



The Relationship between Insurance and Entrepreneurship in Brazil – Concepts and Basic Data*†

Pietro Masci

pietro.masci@tesoro.it

Andre Medici

amedici@worldbank.org

Bernardo Weaver Barros

bweaver@worldbank.org

The authors work at the Inter-American Development Bank: Pietro Masci is Chief, Andre Medici is a Senior Specialist in Social Development, and Bernardo Weaver is a consultant. Following the guidance of Pietro Masci and Andre Medici, Bernardo Weaver collected and assembled the data and prepared various drafts of the present document.

Summary

This document presents data related to insurance and entrepreneurship in the states of Brazil over a period of 10 years. The data is accompanied by brief discussions of terms' definitions. They range from the definition of Startup and Small and Medium-Sized Enterprises (SMEs), to the classification of insurance contracts by types of risks. The data collected includes volume of premium by type of policy, insurance regulators' and market players' estimates of the share of premia paid by SMEs. The document includes data with control variables (education, infrastructure, etc.) and relevant legislation to help future data interpretation. Most of the information has never been presented before in such detail. The document follows the hypothesis developed on a previous unpublished manuscript "Insurance and Entrepreneurship in Latin America and the Caribbean: a Spatial Analysis" by Pietro Masci.

* The authors thank SUSEP (Superintendencia de Seguros Privados) for the support provided, and especially Mr. Olavo Salles, Ricardo Nohra Simoes and Anibal de Vasconcellos. The authors also thank Mr. Marcelo Schaimberg of "Brokers" brokerage firm, and Luiz Felipe Conde, partner at Pellon & Associates Law Firm, for the estimates provided. The authors thank Ms. Andrea Lemgruber, from the IMF, for her valuable insights on tax evasion and SMEs in Brazil. The authors are also grateful to the tailor made data that Mr. Raimundo Eloi de Carvalho, general coordinator and head of tax policy at the Internal Revenue Services, Ministry of Finance of Brazil, has provided. Finally, the authors would like to thank Martha Chavez, from the IADB.

† This working paper is being published with the sole objective of contributing to the debate on a topic of importance to the region, and to elicit comments and suggestions from interested parties. This paper has not gone through the Department's peer review process or undergone consideration by SCL Management. As such, it does not reflect the official position of the Inter-American Development Bank.

Key Words

insurance; entrepreneurship; insurance premium in Brazil; small and medium-sized enterprises.

Contents

1. Introduction. 2. Insurance penetration in selected countries and the 27 States of Brazil. 3. Insurance premium data in Brazil. 3.1. Appendix – Insurance premium data in US\$. 4. Small and medium-sized enterprises and startups. 4.1. Appendix – Small and medium-sized enterprises data, in US\$. 5. Control variables to include in the econometric analysis. 5.1. Appendix – Control variables in US\$. 6. Instrumental variables. 7. Conclusion. 8. Appendices. 9. Bibliographical references.

Sinopsis

La relación entre los seguros y el emprendedurismo en Brasil – conceptos y datos básicos^{*†}

Pietro Masci

pietro.masci@tesoro.it

Andre Medici

amedici@worldbank.org

Bernardo Weaver Barros

bweaver@worldbank.org

Los autores trabajan en el Banco Interamericano de Desarrollo: Pietro Masci es el Jefe, André Medici es Especialista Senior en Desarrollo Social, y Bernardo Weaver es un consultor. Siguiendo la orientación de Pietro Masci y André Medici, Bernardo Weaver ha recogido y reunido los datos y ha preparado diversos borradores del presente documento.

Resumen

Este documento presenta los datos relativos a los seguros y el emprendedurismo en los estados de Brasil durante un período de 10 años. Los datos están acompañados de un breve debate sobre definiciones de términos. Ellos van desde la definición de Arranque y Empresas Pequeñas y Medianas (EPMs), a la clasificación de los contratos de seguros por tipo de riesgos. Los datos recogidos incluyen volumen de primas por tipo de póliza, reguladores de seguros y estimaciones de los agentes del mercado de la porción de las primas pagadas por las EPMs. El documento incluye los datos con variables de control (educación, infraestructura, etc.) y la legislación pertinente para ayudar a la futura interpretación de los datos. La mayoría de la información nunca se ha presentado antes con tantos detalles. El documento sigue la hipótesis desarrollada en un manuscrito inédito anterior "Seguros y el emprendedurismo en América Latina y en Caribe: un análisis espacial", de Pietro Masci.

Palabras-Clave

seguro; emprendedurismo; primas de seguro en Brasil; empresas pequeñas y medianas.

* Los autores agradecen a la SUSEP (Superintendencia de Seguros Privados) por el apoyo prestado, y en especial al Sr. Olavo Salles, Ricardo Nohra Simões y Anibal de Vasconcellos. Los autores también agradecen al Sr. Marcelo Schaimberg de "Brokers" firma de corretaje, y Luiz Felipe Conde, socio del estudio jurídico Pellon & Associados por las estimaciones suministradas. Los autores agradecen a la Sra. Andrea Lemgruber, del FMI, por su valiosa información sobre evasión de impuestos y sobre las EPMs en Brasil. Los autores también agradecen a los datos hechos a la medida, que el Sr. Raimundo Eloi de Carvalho, coordinador general y jefe de la política fiscal del Servicio de Rentas Internas, del Ministerio de Hacienda de Brasil, ha proporcionado. Por último, los autores desean agradecer a Martha Chávez, de la IADB.

† Este documento se publica con el único objetivo de contribuir al debate sobre un tema de importancia para la región, y para obtener comentarios y sugerencias de las partes interesadas. Este documento no ha sido repasado a los pares del Departamento para el proceso de revisión o sometido a la consideración de la Administración SCL. Como tal, no refleja la posición oficial del Banco Interamericano de Desarrollo.

Sumario

1. Introducción. 2. Penetración del seguro en países seleccionados y en los 27 Estados de Brasil. 3. Datos de primas de seguro en Brasil. 3.1. Apéndice – datos de primas de seguro en dólares de los EE.UU. 4. Las pequeñas y medianas empresas y arranques. 4.1. Apéndice – Datos de pequeñas y medianas empresas, en dólares de los EE.UU. 5. Variables de control para incluir en el análisis econométrico. 5.1. Apéndice – las variables de control en dólares de los EE.UU. 6. Variables instrumentales. 7. Conclusión. 8. Apéndices. 9. Referencias.

