerais economy, for a 36 month consecutive period, suffering its worse inflection point in June 1999, where the collections of the sector were in the approximate platform of just R\$ 21 million, as demonstrated in the next graph.

After analyses of the numbers of this economic sector, it is verified that, from the start of the "Real Plan", in 1994, the prices of beverages (beers and soft-drinks) have been presenting soft raises, what pointed to two conclusions: either it would have existed demand retraction, what it did not occur, or elevation of the tax evasion levels.

To revert this frame, keeping in mind the conclusion verified above, it opted for closing up efforts in the wholesale commerce and in the beer and soft-drinks industries (about 300 taxpayers situated in the territory of the State of Minas Gerais), responsible for something around 99% of the levies of ICMS of this segment, since, by the ICMS' Brazilian legislation, these great taxpayers are responsible for the anticipated collection of ICMS of all the other dealers which make part of the sale network of the product until the final consuming (tax burden responsibility transference).

The remaining of the companies of the sector, composed by some very small companies and some of small size, besides the white rum manufacturers (more than 8.000 establishments in Minas Gerais according to researches) and retailer commerce in general, are accompanied at the distance, due to its little significance in terms of revenue and the gigantic quantity of establishments.

### ICMS MONTHY LEVY EVOLUTION Beaverages Sector - STATE OF MINAS GERAIS 1998 - 2000 - Constant Values



Source: Finance Secretariat fo Minas Gerais - Brazil Monthy Levy Report - RMA Note: Updated as per IPCA-IPEAD - Base: Dec/2000=1

Usually, fiscal actions of the taxpayers of the sector of beverages begins in the Merchandises Transit Inspection Stations, where tax evasion clues, adultered invoices, lack of necessary documents to its circulation, among other problems are detected.

Such signals will give continuity to the inspection, after the information to the Finance Regional Administrations (AF) of the circumscription or, if it would be the case, to the Manager of the Project (each one has a manager, responsible for its total management), in the Inspection Office (DIF), which will provide diligences at the establishments suspicious of irregularities, in order to give prosecution to a verification *in loco*.

In consequence of these actions there was an increase of average monthly inspections and notifications in 2001 from 2000. Such attitudes carried out the gradual elevation of the revenue, which at the end of 2000, already amounted to

the plataform of approximately R\$ 30 million, in average, as exhibed in the graph above.

Beyond the attitudes unchained by the Merchandises Transit Inspection Stations, as mentioned in the previous paragraph, the taxpayers who present some irregularity in its records can be blocked administratively in the taxpayers' cadastre of the State, and could not, thus, perform a series of procedures close to the Finance Secretariat, under the limits of the law, until they regularize the situation.

### **2.2.2.2.4 – Coffee Project**

About of the "Coffee Project", this is still in exploratory phase, with small resources allocation by the Finance Secretariat, considering the sector's great economic importance for the State.

Most of its commercialization is directed to the exports and, therefore, not subject to the tribute. Nevertheless, in year 2000, there was an accentuated downturn of the price of commodities in the international market, passing from about 111 cents the weight pound to something around 72 cents the weight pound, registering retraction in its prices of about 35%, with repercussions in the internal market.

### 2.2.2.5 – Foreign Commerce Project

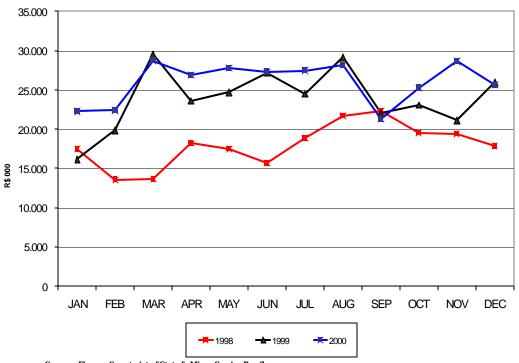
The "Foreign Commerce Project" is related to other projects and sectors, as its working object refers to the imports of these.

In the practice, this caption did not receive any special treatment before the advent of the Project, because there was lack of experienced people in this inspection modality.

The dynamics determined with the beginning of the Foreign Commerce Project occurs from the transit of goods, with verification of the cargos, and notifications and clues are worked afterwards by Finance Secretariat's regional offices and by the Administration of the Project.

In this specific case, focus on certain companies is not only in terms of their size but also of fiscal benefits granted by other States, which induce clearing of goods through the customhouses in their own territory, in a triangular operation that cheats Minas Gerais out of the tax which is retained at the port of arrival in Brazil. An example of this procedure is the fiscal benefit FUNDAPI of the State of Espirito Santo, which ends up by generating fictitious ICMS credits for the Minas Gerais taxpayers, and is being followed by other Brazilian States regarding Minas Gerais. It is to point out that the State is acting severely towards such.

