

Instituto Cultural Minerva

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THE ECONOMY OF THE STATE OF SÃO PAULO

AND

THE COLLECTION OF VALUE ADDED TAXES

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INTRODUCTION

Sao Paulo is the most developed and industrialized state in Brazil. All sectors of its economy are highly integrated. The most important tax revenue collected by the Government of the state comes from a value-added tax – Tax on the Circulation of Goods and Services – TCGS. The revenue collected is related to the product of the economy of the state. Consequently, dynamics and structural changes in the state's economy may affect the amount of its main tax resource.

This paper is aimed at investigating the relationship between the amount of TCGS collection and dynamics of the state's economy during the 1990s and how changes in economy have influenced the collection of TCGS. Non-economic factors such as main changes in legislation and better inspecting and control systems can provide a greater amount of this tax, will also be considered. The perspectives of the state's economy and the collection of the another value added tax – IVA - that is expected to be introduced by the Tax Reform to substitute TGCS, will also be discussed.

This paper is divided into two parts. The first section, *The Gross Domestic Product of the Economy of the State of Sao Paulo and the Tax on the Circulation of Goods and Services – Development during the 1990s*, will present the evolution of the state’s GDP by sector and its corresponding revenues of TCGS. It will relate GDP growth and the collection of TCGS. The consequences of the law changing and better inspecting and control systems introduced by the administration of the Secretariat of Finance will be also discussed.

Part Two, *The Perspectives of the Economy of the State of Sao Paulo and the Collection of Taxes Based on Value Added*, will explore how the perspectives set for the state’s economy will affect revenues provided by taxes based on value added. Structural aspects will be considered, emphasizing the role of the new industrial paradigm. In this context, other taxes based on value added, like tax on consumption and tax on services will be discussed.

Finally, *Conclusion* contains a brief view over the main perspectives for the economy of Sao Paulo and the collection of value-added taxes.

PART ONE

The Gross Domestic Product of the Economy of the State of Sao Paulo and the Tax on the Circulation of Goods and Services

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Transformation during the 1990s

Brazilian Tax System has three taxes included under the umbrella of value-added tax:

- Tax on Industrialized Products: collected by the central government;
- Tax on Circulation of Goods and Services: collected by states government;
- Tax on Services of Any Nature: collected by municipalities.

The subject of this part is to inquire how Tax on the Circulation of Goods and Services is related to the Gross Domestic Product (GDP) of the state. The greater GDP is, the greater the amount of TCGS collected. That occurs because TCGS is collected along the whole net production-distribution-consumption, step by step as value is being added. Taxpayer is any firm which promote commodity exits and offers distribution of electric energy, telecommunication and interstate and inter-city transportation services. It obeys the principle of origin, that is, tax is due from the state in which taxpayers promote commodity output and where services are produced. It also obeys another principle used to calculate value added: debits for outputs minus credits for inputs.

TCGS revenues depend, among another factors, on the amount of GDP, because it is calculated upon the added value. For this reason, the relationship between GDP and TCGS revenues, will be discussed. The product of the economy of Sao Paulo, measured by its GDP, is the added value of the whole state.

The time series for GDP and TCGS begin in 1989 and were computed until 1997, the year when there was available data for GDP. Table 01 shows, in local currency, the evolution of both GDP and TCGS collected by the government of the state.

Table 01: Sao Paulo – GDP and TCGS 1989 to 1990

Values adjusted by IGP-DI to December/97 - billions of R\$ (reais)

Year	GDP	TCGS
1989	231.03	17.21
1990	219.74	18.48
1991	216.50	16.62
1992	212.72	15.29
1993	222.62	14.41
1994	224.02	17.27

1994	234.92	17.57
1995	239.97	22.37
1996	245.54	23.77
1997	255.69	23.41

Source: Secretariat of Finance of the State of Sao Paulo and Seade Foundation

During the 1990s, GDP increased 10.67% while the collection of TCGS increased 36.03%. That means, the amount of TCGS increased three times more than the GDP. We can also observe a recession in the economy from 1990 to 1992, followed by systematic growth of the GDP from 1993 to 1997. TCGS revenues followed the same tendency of the GDP. After a 7% growth in 1990, the state experienced systematic lows until 1993. Great growth is observed from 1994, a period when the level of revenues changed.

The question is: what explains the high performance of TCGS revenue during the second half of the 1990s? Did it happen because the economy grew and the elasticity of TCGS to the product is more than 1? The annual average decrease of the product during the recession period was 2.71% per year, while TCGS revenue decreased 7.96%. On the other hand, GDP grew on average 3.75% from 1993 to 1997, while TCGS revenue grew 12.90% on average per year from 1994 to 1997. Those numbers suggest that TCGS revenue elasticity to the product is already more than 1, it can't however explain why TCGS revenue growth is much higher than the perform of GDP.

To understand better the question, both sides will be examined: first, the development of GDP and then, the evolution of TCGS revenue during the 1990s. GDP series and TCGS revenue series will be break up into three sectors:

- Agricultural and Cattle;
- Industry;
- Services.

The Sectors of the Economy of the State of Sao Paulo

The availability of data, somewhat, restricts the scope of this investigation. The only GDP sectorized data available was offered by Seade Foundation and it contains data from 1980 to 1997. Industry was also divided into Non Durable Consumption Goods Industry, Intermediate Goods Industry, Capital and Durable Consumption Goods Industry and Other Industries.

Non Durable Consumption Goods Industry are:

- Furniture;
- Pharmacy, Perfume and Veterinarian Products;
- Textiles;
- Clothing, Shoes and Textiles Articles;
- Food, Beverage and Tobacco Products;
- Press and Graphics Products.

Intermediate Goods Industry are:

- Non Metallic Minerals;
- Metallurgic;
- Paper and Cardboard;

- Wood;
- Rubber;
- Leather, Skin and Similarly Products;
- Chemicals;
- Plastic Materials.

Capital and Durable Goods Industry involve:

- Mechanic;
- Electric and Communication Materials;
- Transportation Materials.

Other Industries involve:

- Minerals;
- Public Utilities Services Products;
- Construction;
- Others.

Services are the most difficult sector in terms of data surveying. Statistics are very aggregated and that imposes methodological difficulties. GDP could be only divided into the following:

- Retail Sales;
- Transportation and Communication;
- Finance Intermediation Services;
- Others.

GDP data are available for the division above. Times series for TCGS revenues have a more detailed division.

Table below shows the values of GDP by sector from 1989 to 1990.