1. Introduction

The relationship between entrepreneurship and insurance is very complex. To develop a testable theory of the relationship, one has to start from these basic propositions:

- a. Insurance and Economic Growth have mostly a direct relationship in the sense that an increased level of activity prompts the demand for more insurance. However, preexistent insurance institutions and market receptivity of new needs would favor and possibly prompt greater economic activity. Yet, the direction of causality is not fully understood. Life and possibly business insurance play a key role. Social insurance of the type of health insurance may reduce the positive impact of business and life insurance.
- b. Insurance and Financial Markets operate together to the extent that the former not only complements the services of the latter, but it is also essential to its development. Insurers not only guarantee risks directly related to financial sector activities, but also invest most of their reserves in fixed income and equity markets.
- c. Entrepreneurship and Economic Growth are closely related, especially if one examines the recent history of the US economy, when the structure of firms became more dynamic and small companies replaced private bureaucracies. The results were high levels of innovation, and they were reflected in more technology and higher productivity growth.
- d. Effective and Responsive Financial and Insurance Markets are essential to promote economic activity and assure that the entrepreneur has the right incentives to undertake his/her initiatives.

Based on these propositions, we can look at the relationship between Insurance and Entrepreneurship. From an intuitive perspective, entrepreneurs may need to buy coverage to protect against risk and unforeseeable losses. This implies that the level of uncertainty is reduced and transformed into risk that insurance policies may cover. Those entrepreneurs with access to insurance are more likely to continue in business than entrepreneurs that do not buy insurance coverage. Nevertheless, it is very difficult to prove any strong association and/or causality between insurance and entrepreneurship.

In order to carry out an empirical analysis of the relationship between Insurance and Entrepreneurship, we produced a database for Brazil. A similar set of data for the US could be developed in the near future.

Data related to the worldwide situation of the industry and how Brazilian states rank in terms of insurance penetration among selected countries. Insurance penetration is a ratio of total insurance premiums to GDP, and it can be regarded as measurement of the culture and knowledge of insurance. While some Brazilian states do well and rank among European nations, others in the arid northeast and the Amazon rank behind Africa http://siteresources.worldbank.org/INTRES/Resources/FinStructure_60_05_final.xls.

Data used to measure the knowledge and availability of the insurance industry in Brazil. Data are available on total volume of premiums in each Brazilian state for the years 1999 to 2006. It defines 99 standardized contracts in Brazil. The information includes contracts classified into particular types of risk. Data on premiums paid on each contract are combined by type of risk covered. Data available are volume of premium paid, by state, and by type of risk for a period 1999-2006. Data on premiums paid on the five most representative contracts in terms of premiums volume, are also available¹. Estimates of the share of total premiums that small and medium size enterprises i.e., SMEs paid insurers. Data is from SUSEP, the insurance regulator and supervisor in Brazil. Source: http://www.susep.gov.br/menumercado/ses/menu_premios_desegurosporuframo.asp?id=5.

Data used to measure entrepreneurship. Data on startups, i.e., number of start-up companies, limited liability companies, (LLCs) and SMEs (i.e., number of small and medium enterprises by state, for the period 1998-2003) are available and represent the common measures of entrepreneurship (including their performance in Brazil during the last decade). SME revenues, i.e., volume of revenue of small and medium enterprises, in various years, according to the Internal Revenue Service (IRS) of the Ministry of Finance of Brazil; revenues as a share of GDP in Brazil. All these data are available by state in Brazil. Source of Data: <http://www.dnrc.gov.br/>.

Control variables range from GDP to population by state, including infrastructure indicators, education, levels of financial intermediation, the number, and quality of housing units and the proportion of people with private health insurance coverage. These control variables are important to help ensure that the relationship between insurance and entrepreneurship is not affected by model misspecification. Source of Data: <http://www.ipeadata.gov.br/ipeaweb.dll/ipeadata?85794828>.

Instrumental variables. This chapter includes legislation that influences insurance markets. It includes policy changes affecting branches of the insurance industry in the last ten years. For instance, the health insurance industry was affected in 2000 by the creation of an autonomous regulatory body in a market that, until then, lacked regulatory enforcement. Also, the agricultural insurance industry was affected in 2001 by legislation that enhanced financing mechanisms to the agricultural sector. The life insurance industry was affected twice, first in 2001 with the enactment of regulations that created more market alternatives, and again in 2004 with regulations that affected taxation criteria, benefiting the industry with tax breaks for consumers/investors. All these policy changes that have affected the market can be used as "instruments" to assess if there is a correlation, or even causality, between some branches of the insurance industry and entrepreneurship. Source of Data: <http://www.susep.gov.br/menubiblioteca/biblioteca.asp>.

¹ This database has data on 27 states, over 4 years, on 99 contracts. It also has two extra years for the ten largest states, and the total national premiums per type of contract. Thus, it lists over 12,771 cells.

2. Insurance penetration in selected countries and the 27 States of Brazil

This Chapter compares insurance penetration in various countries and in the Brazilian states, for the period 2000 to 2004. It presents two tables. Table 1a compares average insurance penetration and average per capita GDP for several countries in the world and all Brazilian states. Table 1b shows GDP data by country in US\$ (nominal value, according to IMF data). The data in table 1a are defined as follow:

1. Definition of variables: This table compares average per capita GDP and insurance premium penetration in 68 countries and all 27 Brazilian states for the period 2000 to 2004.
 - 1.1. Insurance penetration is defined as the premium volume share of a country's GDP (multiplied by 1,000).
 - 1.2. Per capita GDP is per capita gross domestic product at current prices (in U.S. dollars) – It is computed as total GDP in US\$ divided by total population. Source: World Bank website.
2. Source of information – countries: The source of the specific data used on this document is a World Bank dataset on financial markets, which² takes³ insurance premium data for the countries from various issues of Swiss Re's Sigma Reports.⁴ This dataset takes data on GDP from the electronic version of World Development Indicators.⁵
 - 2.1. Source of information – Brazilian states: The data on insurance premiums for the Brazilian states come from SUSEP. Data on per capita GDP are from IBGE, available at www.ibge.gov.br.
3. Availability of data: On the World Bank dataset, data⁶ are available from 1960 onward. Data on GDP for these countries are available from the World Bank website starting in 1960 as well.⁷ For the Brazilian states, GDP by state are available from (IPEA) for 2000 to 2004.
4. Method used to collect information: the World Bank estimates data based on information from each country's statistical office. Swiss Re calculates premium data from information provided by national regulators.

² http://siteresources.worldbank.org/INTRES/Resources/FinStructure_60_05_final.xls.

³ The report is frequently updated.

⁴ Swiss Re converts local currencies into dollars as period average, "rf," which is defined on the IMF's International Financial Statistics.

⁵ Please see the website link at: <http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0.contentMDK:21298138~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html>.

⁶ Data on insurance penetration are originally divided into life and non-life.

⁷ Beck, Thorsten Asli Demirgüç-Kunt and Ross Levine, (2000), "A New Database on Financial Development and Structure," World Bank Economic Review 14, 597-605. See link at footnote 2.

5. Frequency of the information: These data are collected on a yearly basis.

Due to the geographic concentration of economic development in Brazil, few wealthy states have high levels of insurance penetration, even when compared to some European and most Latin American countries. Conversely, the insurance industry in many other Brazilian states is less developed than that of certain Islamic nations, where Islamic law forbids⁸ some lines of insurance. For the most part, Brazilian states compare favorably with small Latin American countries, but trail Argentina and Chile in terms of insurance penetration.

