

Highlights of Chapter 9 – ST&I and the Information & Communications Technology Sector in São Paulo State

- The Brazilian ICT sector's net operating revenue exceeded R\$173.7 billion in 2005.
- Companies based in São Paulo State accounted for R\$69.4 billion, or about 40% of the total.
- The most important activities of the ICT industry in São Paulo State include hardware and software production and related services, in which the state accounts for roughly 50% of Brazilian output.
- IT activities have this importance in São Paulo State owing to a combination of two factors: proximity to the corporate market, especially for custom software and other IT services; and a supply of labour with the qualifications required for these activities.

Brazil & São Paulo State: Breakdown of net operating revenue from ICT-related goods and services by segment or CNAE class, 2005

| Segment/CNAE class | Net operating revenue | | |
|------------------------------|-------------------------|-------------------------------------|----------------|
| | Brazil (R\$ million) | São Paulo State (R\$ million) | SP / BR (%) |
| Hardware | 16,307 | 8,346 | 51.2 |
| Telecommunications equipment | 40,332 | 15,303 | 37.9 |
| Telecommunications services | 86,589 | 30,790 | 35.6 |
| Software & IT services | 30,557 | 14,980 | 49.0 |
| TOTAL ICT | 173,785 | 69,418 | 39.9 |

Source: IBGE (PAS, PIA 2005). CNAE is the Portuguese-language acronym for National Classification of Economic Activities.

- A similar pattern can be seen in job creation. São Paulo State accounted for 40% of formal jobs in ICT firms nationwide in 2005. Hardware manufacturing was the largest source of such jobs, with a share of 56%.
- It is also worth noting the importance of telecom services, software development and IT services in creating ICT-related jobs: these services accounted for 64% of the workforce in ICT activities in São Paulo State.
- With regard to international trade, ICT exports and imports by São Paulo State fell sharply in the period 2000-03. This drop was followed by a recovery in 2004-06, with ICT exports and imports both rising again.
- Telephone apparatus and equipment are the main product groups exported by São Paulo State's ICT industry. The main ICT-related imports are electronic parts and components. The close links between the types of goods imported and exported are due to the presence of multinationals, which import components, assemble equipment locally and export part of their output to global markets.
- Despite strong growth in its ICT exports and imports, São Paulo State's share in ICT-related trade has fallen compared with those of other Brazilian states. Its share of Brazilian exports fell from 73.2% to 58.2% between 2000 and 2006 (after falling to 43.7% in 2005). Its share of imports fell less (from 57.8% to 52.3% in the same period).

- São Paulo State accounts for a significant proportion of secondary ICT activities, i.e. in-house development structures, especially for software.

São Paulo State: Share of Brazil's ICT trade balance, exports and imports, 2000-06



Source: SECEX/MIDC (Department of Foreign Trade, Ministry of Development, Industry & Trade).

- In 2005, 29% of São Paulo State's population over 10 years old had used the internet at least once in a three-month reference period.

Brazil & São Paulo State: Value of secondary ICT activities by subgroup, 2005

| Subgroup | Value of secondary ICT activities (R\$ billion) | | |
|---|--|--------------------|----------------|
| | Brazil | São Paulo State | SP / BR (%) |
| Workers in software industry | 35.3 | 16.4 | 46.5 |
| Workers in software services | 11.5 | 4.1 | 35.7 |
| Workers in activities indirectly relating to software | 16.6 | 10.1 | 60.8 |

Source: MTE (RAIS 2005), IBGE (PAS 2005).

- In the same year, Brazil had 31 million internet users, 31.7% of whom (9.8 million) lived in São Paulo State. The proportion of the state's population with internet access exceeded the national average (29% v. 21%).
- According to PINTEC 2005, IBGE's survey of technological innovation in industry, innovation expenditure by the ICT industry in São Paulo State corresponded to 6% of net sales (with in-house R&D accounting for 1.6%), compared with a national average of 3.0% (0.6% for R&D).
- Brazil's ICT industry spent 4.2% of net sales on innovation and 1% on R&D, compared with overall averages of 3.0% and 0.6% respectively, according to PINTEC 2005.
- Thus the ICT industry in São Paulo State spent 43% more than the Brazilian ICT industry on innovation as a proportion of net sales.