Table 02: GDP of the state of Sao Paulo – 1989 to 1990
Values adjusted by IGP-DI to December/97 – Billions of R\$ (Reais)

Year	Agriculture and Cattle	Industry	Services	Total
1989	9.67	91.67	129.62	231.02
1990	10.05	82.24	127.45	219.74
1991	10.37	80.25	125.87	216.50
1992	10.39	77.31	125.02	212.72
1993	10.40	82.89	129.33	222.62
1994	10.81	88.35	135.75	234.92
1995	11.02	88.31	140.64	240.00

1996	11.86	89.04	144.64	245.54
1997	12.00	93.05	150.63	255.69

Source: Seade Foundation

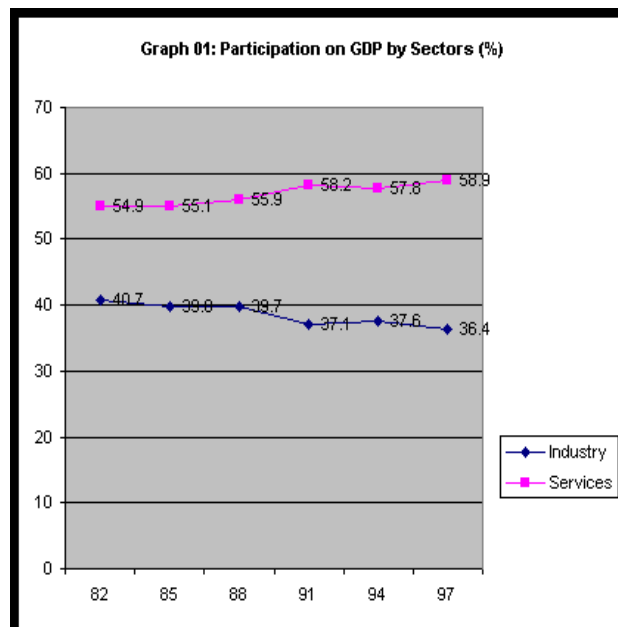
This table shows the participation of each sector on the product of the state. The table includes figures from 1982 in order to show long-term trends.

Table 03: Composition of the GDP of the State of Sao Paulo – (%)

Year	Agriculture and Cattle	Industry	Services	Total
1982	4.4	40.7	54.9	100.0
1985	5.2	39.8	55.1	100.0
1988	4.5	39.7	55.9	100.0
1991	4.8	37.1	58.2	100.0
1994	4.6	37.6	57.8	100.0
1997	4.7	36.4	58.9	100.0

Source: Seade Foundation

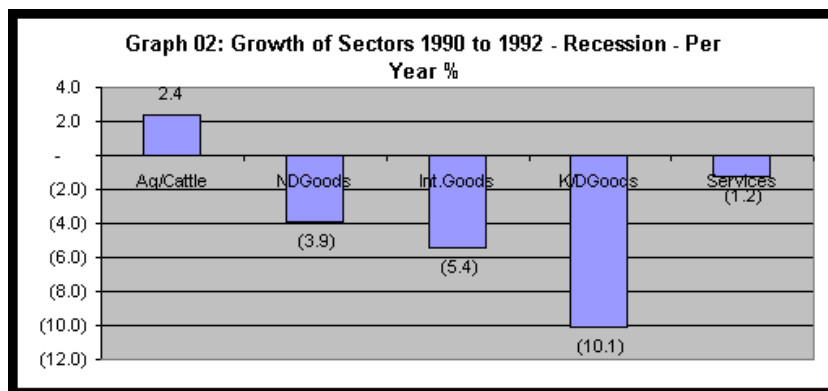
Graph below shows data of table above for Industry and Services.



Source: Seade Foundation

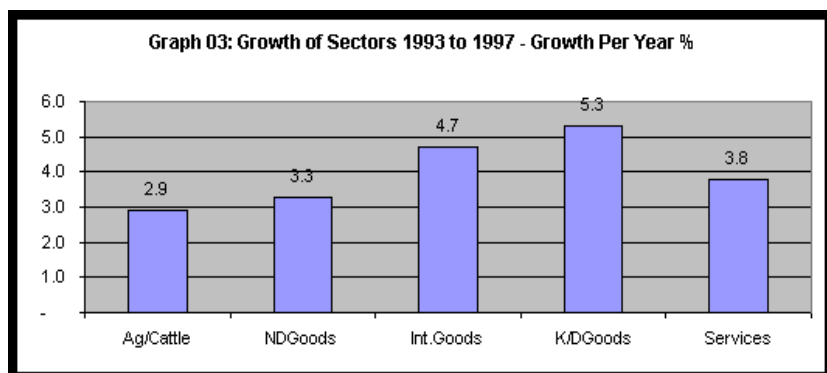
From 1982 to 1997, Agriculture and Cattle, has maintained a low participation on the GDP of the state around 4.5%. Although important technological innovations had been introduced and productivity had increased a lot in this sector, it cannot stimulate economic growth or promote a significant increase on taxes revenues for two reasons. First, Sao Paulo is an industrialized state and development of this sector does not produce significant multiply effects on the industrial product. Second, this sector exports a considerable percentage of its production and exports are not taxed.

On the other hand, the participation of Industry dropped from 40.7% to 35,4%, while Services persistently increased from 54.9% to 58.9%.



Source: Seade Foundation

Services represent more than a half of Sao Paulo's GDP and its growth avoided a deeper recession on the economy of the state during the 1990-1992 period. During the following growth period – 1993-1997, Services showed a greater growth than Industry. Industrial product showed a worst performance both during the recession period (1990 to 1992) and during growth period (1993 to 1997). The graphs below show the performance of each sector the segment of each industry during both periods.



Source: Seade Foundation

Legend:

- Ag/Cattle: Agriculture and Cattle
- NDGoods: Non Durable Consumption Goods Industry
- Int.Goods: Intermediate Goods Industry
- K/DGoods: Capital and Durable Consumption Goods Industry

Agriculture and Cattle was the only sector with growth during the recession. It has been the most stable sector. The two other showed a cyclical performance. During growth period, services increased 2.9% per year while Intermediate Goods Industry and Capital and Durable Goods Industry increased higher, respectively 4.7% and 5.3% per year. Capital and Durable Goods Industry is the most sensitive sector to the economic cycle. It is the sector that produces machine, equipment and automobile – that means industrialized products with the highest value added and with the greater capacity in generating TCGS revenues. Service showed a pro-cycle behavior, although less sensitive to the economic cycle than Industry.

All those numbers show us that during the 1990s great structural changes in the economy of the state didn't occur, although there is a shift from GDP of industries to GDP of services. The amount of TCGS revenues should be related mainly to variations on economic growth, but it was not, as it will be later shown. The most important structural changes in the economy had already occurred during the 1970s, the period of the II PND maturation. At that time, Sao Paulo - and Brazil as a whole - completed their productive structure with all sectors that composed an industrialized economy. The public sector provided all investments in infrastructure and basis industry. During that period, industry in Sao Paulo was developed in all its classic sectors. Growth and diversification of industrial productive structure – mainly Capital and Durable Goods

Industry – had important impacts on the other sectors. A greater urbanism phenomenon – with high growth of important cities – required modern agriculture, capable of offering agriculture products on a larger scale. Agriculture was mechanized and new technologies were applied in plantation and cattle care. Agricultural modernization also required the construction of a huge storage net structure, the restructure of the whole distribution net and the transportation system. It also required more services: civil construction, education, health, urban transportation, telecommunication, financial intermediation services, personal services and so on. All of these were provided by a large participation of public investments. The economy of the state was finally getting into the so called "The Second Industrial Revolution", which had taken part in the developed countries during the second half of the 19th Century and during the beginning of the 20th Century.