Table 1b gives selected countries' GDP based on IMF data. The data for this table are defined as in table 1a.

⁸ Islamic law forbids life insurance as it sees that the beneficiary might "profit" from someone else's death. The name of the product, which partially substitutes life insurance, is Kataful.

Table 1a – Average Insurance Penetration and Per Capita GDP: Selected Countries and States of Brazil

Country or State of Brazil ⁹	Average Insurance Penetration, 2000-2004 (multiplied by 1000)	Average Per Capita GDP, 2000-2004
Roraima (RR)	2.20	1,587.57
Saudi Arabia	2.30	9,510.34
Amapá (AP)	2.38	1,984.50
Algeria	2.80	2,033.78
Amazonas (AM)	3.12	3,269.11
Egypt	3.27	1,331.62
Rondônia (RO)	3.95	1,946.83
Sergipe (SE)	4.80	1,949.86
Iran, Islamic Republic of	4.81	1,879.83
Piauí (PI)	5.03	871.37
Guatemala	5.26	1,794.37
Paraíba (PB)	5.26	1,305.13
Maranhão (MA)	5.27	802.15
Rio Grande do Norte (RN)	5.71	1,604.97
Romênia	5.93	2,354.89
Peru	6.04	2,205.81
Tocantins (TO)	6.15	1,119.39
Sri Lanka	6.42	915.03
Alagoas (AL)	6.44	1,192.43
Indonésia	6.60	956.68
Turkey	7.05	3,109.71
Philippines	7.22	981.08
Pará (PA)	7.71	1,509.63
Mato Grosso (MT)	8.16	2,823.84
Bulgária	8.82	2,189.97
Mexico	8.98	6,289.94
Tunisia	9.00	2,319.07
Ceará (CE)	9.14	1,278.09
Espírito Santo (ES)	9.70	3,150.20
Costa Rica	9.81	4,167.79
Greece	10.37	13,689.90
Dominican Republic	10.44	2,411.11
Jordan	10.78	1,910.68
Venezuela	11.13	4,227.99
Mato Grosso do Sul (MS)	11.91	2,756.47
Bahia (BA)	12.04	1,837.21
Colombia	12.09	1,930.34

⁹ Brazilian states are in yellow with the state abbreviation.

Tabela 1a – Cont.

Country or State of Brazil	Average Insurance Penetration, 2000-2004 (multiplied by 1000)	Average Per Capita GDP, 2000-2004
Goiás (GO)	12.24	2,239.92
Minas Gerais (MG)	12.59	2,735.68
Ukraine	12.65	946.30
Rio Grande do Sul (RS)	12.96	4,054.38
Brazil	13.32	3,041.83
China	13.41	1,174.26
Kenya	13.57	442.40
Santa Catarina (SC)	13.65	3,753.37
India	13.89	509.64
Hungary	14.40	6,866.25
Morocco	14.43	1,348.88
Poland	14.72	5,373.00
Panama	15.33	4,104.45
Croatia	15.51	5,693.80
Thailand	15.64	5,103.82
Pernambuco (PE)	15.65	1,765.94
Iceland	15.93	34,055.35
Slovak Republic	16.48	5,224.89
Paraná (PR)	18.18	3,321.60
Czech Republic	18.79	7,701.30
Argentina	18.96	5,100.93
Chile	20.85	4,869.76
Mauritius	21.56	4,092.92
Rio de Janeiro (RJ)	21.87	4,505.38
Cyprus	23.50	14,290.67
Malta	23.70	11,369.15
Norway	24.62	44,247.68
Slovenia	25.20	12,223.85
Malaysia	26.21	4,041.12
New Zealand	28.71	17,167.62
Distrito Federal (DF)	28.93	6,396.05
Austria	29.16	28,293.95
Israel	30.15	18,514.52
Spain	30.40	18,690.16
São Paulo (SP)	31.82	4,515.48
Canada	33.37	25,761.52
Portugal	34.16	13,290.42
Germany	34.25	26,706.33
Hong Kong SAR	34.42	24,207.39
Italy	34.68	23,319.78
Sweden	34.94	30,509.84
Denmark	37.23	35,569.80
Australia	42.81	23,691.09

Tabela 1a – Cont.

Country or State of Brazil	Average Insurance Penetration, 2000-2004 (multiplied by 1000)	Average Per Capita GDP, 2000-2004
Finland	44.64	28,350.83
Singapore	44.84	22,503.50
France	45.54	25,977.56
United States	46.41	36,829.04
Belgium	49.56	26,756.17
Netherlands	49.89	29,239.57
Korea	52.46	11,880.45
Japan	54.46	33,732.08
Switzerland	61.69	40,269.46
Ireland	73.07	33,772.71
United Kingdom	75.56	28,371.78
South Africa	82.64	3,259.73
Ecuador	86.86	1,941.93
Luxembourg	151.13	56,351.62

Sources: Swiss Re, Sigma Report various years; World Bank.

Table 1b selected countries' GDP, according to IMF data.

The five elements of data definition for this table are the same as those for table 1a.

Table 1b – GDP of Selected Countries, in Nominal US\$ Billions

Country	2000	2001	2002	2003	2004	2005
Algeria	54.749	55.181	57.053	68.013	85.016	102.026
Argentina	284.204	268.697	97.732	127.643	151.958	181.549
Australia	390.169	368.656	413.677	527.216	637.485	708.519
Austria	194.407	193.345	208.566	255.842	293.194	305.338
Belgium	232.425	231.931	252.721	310.521	357.447	371.695
Brazil	601.551	510.384	460.612	505.535	603.783	795.666
Bulgaria	12.639	13.605	15.614	19.974	24.331	26.719
Canada	725.158	715.632	734.773	868.485	993.908	1,132.444
Chile	75.212	68.568	67.266	73.698	95.001	115.314
China	1,198.482	1,324.813	1,453.847	1,640.978	1,931.645	2,234.133
Colombia	83.786	81.991	81.122	79.459	96.788	122.269
Costa Rica	15.947	16.404	16.879	17.491	18.531	19.985
Croatia	18.427	19.832	23.032	29.612	35.261	38.551
Cyprus	9.147	9.497	10.467	13.191	15.501	16.695
Czech Republic	56.717	61.843	75.276	91.358	108.214	124.31
Denmark	160.533	160.583	174.412	214.269	245.172	259.643
Dominican Republic	19.888	21.942	21.625	16.459	18.435	29.089
Ecuador	15.934	21.252	24.899	28.636	32.636	36.489
Egypt, Arab Rep.	99.155	95.399	87.506	81.384	78.802	89.477
Finland	122.222	125.269	135.972	165.031	188.901	196.053
France	1,333.00	1,341.43	1,463.90	1,805.03	2,059.72	2,126.72
Germany	1,905.80	1,892.60	2,024.06	2,444.28	2,744.22	2,791.74

Tabela 1b – Cont.