ICMS MONTHLY LEVY EVOLUTION
Foreign Commerce Sector - STATE OF MINAS GERAIS
1998 - 2000 - Constant Values



Sourcee: Finance Secretariat of State fo Minas Gerais - Brazil Monthly Levy Report - RMA

Note: Constant Values - IPCA-IPEAD - DEC/2000=100

### 2.2.2.2.6 – Project Taxpayers' Current Control

Current control of taxpayers does not set up separate fiscal project, because there is no inspection without specific accompaniment of the development of the companies. In this sense, for implementation of this project there has been a refinement in the controls and procedures to control the companies.

First, there are in Minas Gerais an universe of 300.000 taxpayers and focus is put on the huge, great and important ones in terms of levies, with a monthly analysis of its accounts, which is made with a two-month delay in view of the necessary time to receive the DAPI (Document of poll and Information of ICMS, delivered, obligatorily, every month by the taxpayers, informing how much they owe to the State public treasury and showing the details of its monthly commercial operations) and tabulate the information and, finally, generate the accompaniment indices.

Once the limit date for the taxpayers to submit information is over, the DIF (Inspection Directory of Finance Secretariat) ascertains and guides the regional offices of the Finance Secretariat (AF - Finance Administrations) to work close to the taxpayers to try to reduce the neglectful ones in DAPI's Delivery, which is the self-statement document of ICMS, which will determine the values to be collected to the public accounts.

From this moment on, from the expiration date of the accessory and main obligations, again the AF is activated, this time, to act close to the taxpayer in order to reduce the number of those who fail to pay.

Besides the direct benefit from the reduction of neglectful taxpayers, they generate other indirect ones, resultant from the activities of the taxpayers through the information systems, checking if there is any irregularity with the company and its branches, and the same with regard to the partners and, if such is the case,

blocking the taxpayer in SEF's Systems, unabling him to do any administrative act close to the finance secretariat, as an invoice book, consultation, solicitation or request of negative certificate of fiscal debits, within the law limits, until he regularizes the situation in the Finance Secretariat systems.

### 2.2.2.2.7 – Medicament Project

The Medicament Project has its focus on laboratories and distributors, the choice criterion of companies to be inspected is based on the ratio billing/collection, ascertaining an acceptable index of collection rate to the segment and, therefore, concentrating efforts over those taxpayers which present index below such average.

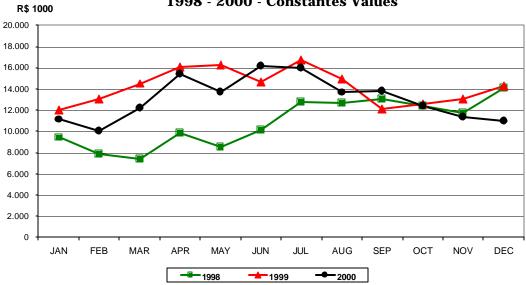
It is to point out that with the covenant of repass of interstate tax burden transference to medicaments, when the State of Minas Gerais assumed all the responsibility for inspection of the medications sold in its territory, instead of putting the responsibility over the medicament industries, it enlarged the portfolio of taxpayers to be under control, reaching forth big drugstores and other retailers, as some laboratories have been moving to the State of Goiás because of the fiscal benefits granted.

As a result of it, SEF/MG prioritized the work in the transit of goods, close to the Merchandise Transit Inspection Stations, and it intensified the taxpayers' invoice digitation routine, gathered in the inspection stations, in order to cross it with other available information.

Turning these activities effective, it seeks to reach and supplant the previous levy platforms, of R\$ 16,5 million annual in July 1999, since the collections of the sector were 33,3% lower than the level in December 2000, with the approximate amount of just R\$ 11 million/year, as it can be accompanied in the next graph.

#### ICMS MONTHLY LEVY EVOLUTION

Medicaments Sector - State of Minas Gerais 1998 - 2000 - Constantes Values



Souce: Finance Secretariat of Minas Gerais State - Brazil Note: Constant values - IPCA-IPEAD - Dec 2000=100

### 2.2.2.2.8 - Major-Taxpayers Control Project

Regarding Huge, Great and Important Taxpayers Control Project, it works over these different sizes of companies in a stratified form. "Huge" taxpayers are those among the 100 largest of the State of Minas Gerais, responsible for 62,5% of its levies, in this case existing a fiscal or a group of inspectors allocated to accompany and make regular visits, which will be assigned to study the "modus operandi" and activities of the company, identifying the irregularities, if such is the case.

The "great" taxpayers are the next 900, carrying 13% of the collections volume of ICMS, and where inspectors make analyses of collection indices and inputs and outputs of goods.