During the 1980s, all investments of II PND had matured and the dynamic process of diversifying the economic structure and accelerated growth stopped. The economy of the state, following the economy of Brazil, had gotten into an irregular tendency of a stop-and-go period. Short periods of recession followed by short periods of growth didn't provoked effects over the productive structure in terms of diversification, innovation and growth. This period has been called in Brazil "the lost decade". At the end of the decade, a growth period began but it was interrupted by a recession that continued until 1992.

During the 1990s, after a stabilizing government plan that ended inflation, a growth economic period began in 1993. TCGS revenues should have been conditioned by economic growth, because significant structural economic changes didn't occurred. The only structural change observed was the slow and silent continuing increasing of Services. During the 1970s, this sector had already begun turning into an important one in terms of employment and production. But this process had been conditioned by the development of the industrial sector. Now we may conclude that, although Services is growing in its participation of GDP, during the 1990s important structural changes didn't happen in the economy of the state. In this case, impacts on the collection of TCGS can be explained only by variations on economic growth and administrative and legislative acts.

At least, as shown above, there were two clear periods during the 1990s:

- a. Recession between 1990 and 1992: GDP decreased 2.7% per year;
- b. Growth between 1993 and 1997: GDP increased 3.7% per year.

Another important phenomenon that is going on, is the redistribution of industry investments from the metropolitan area of the capital to interior cities. New industrialized areas are becoming very important in terms of value added such as Campinas, Sorocaba and Paraíba River Valley. This has positive impacts in terms of value added taxes, because the metropolitan area of the capital is losing its capacity to bring new industrial investments. Today it is much more expensive to install a factory in Sao Paulo City than in Campinas or other strategic area of the interior. These new industrialized areas are well served by an integrated infrastructure of roads, railroads and airports. It is not relatively expensive to outflow production from these areas to Santos port or to other areas of the country. This is positive in terms of tax collection, because the saturated area of the Sao Paulo City is being substituted by the rich and developed interior of the state. Investments in the interior promotes economic growth (and more taxes revenues) because producing activities become more integrated with the other areas of the country.

Now let's turn our inquiry to TCGS revenues.

The Collection of TCGS by Sectors and Its Dynamics

Table 01 shows the evolution of TCGS revenues collected by government during the 1990s. It systematically decreased from 1990 to 1993 following the recession period with a year of discrepancy. During the growth period it increased until 1996, with a tendency of decreasing from 1997. The major point in this case is the large change in the amount collected during both periods. The table below shows the high difference of annual average amount:

Table 04: TCGS Revenues – Annual Average Amount
 Values adjusted by IGP-DI to December/97 – Billions of R\$ (Reais)

Period	Annual Average Amount
1990 – 1992	16.2

1993 – 1997	21.7
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Source: Secretariat of Finance – Sao Paulo

Considering a year of discrepancy, during the equivalent period, Table 05 shows the performance of the GDP.

Table 05: GDP – Sao Paulo – Annual Average Amount
Values adjusted by IGP-DI to December/97 – Billions of R\$ (Reais)

Period	Annual Average Amount
1989 – 1991	222.4
1992 – 1996	231.2

Source: Seade Foundation

The performance of TCGS revenues is incredibly higher. While the annual average amount of TCGS revenues increased 34% from one period to another, the same indicator for GDP increased only 4%.

This is the first important point observed on TCGS revenues. This performance cannot be explained only by economic factors. Large structural changes in the economy could provide more tax revenues. During the 1990s it didn't occur in Sao Paulo as we have seen. It also outperformed GDP of the state. So, diversification and economic growth by themselves cannot explain the increase in TCGS revenues in Sao Paulo during the growth period of the 1990s. Nor it can be explained by the elasticity of TCGS revenues to the product of the economy. In other words, economic factors promote variation on TCGS revenues but they are not sufficient to explain its high performance during the growth period. The variation can be observed from the table below, which relates TCGS revenues to GDP.

Table 07: TCGS Revenues/GDP-Sao Paulo
1989 to 1997

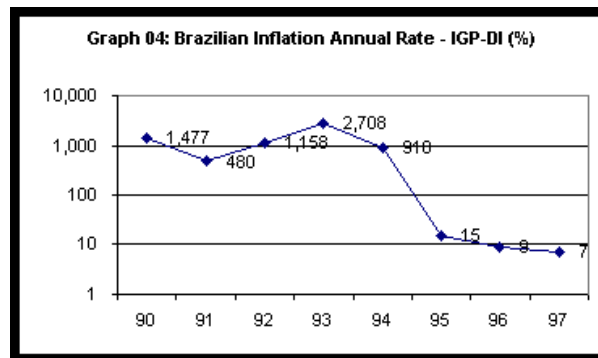
Year	TCGS/GDP (%)
1989	7.5
1990	8.4
1991	7.7
1992	7.2
1993	6.5
1994	7.4
1995	9.3
1996	9.7
1997	9.2

Sources: Seade Foundation and Secretariat of Finance-S.Paulo

If TCGS was related only to economic factors, variations on GDP amount shouldn't be followed by variations on the relationship TCGS/GDP. As the table above shows, during the recession period, TCGS revenues were low when related to GDP. And during the growth period, this relationship increases a lot, with a tendency of decreasing during the last year.

This suggests that during the recession period, tax evasion was greater and the government couldn't manage inspecting. That is true. During the recession period, no important changes in tax legislation were introduced. TCGS revenues could not be low because of legislative acts. Government run by the PMDB party didn't improve inspection and didn't improve control on tax collection. As a result, this was a period of great tax evasion. It was also a period of high inflation rates. During periods of inflation, tax revenues are lower. This effect is known as "Tanzi Effect" and whereby inflation affects negatively tax revenues. Tax revenues are devaluated during the period of time between the legal fact for taxation and the actual collection into the Treasury. An environment of tax evasion, recession and inflation explains why during this period TCGS revenues were systematically low.

The graph below shows inflation rates measured by IGP-DI during the whole period. As mentioned, IGP-DI is an index number that measures inflation in Brazil. Getulio Vargas Foundation calculates it.