Country	2000	2001	2002	2003	2004	2005
Greece	116.469	119.212	135.507	175.892	209.394	225,591
Guatemala	19.289	21.043	23.309	24.738	25.959	27,366
Hong Kong, China	168.754	166.541	163.709	158.473	165.841	177,703
Hungary	47.019	52.314	65.562	83.127	100.821	109,195
Iceland	8.665	7.899	8.768	10.802	13.084	15,823
India	462.643	474.097	493.535	575.273	665.584	771,951
Indonesia	165.521	160.657	195.593	234.834	254.466	281,264
Iran, Islamic Rep.	96.447	115.435	116.412	133.752	161.478	192,349
Ireland	96.609	104.569	122.724	157.118	183.473	200,774
Israel	121.025	118.659	109.382	115.26	122.503	129,841
Italy	1,100.567	1,118.326	1,223.245	1,510.064	1,726.793	1.765,542
Japan	4,650.951	4,090.192	3,911.583	4,237.074	4,587.155	4.567,446
Jordan	8.461	8.975	9.582	10.196	11.398	12,712
Kenya	12.316	13.059	13.191	15.036	16.199	18,736
Korea, Rep.	511.923	481.971	546.709	608.172	679.977	787,567
Luxembourg	20.329	20.216	22.693	29.044	33.638	36,531
Malaysia	90.324	88.001	95.266	103.992	118.461	130,835
Malta	3.853	3.863	4.151	4.854	5.319	5,454
Mauritius	4.512	4.542	4.513	5.159	5.937	6,231
Mexico	580.791	621.859	648.629	638.745	683.486	768,437
Morocco	33.335	33.901	36.093	43.813	50.031	51,621
Netherlands	371.726	400.998	439.357	539.343	609.038	629,911
New Zealand	52.399	51.534	59.766	79.261	97.793	108,523
Norway	167.286	169.797	191.514	222.892	255.107	295,672
Panama	11.621	11.808	12.272	12.933	14.204	15,467
Philippines	75.912	71.216	76.814	79.634	86.703	98,371
Poland	171.314	190.332	198.039	216.539	252.668	303,229
Portugal	112.989	115.812	127.906	155.515	177.828	183,619
Romania	37.068	40.188	45.825	59.506	75.487	98,566
Saudi Arabia	188.693	183.257	188.803	214.859	250.673	309,945
Singapore	92.717	85.612	88.468	92.727	107.502	116,775

Tabela 1b – Cont.

Country	2000	2001	2002	2003	2004	2005
Slovak Republic	20.374	21.108	24.522	33.005	42.015	47,459
Slovenia	19.312	19.772	22.292	28.069	32.494	34,037
South Africa	132.964	118.563	111.138	166.178	214.989	239,419
Spain	582.377	608.882	688.501	882.667	1,041.043	1.126,576
Sri Lanka	16.332	15.746	16.536	18.246	20.055	23,534
Sweden	242.792	221.879	244.314	304.854	350.664	358,817
Switzerland	246.322	250.576	277.113	322.915	359.042	367,571
Thailand	122.725	115.536	126.877	142.928	161.688	173,134
Tunisia	19.456	19.988	21.054	25.254	28.129	28,674
Turkey	198.234	143.096	182.973	240.596	302.561	362,461
Ukraine	31.262	38.009	42.393	50.133	64.883	82,876
United Kingdom	1,445.195	1,435.637	1,574.470	1,814.649	2,155.164	2.229,473
United States	9,816.983	10,127.955	10,469.608	10,960.756	11,712.483	12.455,834
Venezuela, RB	117.153	122.872	92.889	83.436	110.104	132,848

Source: IMF website, www.imf.org.

3. Insurance premium data in Brazil

This Chapter presents 15 tables providing an accurate portrait of the insurance industry in Brazil. It details, for instance, each one of the 99 types of contracts currently available in the market. The database shows types of risk covered, and amount of premiums sold. The contracts are defined according to utility and type of risk. Tables show the contract names in Portuguese and their correspondent English translation. Other tables present estimates of the level of participation of small and medium-sized enterprises (SMEs) in the total volume of insurance premiums paid on each state. Brazilian regulatory bodies, insurance law attorneys, brokerage firms, and the authors developed the estimates of insurance market premiums paid by SMEs, according to the type of insurance contracts, legal entities, and individual consumers.

Table 2a lists total insurance premium volume by state. Tables 2b, 2c, 2d, 2e, and 2f define each one of the 99 contracts, and divide them by risk group. The risk groups are: liability, social protection, property, commercial, and agriculture. Table 2g displays insurance premium volumes segregated by specific groups of risk. Table 2h lists total premium volume for each type of contract. Tables 2i, 2j, 2k, 2l, and 2m show estimates from insurance regulators, attorneys, brokers, and the authors, on the volume of premiums paid by SMEs to insurance companies, by type of contract.

This relationship can be measured by comparing the total volume of insurance premiums in each state, by line of business, by type of contract, by share of premiums paid by SMEs – with the revenue volume and number of SMEs, start-ups, or any other measure of entrepreneurship. A specific table with the revenue volume of SMEs and the number of SMEs is available in Chapter 3. The data for table 2 are defined as follows:

1. Definition of variables: Volume of insurance premiums from 1999 to 2006. These data are available in a separate Excel database from 1995 to 2006. Values are presented in nominal R\$.
2. Source of information: Data on the total volume of insurance premiums by state, are available at <http://www.susep.gov.br/menuestatistica/estatisticas.asp>.
3. Availability of information: The data is available from 1995 to 2006, with some gaps. Given some inconsistencies in the initial years of the series, this table only has reliable data for the period 1999 to 2006. The method used by the authors to fill the data gaps is detailed below:
 - 3.1. Method to estimate data gaps – On the SUSEP website, the file for the year 1999 only shows data for premium volume for the 10 largest states. There is a data gap for the remaining 17 states.¹⁰ The only data available for these smaller states are the market share percentages and total insurance premium volumes for the month of January. In order to fill in this data gap, the national premium for 1999 was divided by the total premium for January. The resulting factor was distributed by the January premium total for each of the 17 smaller Brazilian states. The same procedure was followed to compare the month of January with the whole year for the 10 largest states. The results were relatively similar. Most of the small states were within a 5% margin of error. The table with the premium volumes for 1999 to 2006 is also available in a separate database with data from 1995 to 2006.
4. Method used to collect information: These are administrative data, collected from SUSEP, which requires that the companies under its jurisdiction file proper data, under the penalties of Decree-Law 73, from the year of 1966, and the respective statutes, regulations, and legislation that followed.
5. Frequency of the information: Yearly basis.