Annually, a control is made in which some of the big-sized companies under focus are changed, due to its revenue and revenue movements, what are informed to the AF, in order to exist a new classification of taxpayers which will be inspected, so that the taxpayer considered "mature", whose inspection activities are already exhausted, leaves this portfolio and is just monitored, so that there is no loss of the reached results.

The "important taxpayer" is part of a portfolio of 49.500 with revenue above R\$ 2,5 million, 4.500 of which are extracted, whose sectorial indices are considered to be below an adequate standard for this level of inputs, they are worked until they reach the platform of collection considered ideal.

### 2.2.2.2.9 - Tax Burden Transference Control Project

In the Tax Burden Transference method, which is a specific case of the Brazilian taxes legislation, ICMS' Collection is made by a taxpayer who is not the direct responsible for the operation with the merchandise at the very moment of the tax-generating fact. In other words, the industry or wholesale is liable for advance collection of the tax for the whole trade cycle, from production to retailing. Such procedure aims at facilitating inspection and avoiding tax evasion in economical sectors involving a great number of taxpayers, such as beverages (thousands of retailers), tires, fuels, among others.

In this project, there was not the approach of a sector in special. The work in set among several important segments for the State. Such actions valorize the activities of transit of goods.

There is a performance that would be the "mass control", where the external accompaniment is made, based on the covenant of the Permanent Technical Commission of ICMS – COTEPE-ICMS No. 8193, with "tolerance zero" in what the accomplishment of the primary obligation (payment of the taxes) and

accessory obligation (book-keeping and delivery routines) are concerned. Taxpayer's state registration can be suspended three months without compliance with this last one.

Also done, is the periodic check up of the information omissions of DAPI deliveries or records without movement in the system of the State finance system, canceling the registrations of the companies which do not present regular operation.

It much facilitated, thus, the exigency of the magnetic file containing inputs and outputs operations and values. Also important has been the information crossing, generating clues to confront invoices gathered in the transit with false declarations. The main sectors are fuels and beverages, among other important ones, whose goods come from other States of the Federation, like São Paulo, Rio de Janeiro, Espirito Santo, Federal District and Goiás.

It is still worth to stress the great effort undertaken in the modernization of the fiscal machine of the State, which foresees for 2001 and 2002. Intensive use of the information treatment tools to assist the fiscal control.

Such mechanisms are already in advanced implementation, and it is to be stressed the systematic digitation of invoices gathered in the transit of goods. Such actions is named Sintegra and will integrate the cadastre systems of all the States of Brazil via internet, besides the systems SCF (System of Fiscal Conference), AN-VII (Attachment VII) and the new DATA WAREHOUSE, all of them with the objective of confronting the several available information inside SEF/MG's Scope, giving support to the more effective development of the fiscal activities of the State of Minas Gerais.

### 2.2.2.3 – Indirect Actions Looking to the Minas Gerais State Revenues Recovery

Together with the direct measures adopted and described above, a series of procedures was implemented to give support to the increment effort of the revenue agents in search of fiscal balance of the state.

These measures were adopted in several flanks of the Finance Secretariat of Minas Gerais, and it will be described below.

In the finalistic area, of taxation and tax administration, the colligated units undertook wide effort to fit the tributary legislation to the new economic strategies, rationalize Finance Secretariat's actions and accomplishment of the taxes obligations by the taxpayer, and to hasten and simplify setting of pendencies between Finance Secretariat and the taxpayer.

Inside this focus, a set of activities was developed: improvement of the potentiality of the taxation in certain economic sectors; institution of new sources of the tax revenues; benefits and fiscal incentives revision; updating and revision of the taxes legislation; collecting of the largest debits and subcontracted collecting of debits up to R\$ 1.000,00; regulation of the transaction institute, where we allow the taxpayers to exchange debits for goods, tenements, etc (Bill 851/2000); revision of the fiscal allotment system; restructuring of the Taxpayers Board (CCMG - Administrative Court for tributary demands) and of the Administrative Directory of the Chambers of the Tax Credit (DACCT); creation of the collecting core in the largest Finance Administrations Offices (AF) and in the Collecting Division of the Downsizing Directory of the Tax Credit; studies on accomplishment of the effects of the Law of Fiscal Liability (State Complementary Law nº 101/2000) about state tributary policies, amog others.

As a part of the effort in search of the institutional invigoration, Finance Secretariat deflagrated several actions in the technology and information area.

The implantation of Finance Computer Network, as a form of placing the information service to work for the finalistic areas and to offer larger autonomy to the users in the control and recovery of the information, has been accomplished letting aside the data processing centered in large computer (mainframe) in favor of the data and processing distribution through the computer chain, the open architecture server-client.