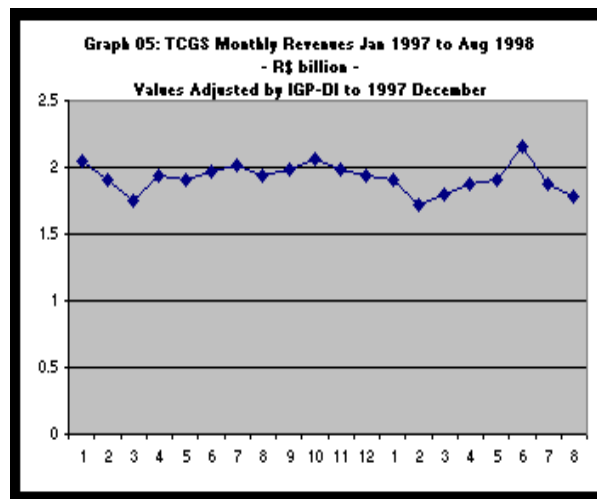


Source: Getulio Vargas Foundation

In 1994 when the new PSDB party governor was elected, he started introducing better methods of inspection and invested heavily in control systems, especially information computerized ones. The newly elected governor also regulated agreements among Brazilian states, establishing rules for tax benefits. These measures, combined with economic growth and lower inflation, already brought TCGS revenues to a higher level.

Another important characteristic observed on TGCS revenues is its low tendency after 1997. This tendency is explained by two reasons:

Firstly, GDP growth began to decelerate. The international finance crisis – Asian and Russian – have required recessive measures taken by the central government to avoid devaluation of Real. In 1998, slow growth and a recession in 1999 is expected. An adjustment policy is being taken. At the same time the Central Government is negotiating a US\$ 30 billion loan with the International Monetary Fund (November, 1998). Despite this adjustment, recession measures have been taken by the Central Government since the second half of 1997. As mentioned before, the economy of Sao Paulo is fully affected. It represents almost 40% of the country's economy and it is the most integrated and industrialized state economy in Brazil.



Source: Secretariat of Finance – Sao Paulo

The second reason regards a legislative act. In September of 1996, the Central Government introduced a Constitutional Act establishing a zero bracket of TCGS over exports of semi-manufactured and primary goods. It also established credits of tax paid on inputs of capital goods, such as machinery and equipment, acquired by firms. This Constitutional Act is known as "Kandir Law" and strongly explains the lower TCGS revenues during 1997 and 1998. The graph below shows the absolute values of TCGS revenues during this period.

A closer inquiry into the performance of TCGS revenues related to each sector of the economy will now be shown.

TCGS Revenues by Sectors

While the GDP didn't show great structural changes during the 1990s, TCGS revenues did. The table below shows how during the 1990s TCGS revenues collected from Industry lost participation over total TCGS revenues and how Services highly elevated its position.

Table 08: Relative Participation of Sected TCGS Revenues on Total TCGS Revenues – (%)

Sector	1990	1993	1995	1997
Agriculture & Cattle	1.15	0.94	0.77	0.43
Industry	68.77	56.59	52.83	48.98
Services	37.00	41.69	45.32	48.85

Source: Secretariat of Finance-S.Paulo

In 1990 TCGS revenues collected from Services was almost half of that collected from Industry. In 1997 both are almost the same. Table 09 below shows it very clearly.

Table 09: TCGS Revenues

Values adjusted by IGP-DI to December/97 – Billions of R\$ (Reais)

Sector	1990	1993	1995	1997
Agriculture & Cattle	0.21	0.14	0.17	0.10
Industry	11.28	8.16	11.82	11.47
Services	6.83	6.01	10.14	11.44

Total	18.48	14.41	22.37	23.41
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Source: Secretariat of Finance-S.Paulo

Despite legislation changes, i.e. "Kandir Law", TCGS collected from Industry remained at the same absolute level (except for the worst recession year of 1993). It was due to a greater effort on inspecting and controlling taxes as previously mentioned. What actually supported total TCGS revenues to a higher level during the growth period, was TCGS collected from the Services Sector.

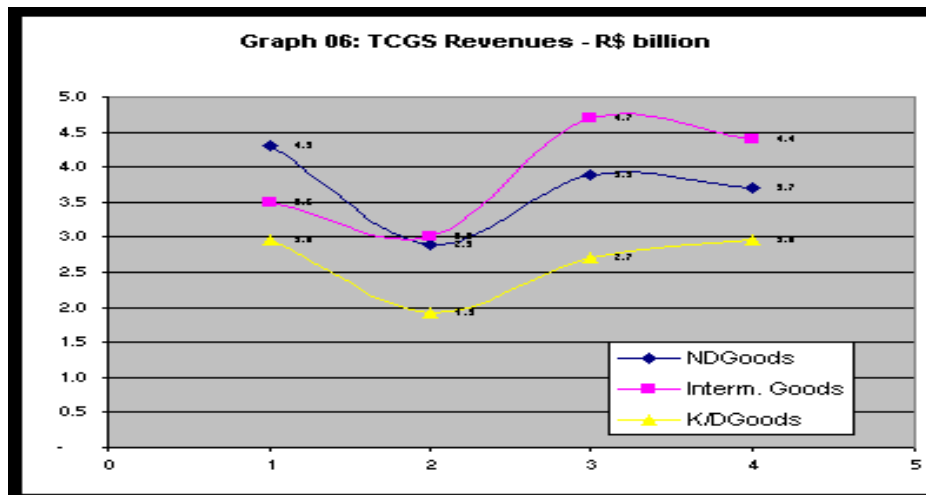
TCGS collected from Industry followed the tendency appointed for both periods: recession and growth. The impact of "Kandir Law" in each segment of Industry Sector was different.

TCGS collected from Intermediate Goods Industry was negatively affected by "Kandir Law", because this sector produces semi-manufactured goods for export. It dropped from R\$ 4.2 billion in 1990 to R\$ 3.7 billion in 1997. It had also followed the tendency of decreasing during the recession period and a great increase during the growth period until 1995, showing a high elasticity to the product. From 1996 to 1997, despite a greater effort on inspecting and controlling taxes, it couldn't afford the effects of "Kandir Law".

TCGS collected from Non Durable Consumption Goods Industry was more affected by "Kandir Law". TCGS collected from this sector dropped from R\$ 4.9 billion in 1996 to R\$ 4.4 billion in 1997.

TCGS collected from Capital and Durable Consumption Goods Industry suffered less variations, but always following a cyclical tendency, decreasing during recession and increasing during the growth period. This segment, as shown in graph 07 and 08, is less elastic to economic fluctuations.

The graph below illustrates those observations.