Tables 2b, 2c, 2d, 2e, and 2f define each of the 99 insurance contracts currently available in the market by type of risk. Tables 2b, 2c, 2d, 2e, and 2f explain the definitions of the 99 insurance contracts standardized

¹⁰ Each one of the 17 states has total premium volume less than 1% of the national premium volume.

and authorized by SUSEP. While contracts definitions come basically from one source, classifications are abundant. SUSEP allocated these contracts to five different risk groups, provided by the authors' classification: liability, social protection, property, commercial, and agriculture. Volumes could be written about how to classify insurance contracts into types of risk. The authors consulted with SUSEP to find the best classification for the Brazilian market for this study.

SUSEP recognizes other classifications. These classifications are often from the risk-retention perspective, i.e., the insurer's perspective. The classification presented in this document comes from the risk seller's perspective, i.e., the perspective of the natural or legal person who purchases insurance (or sells risk) to the insurance company. But both classifications end up being very similar because they are based on the same principles as discussed below.

SUSEP divides all insurance contracts into these categories: DPEM (mandatory boat liability insurance); DPVAT (mandatory auto liability insurance); agriculture insurance; fire insurance; guarantee insurance; personal insurance (which includes both life and health); transportation insurance; and, domestic credit insurance. The classification used in this paper puts DPEM, DPVAT, and part of transportation insurance within liability insurance. This classification also puts fire insurance as part of property insurance, and guarantee insurance as part of commercial insurance. Personal insurance is renamed "social protection." This document's classification separates transportation risk into two parts, one tied to liability, and the other tied to property. Finally, domestic credit is also part of commercial insurance.

SUSEP also puts forth another classification on its website that is made up four basic groups: (1) goods and liabilities, (2) personal insurance, (3) guarantees, and (4) transportation.

The data in these tables is defined as follows:

1. Definition of variables: The tables list the contracts, their name in English and Portuguese, and their definition.
2. Source of information: SUSEP divided these contracts into several types of risk, according to a basic classification that was produced for this paper and to the viewpoint used in this study with respect to the relationship between insurance and entrepreneurship.
3. Availability of information: The information used for the definitions is available in Portuguese at http://www.susep.gov.br/menuatendimento/index_seguros.asp. Some of the information used in our classifications comes from the Federation of Brazilian insurance companies, at www.fenaseg.org.br. The guarantee insurance information was found at the global risk brokerage firm website: http://www.globalrisk.com.br/emp_patr_garantia.html.
4. Method used to collect information: research on the above-mentioned websites.

5. Frequency of the information: this information is not updated regularly, because definitions of insurance contract are usually stable and written in statutes.

After analyzing definitions of contracts available in the Brazilian market, will be reviewed the volume of premium paid for each of these risks and contracts. Table 2g consolidates the total volume of premiums per state, divided by type of risk. Here, we present only a sample of Brazilian states. There is a separate database with data on all states. The data in table 2g are defined as follow:

1. Definition of variables: This table lists the insurance premium volume for each state, divided by type of risk. It is based on a classification, as justified and extensively explained, in tables 2b, 2c, 2d, 2e, and 2f. The volume of the premiums is reported in R\$, nominal value.
2. Source of information: The source is the insurance regulator website www.susep.gov.br.
3. Availability of information: The information is available monthly, starting January 2003 up to the present, without interruptions. For the top 10 states, information is also available for the years 2001 and 2002. The data for the remaining 17 smaller states¹¹ in these two years are in a category called "other states."
4. Method used to collect information: administrative.
5. Frequency of the information: monthly.

Table 2h presents only a sample of the data available in a separate Excel database. This table shows the volume of premiums, by state, for each of these five selected contracts. This table can be used to show a more exact relationship between entrepreneurship and a specific insurance contract that covers a specific risk in a specific manner. The more exact the findings on the relationship, the more powerful recommendations about changes in policy. The data in table 2h are defined as follow:

1. Definition of variables: Table 2h lists only five of the 99 insurance contracts permitted and authorized by the insurance regulator in Brazil, SUSEP, to be contracted on the market. These are a sample of the contracts that fill in the five types of risk, listed in table 2g. The table lists the first and foremost liability contract, the mandatory auto liability insurance, (the acronym in Portuguese is DPVAT) whose premiums are collected by the government through auto property taxes. This contract is numbered 88 in the SUSEP list of contracts.¹² There's also the multi-risk commercial contract, number 18. Then there is engineering risk insurance, number 67; there is mortgage insurance, number 68; and finally, there is rural pledge insurance for public

¹¹ Each of these 17 states has total premium volume of less than 1% of total national premium volume.

¹² These numbers serve to easily identify specific contracts.

financial institutions, number 63. All contracts that are listed in tables 2b, 2c, 2d, 2e, and 2f are available in the Excel database. The total premium volume figure is calculated in R\$, in nominal value.

2. Source of information: www.susep.gov.br. [in Portuguese]
3. Availability of information: The information is available from January 2003 up to the current month without any gaps. For the top 10 states in terms of premium volume, information is available for 2001 and 2002. The remaining states are combined in a category called "other states."
4. Method used to collect information: administrative. Insurers must file their premium volume and loss ratio in order to disclose their reserves' allocation models, so the regulator can estimate solvency and loss ratio percentages margins.
5. Frequency of the information: Monthly.

This table shows premium volume of five insurance contracts in selected states. These contracts are representative of each of the five types of risk listed on table 2g. One important question still unanswered at this point is: How much of all premiums are paid by SMEs? There are no public data, simply because insurance companies do not publicize their customer base demographics or revenue level.¹³

Hence, the best we can do is to make an educated guess. In order to reduce our chances of finding discrepancy in the results, we invited several market players¹⁴ to contribute with their estimates of the volume of premium paid by SMEs as an overall share of each contracts total premium volume. The results are on the next table.

¹³ For some lines of business, such as auto insurance, it is highly unlikely that insurers will even have access to this sort of information.

¹⁴ The authors would like to thank Mr. Schaimberg from Broker's Law firm, Mr. Conde from Pellon & Associados and Mr. Salles, Nohra and Vasconcellos from SUSEP for their valuable insights and opinions.

Tables 2i, 2j, 2k, 2l, and 2m contain estimates from insurance regulators, insurance law attorneys, brokers and the authors of the volume of premiums paid by SMEs to insurance companies. This estimate is detailed to the level of individual contracts, and put together by type of risk according to tables 2b, 2c, 2d, 2e, and 2f. The data in tables 2i to 2m are defined as follow:

1. Definition of variables: Market players' estimates on the share of premium paid by SMEs, according to the type of insurance contract, according to the type of risk. SUSEP determined which contracts single individuals mostly purchased, compared to which were predominantly bought by legal entities. Brokers and attorneys made an educated guess to estimate which percentage of the market premium was paid either by SMEs or companies in general. Table 2i focuses on liability insurance premiums, 2j on commercial risk premiums, 2k on social protection premiums, 2l on property premiums, and 2m on agriculture premiums.
2. Sources of information: Law firm in Rio, SUSEP, IADB, and brokerage firm.
3. Availability of data: by request only.
4. Method used to collect information: Informal request.
5. Frequency of the information: This data request was made for this document.