The modernization of the systems of fiscal and tax administration, the implantation of access services to the internet in SEF's Units, workflow solution acquisition of databases and data warehouse tools (information warehouse) and the machines acquisition, among other actions, are enlarging the administration autonomy use the computer science with the effecture use of resources, besides strengthening the computer science activities in the planning context and general coordination of the jobs developed in SEF's areas.

Example of this is the recently implemented Center of Fiscal Document Processing (CPDOC), which processes data of the invoice emitted by the companies included in SEF's Projects and gathered in the Transit Merchandising Inspection Stations, making the confront of these information through the National Cadastre of Legal Entity - CNPJ (antique CGC), combating, this way, the tax evasion. Other example is the availability, on the internet SEF's home page (www.sef.mg.gov.br), of the up-to-date tributary legislation, including laws, decrees, resolutions and regulations that enact the tributes in the State.

With the implantation of the network it is being possible, as well, the improvement in the Finance Secretariat/taxpayer relationship, especially the easy access to the services rendered by SEF and the accomplishment of accessory tax obligations.

In this context, the Revenue Superintendence also innovated in the reception form of the information of the taxpayers. The documents which demonstrate the monthly accomplished operations (DAPI), the taxpayers' documents with collection regime DEBIT/CREDIT (micro companies and companies of small size), and the Fiscal Added value (VAF) are now transmitted via Internet.

This innovation enabled the agility in the reception of the data and eliminated processing mistakes, since the digitations of the data were suppressed. The electronic transmission still contributed for the warranty of the integrity of the information, since the developed program uploads the consistency of the data.

To give support to the taxpaying users of these systems, the SEF implemented a Helpdesk's Service", attending, via phone and e-mail, the doubts related to fulfilling and transmission of the cited documents. When immediate solving is not possible, in function of the complexity, doubts are submitted to the Finance Administrations for analysis and resent to "Helpdesk", where the appropriated return given to the taxpayer.

Some of these actions made part of Reestruturation's and Modernization Program of SEF, created in 1997, and they are financed with resources of the Interamerican Bank of Development (IDB), with compensation of the State, and it prioritizes projects for the modernization of the targeted areas of Taxation, Tax Administration, Financial Administration and Operational Control, as well as institutional invigoration.

After three years of execution of the program, it was necessary to fit the activities to the SEF's new institutional testament and to the rules praised by the Minas Gerais Plan of Integrated Development (PMDI 2000/2003). The program, initially foreseen for the period 1997-2000, had its actions, goals and resources

reviewed, by a joint work with the several units of the Finance Secretariat. The revision contemplated activities which should be undertaken until March 2002.

With the purpose of modernizing all the administrative activities, there is in course in SRE (State Revenue Superintendence) the Administrative-Tributary Process Modernization Program of SEF/MG (PROMAT) to accomplish the analysis, the revision and the rationalization of the tax-administrative control systems exercised by SEF to pattern it, documenting all the procedures and encouraging the integration among Finance System and the of the organs in which there is interface, like the Chamber of Commerce, the Accounting Board, the Transit Department (Detran), the Secretariat of the Federal Revenue, etc.

In the medium term, the great majority of the services rendered by Revenue Superintendence to the taxpayers, like State registration, negative certificate of debits, authorization for impression of fiscal documents, registration of fiscal books, control of issuing equipment of fiscal tickets (ECF), among another, will be required via Internet, without the need of physical presence of the taxpayer in the Finance Administrations.

Inside the Fiscal Education Program, they undertook actions to touch society and servants of the institution for the importance of comprehending the socioeconomic function of the tribute and of the inspection and taxation activities.

The Central Superintendence of Operational Audit, aiming at verifying the range of goals and operational goals of the public organs which compose the direct and indirect administration of the State, accomplished a lot of relevant tasks, among It, I can highlight the Evaluation report of the Execution of the Annual Budgetary Law, the consulting to the organs and entities in the accomplishment of the Normative Judicial inquiry 04/99 of the State Accounting Tribunal of Minas Gerais, the Fiscal Innings Report foreseen in the Fiscal Responsibility law and several reports involving the subject "bidding and covenants".

Still in the goal area of Financial Administration, Audit and Internal Control, the Central Superintendence of General Accounting (SCCG) was responsible, mostly, by the improvement of the control of the budgetary, financial execution, patrimony, accounting and managerese of the State, through the operational administration of the Integrated System of Financial Administration (SIAFI) and of the several routines in the system, also developing actions for accomplishment of its institutional goals.

Among the most important actions, I mention the development and implementation in SIAF (Integrated System of Finance Administration of State of Minas Gerais) of the invoices payment of public services (energy, communications, and so on) by means of bar codes and optic reader; the data rising and analysis and the bimonthly demonstrative and quadrimonthly publication in assistance to Law of Fiscal Liability; availability, via internet, of consultation to the legislation of public finance; Several actions aiming at definition of the new Siafi's conceptual model and of the new Accounting Plans' Structure of the State of Minas Gerais.