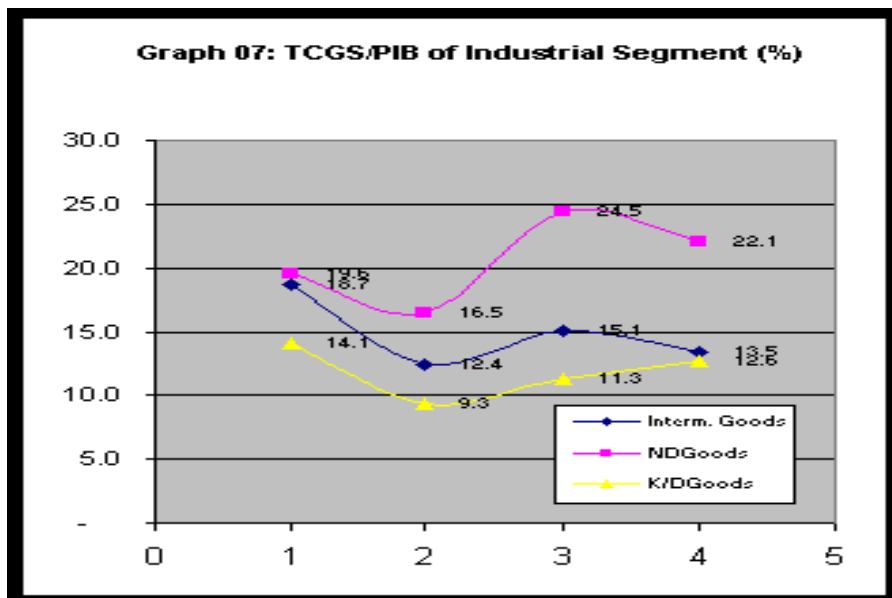
Source: Secretariat of Finance – Sao Paulo

In "x" axes in the for Graphs 06 and 07:

- "1" means the year of 1990;
- "2" means the year of 1993;
- "3" means the year of 1995;
- "4" means the year of 1997.

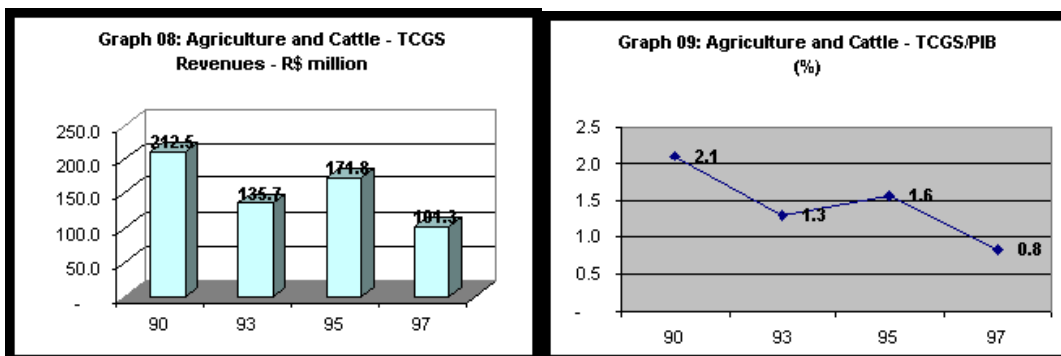
In summary, all curves show a minimum point in the year of 1993, ending a period of recession, high inflation and mismanagement by the government. From 1994, TCGS revenues began a new cycle reflecting a period of economic growth, low inflation and the government worried about improving means and methods of inspecting and collecting taxes. As a result of "Kandir Law", an inflecting point appears in the year of 1996 for segments of Intermediate Goods Industry and Non Durable Consumption Goods. TCGS revenues from Capital and Durable Consumption Goods Industry, show a

tendency of decreasing from 1997, reflecting the first signals of an expected recession period. The same conclusions are reached, when TCGS revenues collected from each industrial segment are related to each GDP segment, as shown in graph below.



Source: Secretariat of Finance–Sao Paulo and Seade Foundation

Before presenting the important phenomenon of TCGS collected from Services Sector, a brief view on Agricultural & Cattle behavior should be discussed. This is the sector that produces the lowest TCGS revenues, only 0.43% of the total in 1997. The government is losing revenues from this sector because it was strongly affected by "Kandir Law", due to a great export percentage of the product of the sector. The graphs below illustrate its performance.



Source: Secretariat of Finance - S.Paulo and Seade

In Agriculture and Cattle, TCGS revenues were following the general tendency of decreasing until 1993 and recovering from 1994 on. It would have had a growth tendency after 1995 if "Kandir Law" had such a huge impact.

TCGS Collection from Services Sector

It was shown that Agriculture and Cattle and Industry lost their relative position in producing TCGS revenues and, in a larger sense, taxes on the value-added tax. It occurred because "kandir Law" established by the Central Government allowed zero brackets for export operations of primary and semi-manufactured goods and also credits of tax paid on inputs of capital goods, such as machinery and equipment. It affected Agriculture and Cattle and the segments of Industry in different ways. Agriculture and Cattle, for instance, responded with a high decrease of tax collection, because it is a high export sector. The segment of Capital and Durable Consumption Goods wasn't highly affected until 1997. Decrease on tax collection of Industry wasn't deeper because government improved methods of inspecting and controlling tax collection. That made Industry maintains TCGS collection at the level of R\$ 11.60 billion, responding for 49% of total TCGS revenues.

Collection of TCGS from the Services didn't follow this logic. On the contrary, it suddenly increased so high from 1994, that the average level of TCGS revenues raised from R\$ 15.4 billion in the period of 1991-1993 to R\$ 23.2 billion in the

period of 1995-1997. Tax revenue collection showed a spectacular increase of 50.2% while the average product of the economy increased only 11.0%.

The table below compares average levels of the GDP and TCGS revenues for each sector.

Table 10: Average Level: Sectored GDP and TCGS Revenues
Values adjusted by IGP-DI to December/97 – Billions of R\$ (Reais)

Period*	Agriculture & Cattle				Industry				Services**			
	Average GDP	Growth	TCGS	Growth	Average GDP	Growth	TCGS	Growth	Average GDP	Growth	TCGS	Growth
	R\$ billion	(%)		(%)	R\$ billion	(%)		(%)	R\$ billion	(%)		(%)
1991-1993	10.3		0.2		79.9		8.9		104.0		6.3	
1995-1997	11.2	9.1	0.1	(11.8)	88.5	10.8	11.8	32.7	148.8	43.0	10.9	72.1
Sources: Secretariat of Finance - S. Paulo and Seade Foundation												
* For Average GDP, there's a discrepancy of a year because of the methodology for calculation of TCGS												
** Intermediation Finance Services not included, because this segment of Services does not produces TCGS revenues												

Except for Agriculture and Cattle, each TCGS sectored revenues increased more than the sectored product during growth period. But the Services Sector showed greater increase

As shown before, the relative position of Services product in terms of Sao Paulo's GDP have progressively increased since the last decade. And it increased much more than Industry Sector during the 1990s, i.e. 17.1% for Services and 1.5% for Industry.