Table 2a – Volume of Insurance Premium, by State, 1999 to 2006, in thousands R\$

State of Brazil	2006	2005	2004	2003	2002	2001	2000	1999
Acre (AC)	16,696	16,071	7,489	5,547	3,467	4,567	4,209	3,032
Alagoas (AL)	102,421	84,846	66,460	53,198	51,985	52,746	59,988	57,629
Amazonas (AM)	20,023	16,908	8,116	6,544	50,480	53,273	57,482	45,725
Amapá (AP)	269,014	198,828	152,664	109,914	5,538	7,632	4,232	1,925
Bahia (BA)	1,197,626	1,042,102	882,092	670,001	474,179	773,798	879,075	745,927
Ceará (CE)	653,734	396,349	382,203	311,244	174,464	181,511	169,141	149,110
Distrito Federal (DF)	1,567,005	1,286,742	1,054,753	915,958	969,996	1,055,693	1,085,317	599,496
Espírito Santo (ES)	532,468	420,619	378,502	320,498	211,292	205,906	194,403	174,378
Goiás (GO)	852,910	655,020	635,838	498,585	264,950	288,247	268,656	232,454
Maranhão (MA)	201,469	141,252	130,015	80,370	42,548	42,982	45,178	42,584
Minas Gerais (MG)	3,455,945	2,980,803	2,592,173	2,014,004	1,394,305	1,272,508	1,161,547	1,094,981
Mato Grosso do Sul (MS)	392,379	366,306	308,144	246,980	159,939	141,533	124,889	109,381
Mato Grosso (MT)	422,893	344,823	316,858	218,399	98,666	109,800	91,010	74,910
Pará (PA)	362,094	252,797	268,222	262,887	167,264	157,929	148,927	162,857
Paraíba (PB)	164,784	108,878	119,007	88,966	42,585	40,550	40,240	44,698
Pernambuco (PE)	1,004,002	783,536	684,264	521,999	407,532	608,452	616,451	474,931
Piauí (PI)	89,101	72,376	52,626	42,498	28,422	25,954	21,500	24,386
Paraná (PR)	2,961,087	2,478,757	2,380,934	1,951,386	1,255,614	1,190,985	1,166,041	1,025,586
Rio de Janeiro (RJ)	5,782,131	4,897,706	4,299,362	3,757,988	3,018,695	3,722,398	3,778,629	3,895,220
Rio Grande do Norte (RN)	155,959	116,117	99,707	79,842	57,355	54,462	57,054	51,157
Rio Grande do Sul (RS)	75,231	59,172	45,973	32,713	24,366	24,522	21,417	16,912
Rondônia (RO)	12,839	22,930	5,711	3,900	2,048	2,801	2,484	2,412
Roraima (RR)	3,222,853	2,717,420	2,187,358	1,719,044	1,203,931	1,141,405	1,064,573	1,036,185
Santa Catarina (SC)	1,614,755	1,370,596	1,204,697	914,118	581,557	594,832	535,332	537,099
Sergipe (SE)	84,337	87,837	77,590	69,376	31,570	31,205	27,246	30,037
São Paulo (SP)	24,259,029	21,594,342	19,175,546	15,796,353	13,343,795	12,525,832	11,339,337	9,700,529
Tocantins (TO)	56,754	46,292	30,198	25,005	15,030	13,407	24,658	5,772
Total – Brazil	49,529,539	42,559,423	37,546,501	30,717,318	24,081,572	24,274,931	22,989,012	20,324,675

Sources: SUSEP; authors' estimates for the 17 smaller states in terms of premium, only for the year 1999.

Table 2b – Insurance Contracts Considered by the Regulator as Protecting Liability Risk

Contract Name in Portuguese	Contract Name in English	Liability Contract Definition
10 – Responsabilidade Civil de Administradores e Diretores (D&O)	10 – Directors And Officers Civil Liability (D&O)	This contract covers companies' directors and officials against personal liability. It has been a rising line of insurance business since shareholders have become more litigious in the last few years. The rise in premia volume in this contract is also tied to corporate governance issues.
20 – Acidentes Pessoais de Passageiros	20 – Private Passengers Auto	This contract guarantees passengers in commercial vehicles. The insured is the company that owns the vehicle. This type of insurance, specially the liability component of the contract, is mandatory for all transportation companies (including boating companies). It covers the vehicle (and its cargo) in case of theft, loss, and damage. Coverage is paid through reimbursement for aerial, sea, lake, railroads, and auto roads accidents.
23 – Responsabilidade Civil Transporte Rodoviário Interestadual e Internacional	23 – Civil Liability of the International and Interstate Road Carrier	This contract guarantees liability for the carrier under these types of auto roads. Similarly to other transportation contracts, the insured party is the transportation company.
24 – Garantia Estendida	24 – Extended Guarantee	This contract covers the insured party, who is usually the retailer or the manufacturer, against damages to third parties caused by products sold or distributed defectively. The contract covers poor manufacturing, warehousing, or even mere mishandling of the insured goods.
25 – Carta Verde	25 – Carta Verde	MERCOSUR auto liability insurance –Within the South America's common market, this contract is the standard auto liability contract.
27 – Responsabilidade Civil do Transporte Intermodal	27 – Civil Liability of the Intermodal Carrier	Liability for large cargo truck transportation – This contract covers liability for cargo truck transportation, and follows the same basic principles of contract 20.
32 – Responsabilidade Civil do Transportador Viagem Internacional – Carga	32 – Civil Liability of the Carrier in International Transport – Cargo	This contract guarantees liability arising from losses to cargo in international transportation. It follows the same principles apply in contract 20.
37 – Responsabilidade Civil Hangar	37 – Hangar Liability Insurance	This contract covers losses to airplanes in a hangar, including any accident to airline property. Similar principles that apply to contract 52.

Table 2b – Cont.