Concluding, it is worth stressing that the development of the above cited SEF's goal-activities, mostly in search of the revenue increment and expenses control, depended, largely, on the articulation of the units of support of the Secretariat. In this sense, the performance of the Human resources Superintendence and Administrative Superintendence were decisive for the SEF's Good Performance in 1999 and 2000, and deserve, therefore, be reminded in this work.

## 3 - ICMS Perspectives in Minas Gerais' State by 2001 and 2002, After the Consolidation of the Introduced Projects and Actions. A Brief Econometric Review

#### 3.1 - Introduction - Econometrics and Econometric Models

To become possible to understand the possibilities of the utilization of econometric models it is fundamental to know its basic principles, its adequate utilizations and, mostly, its technical limitations.

### **3.1.1 – Concepts**

Econometrics is a method of economic analysis, which aggregates the Statistics, the Mathematics and the Economic Theory, in other words, it is the application of mathematical and statistical methods to the analysis of economic data sets, with the goal of providing empiric support to the economic theories.

Models are a simplified representation of a process of the real world, therefore, an economic model constitutes a hypotheses set which retracts, approximately, the behavior of an economy, described by compartmental equations set, which involves observable variables and an aleatory or erratic term, and this last one contains all the factors that were not incorporated to the model.

Moreover, it contains affirmations as to the existence of observation mistakes in variables of the model and as to the specification of the probability distribution of the aleatory term.

The goal of this formulation is to provide a representative form passible of empiric test, by means of estimate, test and check up of the diagnosis produced.

The used variables can be treated within two great groups. They can be expressed in current or constant values. Then, both groups can be logarithmated or presented in monetary values.

### 3.1.2 - Methodology

In this review I opted for working with current instead of constant values, once the use of the model was intended to generate a series of levies forecast for the State.

This way, in case it were worked in constant values, it would not only be necessary to generate the foreseen series but also the waited inflation in the period at issue. In other words, when working with the current values, it is possible to generate, all at once, the forecast for the effective values to be levied.

Regarding the nominal and logaritmated values, the first presents growth in nominal values (for example, the series would tend to grow determined fixed amount a month), in other words, there is a falling tendency of its growth rates along time.

In the case of the logaritmated values, the demonstration is made through growth rates that would have been fixed along its trajectory; the consequence of this would be that the values of nominal growth would be increasing.

There are several types of econometric models which could be applied to the studies of the behavior of the revenue of the State of Minas Gerais, each one presenting characteristics of specifications with advantages or disadvantages in its application, depending on the purpose.

To develop this present work of revenue perspectives, I could chose for the utilization of *ARIMA* Models or *Structural* Models.

Each one of these models serves best to a specific objective. However, here I intend to make projections of the possible values to be reached by the levies in a horizon that will vary from 1 to 24 months and draw up the determinant variables of the levied quantum, emphasizing which ones would be passible of intervention by the Public Administration and to do a statistical inference which makes possible a short term impact analysis.

Structural Models, despite used for projections, need also to project its independent variables, what increases excessively the complexity of the necessary calculations.

Nevertheless this structural models present substantial advantage versus models of temporal series, once they can show clearly the correlation between the dependent variable (revenue) front the independent variables (demanded volume prices, economic growth, inflation, etc.), presenting interesting possibilities for impact analysis (expected by height, next month, if there is a price increase - or aliquots - supposing the other variables of the constant model).

These Structural Models also generate consistent forecasts. However, its utilization for this end is bound to the previous estimate of the forecast of the used independent variables, what complicates excessively the calculations to be made. As it was already cited, this model lends very well to caption of the independent variables actually influencing the behavior of the dependent variable, and the magnitude of this influence.

The ARIMA models, by its turn, present three basic components, which are: the AIR - auto regressors, the I - integrational or differential and the MA - econometric move average. Do not confound with the method of the arithmetic mobile average. Belonging to the models group of Temporal Series, these have as main goal the forecasts accomplishment.

So, I have opted for ARIMA to work the question of the revenue forecast, once that could be considered as an "inertial model", it is possible with just own series (dependent variable) to project values for several future periods, without the need to project the independent variable values, what it would carry larger complexity in the calculations, inclusive rising the mistake possibility.

That is possible because the ARIMA model works with stationary series, in other words, through differentiation it obtains average and variance of the dependent variable invarianties in time and that autocovariances do not depend on time, in other words, they vary regarding just the distance that separate both considered observations.

Also working with the auto regressors (AIR) which perform the long waited memory of the series, as well as with the move average (MA), which represents the not waited short memory (it represents the adverse shocks) it is possible to obtain a setup with good adherence between observed series and the projected one which allows to do projections very close to reality.