This huge performance cannot be explained by arguments focused on the "Revolution of Services". It hasn't happened yet. The structure of GDP didn't change to a point that one could call it a revolution and, more importantly, great investments in this sector occurred during the 1960s and the 1970s commanded by industrial investments. That means, the dynamic of Services and changes of its technical structure were set by Industry. Important investments - especially in the segment of infrastructure, such as transportation, telecommunication and distribution of energy - were made to support industrial investments following the governmental policy of the II PND. Even services such as education, personal services, urban transportation and storage, followed urbanization process commanded by the industrial sector. The great changes in the structure of the economy of Sao Paulo, with the rise of Services to a position of almost half of the product of the economy, occurred during the 1960s and the 1970s. During the 1980 – the "lost decade" – nothing important happened in terms of structural changes. During the 1990s, Services grew faster than Industry, but no important structural changes occurred yet. The long persistent increasing of Services, performed even better than Industry during the recession, is a tendency that is happening in the industrialized world and it might become a real revolution. A real revolution is much bigger. It is associated with the changing of the command process: the dynamic of Services turns to determine the dynamic of Industry, that means, industrial investments occur to support investments in Services – a new logic that the richest industrialized countries are beginning to deal with. This will be discussed later. For now it is important to inquire how TCGS highly increased during the 1990s. The table below shows TCGS by Services segments.

Table 11: TCGS Revenues on Services Segments

Values adjusted by IGP-DI to December/97 – Billions of R\$ (Reais)

Segment	1990	1993	1995	1997
Whole Sales	2.2	1.2	2.3	2.4

Distribution of Fuel	1.0	1.8	2.3	2.9
Transportation Services	0.5	0.2	0.2	0.2
Distribution of Electricity Energy	1.1	1.0	1.5	1.8
Communication Services	0.5	0.7	1.1	1.5
Distribution of Automobiles	0.0	0.4	0.7	0.5
Retail Sales	1.4	0.6	1.6	1.8
Other	0.2	0.1	0.4	0.2
Total	6.8	6.0	10.1	11.4

Source: Seade Foundation

Statistics of Services do not show GDP data by all segments. This is found only for TCGS revenues. A methodological limit is imposed: it is impossible to relate sectored TCGS revenues to each segment of the sector. The next discussion about services must be done with a higher level of abstracting and, at the same time, logically coherent.

From the table above we can conclude that TCGS revenues on some segments did follow the dynamics of the economy as a whole and some did not.

Group 01 - segments that followed the dynamics:

- Whole Sales
- Distribution of Electricity Energy
- Retail Sales

Group 02 - segments that did not followed the dynamics:

- Distribution of Fuel
- Transportation Services
- Communication Services
- Distribution of Automobiles

Group 01:

Classical segments in Services: Whole and Retail Sales. These two segments were also better inspected and at the same time the industrial production responds better to market demand nowadays. During the 1990s, information technology investments occurred in the two sectors, integrating their information systems among the whole net – Industry-Whole Sales-Retail Sales. Just-in-time programs also could be set. Today, big net retail sales enterprises are more integrated with oligopoly industries and big whole sales enterprises in Sao Paulo. Those industries are also integrated with small retail sales firms. So, those segments, producing network reaction, capture variations on demand and income automatically. TCGS revenues in this case, associated with better methods of inspecting, strongly followed the tendency of GDP. It is important to observe that those information technology investments are setting a new paradigm in business and economics, and composes the first steps of the "Revolution in Services".

The other segment of this group, Distribution of Electricity Energy is strongly and automatically related to industrial demand. So the same conclusions of the segments above can be said for this segment in terms of TCGS revenues performance.

Group 2:

Except for Transportation Services, TCGS revenues on the other segments steadily grew, even during the recession period.

The Distribution of Fuel is a segment hugely composed of big oligopoly firms. Taxes on those services are better collected from distribution oligopoly firms than from retail firms, and are much more atomized – for instance, gas station firms. For that reason a mechanism called "Tax Substitution" was set by a decree in 1996, collecting TCGS due over the whole operation from distribution oligopoly firms at the beginning of the chain. This mechanism was very effective in lowering tax evasion in this segment. Also, a special inspecting operation called "Fuel Inspecting Operation" was set with great results.

Communication Services are a Monopoly segment. Persistent increase in TCGS revenues in this segment is explained by three reasons. At first, there was a concentration and diversifying of services in Sao Paulo City. More services, more telecommunication services are required. Second, from 1995 high technology industries began to invest in the state. This kind of industry requires a greater demand for telecommunication services. At least, the state Telephone Company (TELESP) sold a great number of telephone lines during the 1990s, attending a great-repressed demand very well known for those who live in Sao Paulo.

TCGS collection from Services performance has been more related to a better tax collection administration of tax collecting. Growth of the sector by itself cannot explain TCGS revenue performance, neither is it explained by the "Revolution in Services", although high tech investments are being realized in Sao Paulo. Better methods of tax collecting considered the structure of strategic markets and recognized the characteristics of their operations. This helped establish new instruments for collecting taxes. This is behind the greater level of TCGS revenues during growth period in the 1990s.

A brief conclusion of this part may be set.

During the 1990s, the structure of the economy of the state of Sao Paulo didn't change and also didn't grow significantly. But revenues collected from its value-added tax changed a lot both structurally and quantitatively. The state lost collection from Agriculture and Cattle – and that meant almost nothing – levels were maintained in Industry and much was gained in Services.

Losses in Agriculture and Cattle were much more compensated by gains in Services. In industrialized economies revenues on value-added taxes in Agriculture and Cattle are usually very low, because its value added is usually low in comparison with the other two sectors. It is not a strategic sector to promote tax collection.

In terms of tax collection, "Kandir Law" impacted negatively Agriculture and Cattle and Industry. Considering that the first sector has a low capacity to produce taxes on value added, the strategy to minimize the effects of this federal law and, at the same time, improve tax collection to a higher level, have improved methods for inspecting and controlling taxes over Industry and Services. For the last one, new instruments for collecting taxes on value added from big oligopoly firms has been developed and implemented.

We may resume all combined factors that promoted changes in tax collections:

- a. "Kandir Law" impacted tax collections negatively;
- b. better inspection and control methods tended to minimize the negative effects of "Kandir Law" specially in Industry;
- c. increasing demand for services, due to new industrial investments, increased tax collections and
- d. better methods for collecting taxes on oligopoly segments of Services increased tax collection specially on those segments divided into a big offering firm and a great number of small trade firms.

PART TWO

The Perspectives of the Economy of the State of Sao Paulo

and

the Collection of Value Added Taxes

This part of the paper will discuss the perspectives of the economy and how they are related to collection of value-added taxes. This will not be an exercise in futurology, but perspectives. That means, what are the possibilities for the future from the condition set nowadays and the impacts of programmed private investments.

This will be more a qualitative discussion than quantitative, given the natural difficulties in finding data for the future.