Contract Name in Portuguese	Contract Name in English	Liability Contract Definition
38 – Responsabilidade Civil do Transportador Ferroviária Carga	38 – Civil Liability of the Rail Carrier – Cargo	This contract covers the carrier against losses arising from events occurred during railroad transportation. This contract follows the same principles explained in contract 20.
44 – Responsabilidade Civil do Transportador – Viagem Internacional Pessoa Transportada ou não	44 – Civil Liability of the Carrier in International Trip – Personal Injury	This contract guarantees the carrier for losses arising from events that caused personal damages to passengers in international travel. This contract follows the same principles explained in contract 20.
51 – Responsabilidade Civil Geral	51 – General Liability	This contract covers general liability. Its principles, clauses, and provisions are generally similar to those of other multi risk contracts.
52 – Responsabilidade Civil do Transportador Aéreo Carga	52 – Civil Liability of the Air Carrier – Cargo	This contract guarantees liability arising from damages to cargo during air transportation. There are many types of contract to cover air transport: Some cover airplanes and passengers' liability in accidents that can produce death, disability, or the need of medical treatment. Others warrant indemnities to cover for losses reimburse expenses and refund general airlines liabilities. This contract follows the same principles explained in contract 20.
53 – Responsabilidade Civil Facultativa	53 – Auto Civil Liability – Facultative	This contract covers losses arising from auto accidents above and beyond DPVAT (see contract 88).
54 – Responsabilidade Civil Transportador Rodoviário – Carga	54 – Civil Liability of the Road Carrier – Cargo	This contract covers liability related to losses with cargo truck transportation.
55 – Responsabilidade Civil Desvio de Carga	55 – Civil Liability – Cargo Deviation	This contract covers liability related to cargo deviation or detour. This contract is used mostly to assure transporters that if the route agreed on the main contract has not been used, the goods are still covered.
56 – Responsabilidade Civil do Armador	56 – Civil Liability – Ship-owner	This contract covers the shipyard from any liability arising of its inability to deliver the vessel at the time and manner agreed (in the terms of the construction contract).
57 – DPEM	57 – DPEM – Personal Injury Caused by Vessels (compulsory)	This contract covers boat owners from liability arising of events occurred within private boats. This is a mandatory, state-owned insurance coverage that must be contracted, under the penalties of the law.

Table 2b – Cont.

Contract Name in Portuguese	Contract Name in English	Liability Contract Definition
58 – Responsabilidade Civil Operador Transporte Multimodal	58 – Civil Liability of the Operator in the Multimodal Transport	This contract covers liability arising from events occurred with multimodal trucks.
78 – Responsabilidade Civil Profissional	78 – Professional Liability	This contract covers professionals such as attorneys, architects, accountants, and others against liability arising of their main professional activity. This contract is very similar to D&O, and medical malpractice insurance, but it is directed to other professionals.
84 – Aeronáutico – Bilhete	84 – Aircraft – Simplified Policy (Run Off)	This contract covers losses arising of aircraft transportation. This contract follows the same principles explained in contract 20.
88 – DPVAT (Todas Categorias). a partir jan 05¹⁵ – Danos Pessoais Veículos Automotores Terrestres	88 – DPVAT – Mandatory Personal Injury caused by Motor Vehicle (all types of vehicles)	Auto liability – This contract, known by the acronym DPVAT (personal damage caused by auto vehicles on roads), is the mandatory liability insurance coverage. Auto owners usually pay along with auto property taxes. As the acronym explains, this contract covers passengers and pedestrians for physical damages caused by the auto or its cargo. Indemnities are paid by any of the insurers within the pool ¹⁶ .
89 – DPVAT (Run Off)	89 – DPVAT (Run Off)	Auto liability runoff – This contract is the run off version of the above-mentioned contract.

Sources: SUSEP, available at http://www.susep.gov.br/menuatendimento/index_seguros.asp, the Insurance company federation, at www.fenaseg.org.br, and Global risk brokerage firm: http://www.globalrisk.com.br/emp_patr_garantia.html.

¹⁵ The current version of this contract started to be enforced on January 5.

¹⁶ Insurance companies retain a part of each premium collected and manage the pool of losses. This division of premium is based on each insurer's market share of the overall auto insurance business.

Table 2c – Insurance Contracts Considered by the Regulator as Protecting Commercial Risk

Contract Name in Portuguese	Contract Name in English	Commercial Contract Definition
19 – Crédito a Exportação – Risco Comercial	19 – Export Credit Insurance – Commercial Risks	This contract guarantees commercial risk on international sales. This contract follows the same principles explained in contract 49.
39 – Garantia Financeira	39 – Guarantee Financial Obligations	This contract covers financial obligations in case of default. While the borrower pays the premium, the real "insured beneficiary" of this operation is the lender.
40 – Garantia de Obrigações Privadas	40 – Guarantee Insurance – Private Obligations	This contract guarantees losses related to delays and other problems in the delivery of goods and services for private contracting and subcontracting.
45 – Garantia de Obrigações Públicas	45 – Guarantee Insurance – Public obligations	This insurance contract covers delays and other problems in the delivery of goods and services made by private contractors and subcontractors to the public sector.
46 – Fiança Locatícia	46 – Rental Surety Insurance	This insurance contract covers the landlord up to the full amount of the leasing contract in case of tenant's partial or total default. It includes damages to the property.
47 – Garantia de Concessões Públicas	47 – Guarantee Insurance – Public Concessions	This insurance contract guarantees that the terms of a given public concession ¹⁷ will be observed during its performance by the private sector.
48 – Crédito Interno	48 – Domestic Credit Insurance (Run Off)	This insurance contract guarantees lenders against borrowers' default on a credit operation. This contract is a "runoff," i.e. it is being replaced by other contracts.
49 – Crédito à Exportação	49 – Export Credit Insurance (Run Off)	This contract covers an exporter's net losses arising from an importers' lack of credit to conclude the operations. In that case, the deal is forfeited and profit estimates might be under examination. This insurance contract covers commercial and political risks.
50 – Garantia Judicial	50 – Third-Party Coverage	This contract covers plaintiffs, during a legal dispute, against defendants' default. This contract is used in lieu of a judicial deposit of the sum or arrest of the disputed asset.

¹⁷ A public concession is different from a mere government contract. The difference is that a concession is usually tied to a service the government is handing out to the private sector for a fee. It usually entails a long-term relationship, while a government contract usually ends with the delivery of a specific good or service to the government.

Table 2c – Cont.

Contract Name in Portuguese	Contract Name in English	Commercial Contract Definition
59 – Crédito à Exportação Risco Político	59 – Export Credit Insurance – Political Risks	This insurance contract guarantees exporters' net losses arising from importers' lack of credit to conclude the operations. This insurance contract merely complements the type of coverage on contract 49, to explicitly add political risk.
60 – Crédito Doméstico Risco Comercial	60 – Domestic Credit Insurance – Commercial Risks	This insurance contract guarantees lenders against borrowers' default on regular domestic credit operations.
66 – Habitacional (dentro do Sistema Financeiro Habitacional – SFH)	66 – Mortgage Ins. in the Fin. System)	This insurance contract covers real estate lenders in the case of homeowners' default. In this particular type of contract, lenders are in the SFH, the Brazilian Housing Financial System.
68 – Habitacional (fora do Sistema Financeiro Habitacional – SFH)	68 – Mortgage Ins. (out of the Housing Fin. System)	This insurance contract covers real estate lenders in the case of homeowners' default. In this particular type of contract, lenders are in the private sector, out of the SFH (see contract 66 above).
70 – Crédito Doméstico Risco Pessoa Física	70 – Domestic Credit – Natural Persons Risks	This insurance contract covers the lender in case of borrowers' default. In this particular contract, the borrower cannot be a legal entity.
75 – Garantia	75 – Guarantee (Run Off)	This insurance contract is the regular general warranty for a given commercial contract.
90 – Renda de Eventos Aleatórios	90 – Random Events	This insurance contract guarantees against loss of revenue due to default in a specific contract.