To make estimatives with the ARIMA model, it initially must differentiate the series until it becomes stationary, afterwards test which AIR's and MA's are statistically acceptable so that then it can proceed to the projection process.

A basic model, with only one AIR component, will present the AIR setup(1) – Auto-Regressive Model of First-rate Order - and would have the following form:

$$y_t ? a ? b ? y_{t?1} ? ?_t$$

So that the value of the variable y in the period t is dependent (of lineal form) of the observed value (from this same variable) in the immediately previous period.

In the same way, it is possible to think of models of superior orders (the current observation being function of the past period, of two previous periods, etc). These models would be known for presenting long memory, in other words, modifications occurred in the series tend to affect it during a long period. It must be reminded that any econometric model presents a component of aleatory mistake () inevitable and without forecast. Also it is possible to show that, in this model, the variable y will tend to  $\frac{a}{(1?b)}$ .

Other basic model, only with a MA component, will present MA setup(1) – Mobile-Average Model (econometric) of First Order - and would have the following form:

$$y_t ? a ? b ? ?_{t?1} ? ?_t$$

In other words, the value of y will be function of the shocks occurred in the series in the previous period, inducing it to assume a cyclic trajectory around (a). In the same way, it can occur superior orders (in other words, the series being function of the previous mistake, of the mistake occurred in two previous periods, etc).

This model would represent a short-memory series, in other words, shocks occurred in the series would tend to modify the behavior of this only for a short time from the occurrence of the phenomenon.

### 3.2 - Forecast of the ICMS Revenue for 2001 and 2002 for Minas Gerais – A ARIMA Model

The revenue forecast which will be demonstrated below used the data of total levies of ICMS, given by the Monthly Report of Levies (RMA), aggregated values, of Minas Gerais, from January, 1995 until December, 2000, serving as a base for the equation used.

Thus, in the estimated model, a variable  $dummy^1$  was used to detect this relative structural change in the new performance of the public treasury initiated in the current administration (1999 – 2002).

However, the extremely dynamic form with which these revenues earnings were reached may suffer a deceleration, maintaining, however, the platforms already consolidated.

To incorporate this question to the model, the option was the exclusion of dummy, for forecast effects, in the period post December 2001, understanding that in this period, after about three years of the new administration and implementation of the fiscal projects in course, described shortly in this work, one will be close to the saturation point of the possible earnings.

The estimate, with nominal values, it appeared as an ARIMA(24,1,2). For the previous period of December, 1998, we find the following equation,

Dummy is a binary variable used to determine qualitative variations in the arguments of the models, where zero means absence of the occurrence, on the contrary of one. This way, in case this is significant, there would be structural change. In this specific case, it seeks to measure possible modifications in the State's ICMS levies, occurred in the current administration, and due to the new implemented managerial techniques.

 $ICMS_{t}$ ?  $ICMS_{t?1}$ ? ?0,3075?  $(ICMS_{t?6}$ ?  $ICMS_{t?7}$ )? 0,2014?  $(ICMS_{t?24}$ ?  $ICMS_{t?25}$ )?

For the Itamar Franco's administration we find:

$$ICMS_{t}$$
?  $ICMS_{t?1}$ ? 9.254.449? 0,3075? ( $ICMS_{t?6}$ ?  $ICMS_{t?7}$ )?

? 0,2014? (
$$ICMS_{t?24}$$
?  $ICMS_{t?25}$ )? 0,7366?? $_{t?1}$ ? 0,6098?? $_{t?2}$ 

The results referring to this equation are presented in the following picture.

Dependent Variable: D(ICMS) Method: Least Squares

Date: 01/30/01 Time: 14:15 Sample(adjusted): 1997:02 2000:12

Included observations: 47 after adjusting endpoints

Convergence achieved after 49 iterations

Backcast: 1996:12 1997:01

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ITAM	9,254,449.00	1312030	7.053536	0.0000
AR(6)	-0.307484	0.087115	-3.52964	0.0010
AR(24)	0.201434	0.089741	2.244616	0.0301
MA(1)	-0.736628	0.179672	-4.09986	0.0002
MA(2)	-0.609753	0.178965	-3.40712	0.0015
R-squared	0.612335	Mean de	pendent var	4,905,332.00
Adjusted R-squared	0.575414	S.D. dep	endent var	30,290,839.00
S.E. of regression	19737586	Akaike i	nfo criterion	36.53424
Sum squared resid	1.64E+16	Schwarz	criterion	36.73106
Log likelihood	-853.5545	F-statist	ic	16.58522
Durbin-Watson stat	2.418663	Prob(F-s	tatistic)	0.0000