The Perspective of Tax Reform

A Tax Reform is being discussed in Brazil and a new tax system will be implemented in the next two years. This issue is not the subject of this paper. The important thing to consider is that Brazil will have one, instead of three, value-added tax. Tax on Industrialized Products, collected by the central government; Tax on Circulation of Goods and Services; collected by states and Tax on Services of Any Nature, collected by municipalities will be aggregated into one tax, known as IVA. The same systematic method of calculating TCGS and Tax on Industrialized Products – credits for inputs and debits for outputs – will be preserved. States will be responsible for inspecting and collecting this tax, but brackets and benefits will be fixed by the Senate, in order to avoid the so called "tax war". To compensate tax losses for municipalities and for the central government, part of revenues collected by states will be refunded to them.

The advantage of this new value added tax is reducing costs for both, government and taxpayers, putting under the same system all fragmented value-added taxes. It improves the capacity of collection by one entity and preserves the principle of Federalism, in which each state must preserve its tax autonomy.

The New Context of the National Economy and the Role of Sao Paulo

Although social indicators in Brazil are very low, its economy is big and it is an industrialized country. Its industrial productive structure was consolidated during the 1970s with a great effort of public investments in basic infrastructure, in capital good industries and in basic raw materials industries. As mentioned before, this policy was conducted under II PND and it also established a strategy to distribute industrial investments all over the country. Despite this policy, industrial production in Sao Paulo increased a lot and its industrial structure had a fast modernization and diversification, attending greater national demands and promoting exports. In this context, Sao Paulo also completed its productive structure as an industrialized economy.

Nowadays, Sao Paulo is still the main industrialized state in Brazil and its industrial park keeps a high rate of technical interdependency. Technical and structural basis installed in other states of the country is still insufficient to consolidate an industrial decentralizing process from Sao Paulo to the rest of the country. Actually, new industrialized areas in Minas Gerais and Parana are highly integrated with the economy of the state.

To understand the new context in which Brazil, and Sao Paulo especially, will be inserted during the next decade, a brief view of the main changes that is going on around de world's economy will be presented.

As seen before, Brazil completed its technical production basis and was inserted in the "Second Industrial Revolution" very late during the second half of the 20th century. The "Third Industrial Revolution" is nowadays occurring in all industrialized economies in the world. They are transforming into service economies. The main technical characteristics of this revolution are:

- a. a great substitution of non qualified labor by high qualified labor;
- b. high quality products;
- c. intensive use of information systems, automatics, knowledge and abstractive capacity on production processes;
- d. saving energy on production;
- e. substitution of traditional raw materials by lighter ones, more expensive and with greater scientific and technological basis.

Other characteristics of this revolution are:

- Strategic decisions about production, commerce, technology transfer and financial matters are transferred from public to private sector.
- Public sector becomes much more concerned with policies of incentives and regulation.
- Countries are promoting welfare by opening their markets and integrating their economies in blocks.
- Finance flows becomes much more flexible and there is a tremendous concentration of financial resources in big oligopoly industries – and they are the real active agents of this revolution.

Brazil is still a closed economy – except for Mercosur. There aren't development policies for the long run. Its competitiveness for export is still very low. Although many high technologies industries are investing in the southeast of the country, there is still a considerable obsolete portion of the industrial sector needing lots of financial resources to modernize process, machinery and equipment. To modernize the whole economy, it is also necessary for more imports of capital goods and intermediate goods, although much of them are being produced inside the country. To engage into the "Third Industrial Revolution" there is a lot to do in terms of education. New processes require workers with higher knowledge and a higher capacity for abstraction. All this doesn't mean that the country has lost the opportunity. It means that it won't be easy. The insertion of Brazil into this revolution won't be fast and automatic as the neo-liberal advocates intend. Single measures, as "liberalization of the economy" or "sell public enterprises" aren't enough without a strategic national project.

In the "Third Industrial Revolution", the services sector is the most strategic one. It is the greatest employer sector. New technologies are destroying jobs in the industrial sector and creating others in the services sector.

In this context, Sao Paulo has an important role and advantage to develop conditions for the insertion of its economy and even Brazil's economy into the "Third Industrial Revolution". It has a great net of good schools. Its universities are classified as the best in Latin America and there are important centers of survey in high technology, biotechnology and telecommunication technology. It has integrated and adequate infrastructure and has a higher qualified workers. It has the characteristics of a developed country and these advantages are attracting investment intensive in technology, while traditional segments of industry – intensive in labor – are moving to northeast, where there is a lower cost for labor.

The Perspectives of the Economy of the State of Sao Paulo

Despite the tendency for recession during the next year – 1999 – for next the future, the perspective is a higher level of investments.

The last government had adjusted public accounts and since then, Governor Mario Covas has been reelected. The Treasury of the State has no deficit. Government cut expenses, improved tax collection by administrative measures and renegotiated debts. Many public enterprises were sold and the state bank Banespa was federalized and it will be sold to the private sector. Public sector has adjusted. It has also prepared a concession plan for private sector investments and exploration of infrastructure business. The main concessions are:

- a. exploration of cellular telephone services: US\$ 0.5 billion;
- b. construction of "rodoanel" – a road around the Capital area of the state: US\$ 2.2 billion;
- c. reform of railroads: US\$ 13.0 billion;
- d. ports and water system: US\$ 0.7 billion.

Those are investments in infrastructure. They are significant but not enough to promote the modernization of the whole infrastructure. They do create multiples effects on industrial production and support for private sector investments.

Sectors of the economy more contemplated with investments, are those related to infrastructure and the emergent ones, such as computer, telecommunication equipment and automobile. Traditional sectors, such as shoes industry, textiles industry and clothing may lose their position.

Another important phenomenon, as mentioned before, is the flow of new industries for the interior of the state. Sao Paulo City is becoming a service economy area. There are also two important industrial areas that are becoming high technology centers: the area of Campinas – with factories of computers and telecommunication equipment, and Sao Jose dos Campos

(Paraíba River Valley) – with factories of air and space equipment, airplanes and other such as paper, beverages and automobile.

The private sector has programmed investments of US\$ 73 billion from 1998 to 2003. On an annual basis this represents almost 6% of current GDP of the state (average). It is not very much. During the 1970s, Gross Formation of Fix Capital Rate represented 20% of GDP in average. The table below shows the distribution of those investments by sectors:

**Table 11: Private Investments by Sectors
1998 to 2003**

SECTORS	Investments (US\$ million)	Percentage of Total Investments (%)
Agriculture and Cattle	96.9	0.1
Industry		
Non Durable Consumption Goods	3,082.0	4.2
Intermediate Goods	18,466.2	25.3
Capital and Durable Consumption Goods	13,953.7	19.1
Others Industries	14,147.4	19.4
Subtotal	49,649.3	67.9
Services		
Infrastructure	19,174.6	26.2
Others Services	4,184.3	5.7
Subtotal	23,358.9	32.0
TOTAL	73,105.1	100.0

Sources: Seade Foundation and Secretariat of Science, Technology and Economic Development of the State of Sao Paulo

It seems to be a contradiction the fact that Industry, which corresponds to a third of the product is receiving two third of the investments, while Services will attract the other third. It is not. By segments, Infrastructure Services and Intermediate Goods Industry are attracting more than half of total investments. Almost 100% of investments in Infrastructure Services refer to the segments of Transportation, Storage, Information Technology and Telecommunication. In Industry as a whole, the traditional segment of Non Durable Consumption Goods will attract very little, just 4% of the total and segments intensive in capital and technology will receive more, almost 44%.