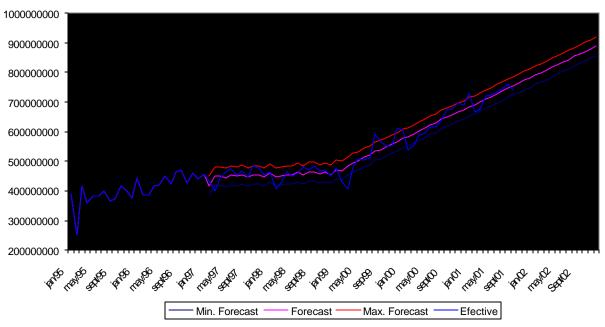
The graph and the table below show the foreseen values, in "reais", for ICMS' Levies until December 2002. This estimate is very clear regarding the maintenance of the platforms of reached revenue, not existing reversion of the growth tendency verified up to now, and which has elevated the revenue for values around R\$ 700 million monthly, stressing that, already in December 2001, it will

reach around R\$ 801 million, a month in which, historically, there is a tax collection peak, maintaining, for the following year, monthly average values around R\$ 750 million.

The table also presents the relative intervals to this forecast (generated through the subtraction and the sum of a standard error in the estimate value), which would contain about 68,26% of the expected values, in other words, with -1 standard error and +1 standard error.

It is important b emphasize that in this revenue perspectives, based on RMA's Aggregated Data, the observed average error lies at approximately 2,06%, between foreseen values and the accomplished values, from January until September 2001, as it can also be observed in the graph below and in the table on the next page, bringing to this series a lot of credibility.

Effective and Foreseen ICMS Levies - Minas Gerais 1995 - 2002



Source: Monthly Report of Levies (RMA) - Finance Secretariat of Minas Gerais

### ICMS Levies Perspectives - Minas Gerais 2001 - 2002

R\$

	1						K 5
Column	1	2	3	4	5	6	7
Period	Estimate Value 1Std. Error	Estimate value	Estimate Value + 1 Std. Error	Effective revenue	% Variation col(4/1)	% Variation col(4/2)	% Variation col(4/3)
January/2001	665.822.914,09	696.113.753,09	726.404.592,09	731.782.286,37	9,91%	5,12%	0,74%
February 2001	661.560.791,01	691.851.630,01	722.142.469,01	667.531.219,09	0,90%	-3,52%	-7,56%
March 2001	655.394.194,10	685.685.033,10	715.975.872,10	675.456.911,45	3,06%	-1,49%	-5,66%
April 2001	679.564.651,95	709.855.490,95	740.146.329,95	722.014.913,74	6,25%	1,71%	-2,45%
May 2001	689.447.335,41	719.738.174,41	750.029.013,41	725.326.488,61	5,20%	0,78%	-3,29%
June 2001	701.331.797,52	731.622.636,52	761.913.475,52	735.000.000,00	4,80%	0,46%	-3,53%
July 2001	710.623.880,05	740.914.719,05	771.205.558,05	744.000.000,00	4,70%	0,42%	-3,53%
August 2001	738.507.271,12	768.798.110,12	799.088.949,12	762.000.000,00	3,18%	-0,88%	-4,64%
September 2001	745.477.188,04	775.768.027,04	806.058.866,04	742.000.000,00	-0,47%	-4,35%	-7,95%
October 2001	745.404.852,27	775.695.691,27	805.986.530,27				
November 2001	752.632.847,72	782.923.686,72	813.214.525,72				
December 2001	771.126.937,48	801.417.776,48	831.708.615,48				
January/2002	768.111.279,32	798.402.118,32	828.692.957,32				
February 2002	746.783.762,52	777.074.601,52	807.365.440,52				
March 2002	749.196.916,23	779.487.755,23	809.778.594,23				
April 2002	756.504.073,69	786.794.912,69	817.085.751,69				
May 2002	757.187.130,70	787.477.969,70	817.768.808,70				
June 2002	755.973.761,70	786.264.600,70	816.555.439,70				
July 2002	755.757.349,83	786.048.188,83	816.339.027,83				
August 2002	764.144.259,20	794.435.098,20	824.725.937,20				
September 2002	769.243.730,84	799.534.569,84	829.825.408,84				
October 2002	765.743.549,24	796.034.388,24	826.325.227,24				
November 2002	767.476.928,31	797.767.767,31	828.058.606,31				
December 2002	764.587.280,52	794.878.119,52	825.168.958,52				

Source (Efective Revenue): RMA (Montlhy Revenue Report) - SEF/MG

Obs:: 1- Data do not contain interest rates, fines and notificatios in judicial charging.

<sup>2-</sup> Current Values

### 4 - Final Considerations

Clearly, the historical data of levies of Minas Gerais presented a significant structural change starting from 1999 (see graphic in the previous section), due to increase in ICMS collection.