This data reflects a clear tendency for the economy of the state: the emergence of high technology segments related to industry and infrastructure services. GDP growth will be commanded by sectors that are investing from now until the beginning of 2000. Promising segments are Intermediate Goods, Capital and Durable Consumption Goods and Infrastructure Services. Others Industries will also be contemplated with a great amount of investments. They are mainly

industries related to input for public services. There is a technical and qualitative changing. And that is the point. Nature of this new process is quite different from consolidation of "The Second Industrial Revolution" during the 1970's. At that time, industrial development brought a structuring cycle for Services. This cycle was completed at the end of the decade. From now on, a new cycle begin and this point will be presented next.

The Dynamics of Industrial Development and the Building of Services

This point is discussed in order to help undestant taxation on value added or on consumption in the context of the new industrial (or services) paradigm.

A real "Revolution in Services" would change the logic process of investments. Investments in Services Sector would determine investments in Industry sector. During the classical industrial era, Services Sector was built as a consequence of industrial development. Many segments in Services were built to support it.

A survey taken by Campinas University and Secretariat of Planning of the State of Sao Paulo, describes how industrial development in Sao Paulo brought important dynamics of Services. During the 1960's and the 1970's, transformation on the industrial structure of the state of Sao Paulo led by investments on new industrial segments (capital and basis industry) increased demand for services. Mechanizing agricultural cultures, transforming activities of agriculture into agri-industrial segments and inserting new agricultural techniques, increased demand for services such as finance intermediation, storage and engineering. Industrial investments in capital and durable consumption industries and also in intermediate goods industry (hard industries) required an enormous quantity and variety of services. Services such as engineering, consult, planning, marketing, intermediation finance services, security, industrial cleaning, industrial maintenance, transportation and distribution, whole sales, retail sales and distribution of electric energy were developed to attend industrial development. It also brought an accelerated process of urbanization, which required demand for personal services, urban transportation, education, health and urban security. All investments in infrastructure were also made to support industrial production in a big scale. For instance, high scale of investments in production and distribution of electrical energy. Another example: industrial outflow production requires roads-railroads-ports-airports net. All this were enlarged and built in Sao Paulo during the 1960s and the 1970s.

Industrial structural changes during the 1970s brought a cycle of growth, diversification and modernization for Services Sector. This sector was built to support and complement industrial production.

During the 1980's, the economy of the state (and Brazil) was in recession. The Services Sector lost its dynamic. During this decade its position on GDP grew because of the bad performance of the industrial sector. It didn't occur due to accelerated incorporation of high technology, nor to changes in the industrial structure.

During the 1990's a new cycle for services begun. At this time it was determined by investments in modern segments of industry and infrastructure. These industries requires a high technology Services such as telecommunication, scientific survey, fine chemistry, information technology, industrial automation and biotechnology. It also requires investments in education mainly.

International trade and liberalization of the economy is a trend in Sao Paulo (and Brazil as a whole). It impacts Services both by improving and by diversifying commercial enterprises, not only those dedicated to this segment, but also others dedicated to distribution. Another important impact of liberalizing the economy, are the following:

- a. it offers incentives to exports for growth, which directly provides incentives for the growth of industry and services (and more taxes revenues);
- b. it brings new technologies for the productive structure, creating incentives to grow competitiveness.

The Perspectives for Taxation of Value Added and Consumption

Taxation on value added and tax on consumption for the future should consider growth in Services. Even nowadays, in Sao Paulo, TCGS represents 8% of Services taxable basis, while in Industry this percentage is 13%. Total taxation on Services includes tax collected by municipalities. With tax reform it will be included in IVA, but states will have to refund part of IVA collection to municipalities. That means, taxation on value-added for service won't increase significantly.

A new form for collecting taxes on value-added should be introduced.

The new industrial paradigm will introduce a higher taxation based on services rather than the one existing nowadays. Structuring of this new paradigm requires a diversified apparatus and a technological complex of Services. That means, a greater polarity of taxpayers, which will require new programs and instruments for inspection.

A new technological level for controlling collection of tax revenues will have to be set. Educational programs to create citizen conscientiousness will be required more than the ostensive presence of tax inspectors. Taxation on consumption of services should privilege great concentrated segments such as commercial aviation, big magazines and big supermarkets.

On the other hand, value-added taxes on commodities will be much more complex. Industrial segments with a great participation on TCGS collection – that means, enterprises that supports tax collection – will modernize their productive and distribution technical basis, work with a greater rotation of commodities and a greater integration over the whole net production-distribution-whole sales-retail sales. This integration is made by complex information systems. All government current apparatus to inspect taxes turned obsolete. It is impossible to inspect and control big integrated nets of production and sales with the current instruments.

While the modernization of production-distribution process moves forward, taxation on consumption turns more plausible. With the current instruments for inspecting and controlling taxes, it is quite impossible to establish taxes on consumption. The great polarity of retail sales firms makes more effective the possibilities of tax evasion at retail trade. The incorporation of new technologies into Tax Administration permits automatic monitoring of the whole net production-sales, by accessing their complex information systems turning more effective inspection of retail stores.

CONCLUSION

Taxation on value added has been considered ideal for a federation system. It assumes different forms according to degree of development, modernism and conscientiousness of citizens.

The tax system in Brazil has three species of value-added tax. It had worked well during the first wave of industrial development after the 1960s, which ended during the final of the 1970's. Now it is completely obsolete and the new cycle of development based on process intensive in high technology and knowledge systems permits the integration of this tax into one. It may assume a unique value-added tax collected by a credit-debit system or by the other hand, another collected on consumption. It may also tax a much enlarged basis production of services, a sector that responds nowadays for almost half of GDP and promises to be more diversified, bigger and modern.

Sao Paulo is assuming the characteristics of a modern developed economy. After the stagnation of the 1980's, a new growth cycle started during the 1990's and promises to continue during the first years of the 2000's. This new cycle is bringing investments to dynamic industrial and services sectors. There will be a large basis for taxation on value added on the circulation of commodities and services. The Tax Administration had gotten a higher level of tax collection during the 1990's by establishing efficient instruments to inspect, collect and control taxes. However, nowadays it is essential for the Tax Administration to engage in the new technological paradigm and invest in technology and knowledge processes. Otherwise the state won't be able to control rampant tax evasion.

Growth, diversification and modernization of the economy are not sufficient to maintain an adequate level of value added taxes revenues. It also requires the modernization of the government obsolete instruments for inspect and collect taxes. Sao Paulo has already begun this process.

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