Two factors can explain this process. On one side, there occurred a strong increase of the prices managed by the Brazilian government (especially, the one relative to the petroleum), what impacts positively the levies. On the other side, the Fiscal Projects implemented by Finance Secretariat visibly increased the leviing efficiency in Minas Gerais, as shown throughout this paper.

Both the changes generated structural breakages in the behavior of the levies of the State, as detected econometrically. However, such changes turned more difficult the generation of the presented forecast, in the last section.

It is possible to hope that such effects about the growth of the revenues will be transitory, but it is fearful to think this vitality will keep up in the future. An example is the biggest levying efficiency shown nowadays.

This, initially, allows the levies to increase too much. However, such gain occurs only once (once reached a level without inefficiencies, the levies would proceed growing just as the economy, as the law of the decreasing marginal revenues shows).

The same can be said about managed prices. It is possible to suppose they do not tend to grow, in view of the strong growth previously observed (an example would be related to current crisis of petroleum, when, in front of the highest international price at the moment, it is to suppose that this will not grow even in the future).

This way, forecast exercises at this moment are very delicate. Nevertheless, it is not absurd to hope that the levies situates in any intermediary dot between the more optimistic series foreseen and the intermediary one.

It is fundamentally important to stress that the validity of its forecasts can be jeopardized by the advent of the structural breakage, occurred in all the Brazilian and Minas Gerais' economy ensuing from the need to ration electric power as of June 2001. Such fact could not be incorporated to the model used for the forecast by the simple reason that there are not data enough to feed the model.

Concluding, it ought to be in mind that the current level of debts of the Brazilian States are dramatic, as it could be verified in the proper section of this work about Minas Gerais' situation which owes more than R\$ 25 billion to the Federal Government, what would represent almost 3 years of levies.

The only way to try a solution for the fiscal balance of these federated entities would be, on one hand, to take considered actions as to rising their own revenues and the effectively cutting expenses, as Minas Gerais' Government has been doing with the ICMS tax and I have shown herein. On the other hand, they should try a new settlement with the Federal Government, the major creditor of the majority of Brazilian States, in the sense of a new method for repayment of their indebtedness, as the current agreement, signed in 1998, has proved to be insufficient to help the States in their attempt to balance their accounts.

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### III - Appendix – Brazilian Reais x American Dollar Exchange Rates 1998 – 2000

In order to make it easier for the reader to understand the values expressed in Brazilian "reais" in this work, I have elaborated the present appendix, which contains the exchange rate table for "reais" against the North American currency (US\$).

As all the values expressed in Brazilian "reais" in this work are in constant values of December 2000, it is just necessary to convert them into dollars per quotation of 12/29/2000, last quotation of that year, to work with the same equivalent amount in American dollars, remembering that the comma simble (,), used herein, separates decimals.

Exchange Rates Brazilian Reais X U.S. Dollars 1998 - 2000

1998 - 2000 R\$				
Month	Cotation Date	Reais per US\$		
Jan/98	30/01/1998	1,166		
Feb/98	27/02/1998	1,174		
Mar/98	31/03/1998	1,183		
Apr/98	30/04/1998	1,190		
May/98	29/05/1998	1,191		
Jun/98	30/06/1998	1,207		
Jul/98	31/07/1998	1,660		
Aug/98	31/08/1998	2,013		
Sep/98	30/09/1998	1,843		
Oct/98	30/10/1998	1,707		
Nov/98	30/11/1998	1,748		
Dec/98	31/12/1998	1,790		
Jan/99	29/01/1999	1,815		
Feb/99	26/02/1999	1,893		
Mar/99	31/03/1999	1,879		
Apr/99	30/04/1999	1,993		
May/99	31/05/1999	1,931		
Jun/99	30/06/1999	1,805		
Jul/99	30/07/1999	1,798		
Aug/99	31/08/1999	1,778		
Sep/99	30/09/1999	1,724		
Oct/99	29/10/1999	1,778		
Nov/99	30/11/1999	1,847		
Dec/99	31/12/1999	1,820		
Jan/00	31/01/2000	1,796		
Feb/00	29/02/2000	1,820		
Mar/00	31/03/2000	1,855		
Apr/00	28/04/2000	1,880		
May/00	31/05/2000	1,910		
Jun/00	30/06/2000	1,956		
Jul/00	31/07/2000	1,958		
Aug/00	31/08/2000	1,952		
Sep/00	29/09/2000	1,958		
Oct/00	31/10/2000	1,961		
Nov/00	30/11/2000	1,956		
Dec/00	29/12/2000	1,955		

Source: Central Bank of Brazil Note: (,) Decimals Separator Sales Cotations