Sources: http://www.susep.gov.br/menuatendimento/index_seguros.asp. the SUSEP website. Insurance company federation, at www.fenaseg.org.br. Global risk brokerage firm: http://www.globalrisk.com.br/emp_patr_garantia.html.

Table 2d – Insurance Contracts Considered by the Regulator as Protecting Social Protection Risk

Contract Name in Portuguese	Contract Name in English	Social Protection Contract Definition
36 – PCHV	36 – Pilot's License Loss	This insurance covers pilots in case of losing a professional license. This contract is structured similarly to a disability loss-of-income insurance contract.
77 – Prestamista	77 – Credit Life Insurance	This insurance contract covers the lending institution against borrower's default in case of death, disability, or loss of income.
80 – Seguro Educacional	80 – Educational Insurance	This insurance contract guarantees the completion of education of a legal dependent, usually a daughter, or a son. Coverage kicks in if the responsible person dies, becomes disabled, or loses their main source of income.
81 – Acidentes Pessoal – Individual	81 – Accident Insurance – Individual	This insurance contract guarantees that the injured person will receive an indemnity in the case of an accident.
82 – Acidentes Pessoais – Coletivos	82 – Accident Ins. – Group	The same contract as above on 81, but purchased by legal entities.
86 – Saúde Individual	86 – Health Individual (Run Off)	This insurance contract covers health expenditures, in the terms and limits of the policy. The insurer may pay directly to health providers or reimburse expenses afterwards. This is a runoff contract.
87 – Saúde Grupal	87 – Health Group (Run Off)	This contract covers health expenditures as described above on contract 86. The difference is that this policy is sold to groups, usually work related.
91 – Vida Individual	91 – Life-Individual	This insurance contract is equivalent to a regular term life policy in the USA. This contract covers death or survival of a beneficiary by a spouse, and indemnity is paid either as revenue or as a total sum. There are several different arrangements: In the ordinary life insurance contracts, the beneficiary pays yearly premia during all his life. But on the pure whole life contract, premia are paid only for a period, and the contract is triggered by the beneficiary's survival. Finally, in the mixed term life insurance contract, the indemnity is due either in case of a beneficiary's early death or in case of an extended life.

Table 2d – Cont.

Contract Name in Portuguese	Contract Name in English	Social Protection Contract Definition
92 – VGBL/VAGP/VRGP/VRSA/PRI individual	92 – VGBL/VAGP/VRGP (Redeemable Life Insurance) – Individual	This insurance contract covers against extended life. Premia are paid only for a certain period. If the insured person dies before the end of the payment period, no further payments are due and the indemnity will be earned in full by the beneficiary. Otherwise, the indemnity is due both in the case of the insured's early death or extended life.
93 – Vida em Grupo	93 – Life-Group	It is a contract mandated by a third party, which has one policy but several beneficiaries. Common interests, usually a working relation, are the usual link of these beneficiaries. There can be additional coverage included in this insurance contract, e.g. disability and accidental death.
94 – VGBL/ VAGP/VRGP/VRSA/PRI Coletivo	94 – Redeemable Life Insurance	This insurance contract provides either a variable income to a fixed premium, or charges a variable premium in order to provide a future fixed-income.
97 – VG/APC	97 – VG/APC	This group of contracts are mostly private pension plans. There can be two types of sponsors, who are the so-called open or closed groups. Closed groups are organized as legal entities and are recognized as pension plans. ¹⁸ Open groups are organized either as not-for-profit or for-profit legal entities. Insurance companies manage the latter, and they can include profit-sharing mechanisms for investment performances.

Sources: http://www.susep.gov.br/menuatendimento/index_seguros.asp the SUSEP website. Insurance company federation, at www.fenaseg.org.br. Global risk brokerage firm: http://www.globalrisk.com.br/emp_patr_garantia.html.

¹⁸ Private pension plans run in parallel to the social security system in Brazil. Social security has a public, mandatory character and private pensions are voluntary, usually purchased by the middle class and by private companies as a benefit to their employees. They have seen exponential growth in the last years, specially after some recent legislation enhanced tax advantages for this sector.

Table 2e – Insurance Contracts Considered by the Regulator as Protecting Property Risk

Contract Name in Portuguese	Contract Name in English	Property Contract Definition
11 - Incêndio Tradicional	11 – Fire	This insurance contract covers basic losses due to fire, lightning, and domestic kitchen gas explosion, and their direct effects, such as lost properties, fixing expenditures and others.
12 – Incêndio – Bilhetes	12 – Fire – Simplified Policy (Run Off)	Same as above, but running off.
13 – Vidros	13 – Glass (Run Off)	This insurance contract guarantees glass windows and doors in case of cracks or regular breaks.
14 – Compreensivo Residencial	14 – Homeowners	This insurance contract is the standard homeowners property and liability.
15 – Roubo	15 – Burglary and Theft	This contract covers losses related to the theft of certain goods. These goods must be listed on the policy, and must be held at a location indicated in the contract. It also covers material losses caused by attempted robbery.
18 – Compreensivo Empresarial	18 – Commercial Multiple Peril	This contract covers all losses specified in the policy, usually related to an entrepreneurs' main commercial activity.
21 – Transporte Nacional	21 – National Transport	This is the standard insurance contract that covers domestic transportation of goods and people.
31 – Automóveis	31 – Auto	This contract covers loss and damage to an automobile. Standard coverage includes collision, fire, and theft, which are available together or not. Supplementary coverage can include third party liability, personal damages to passengers, AAA roadside assistance, and vehicle reposition in case of an accident. Premium cost varies according to the auto brand, year of manufacture, safety conditions, the area where the auto circulates, driver's profile: age, historic of accidents, etc.
33 – Marítimos	33 – Maritime	This insurance contract cover the vessel itself. This contract follows the same principles explained in contract 20.
34 – Riscos de Petróleo	34 – Petroleum Risks	This contract covers assets and liabilities related to prospecting, drilling, and producing oil and gas.
35 – Aeronáuticos	35 – Aircraft	This contract covers losses to the aircraft itself.

Table 2e – Cont.

Contract Name in Portuguese	Contract Name in English	Property Contract Definition
67 – Riscos de Engenharia	67 – Engineering Risks Insurance	This contract covers any of the several stages of construction, such as: the installation, setup, civil construction, and equipment malfunction, including computers.
71 – Riscos Diversos	71 – Multiple Peril	This contract covers multiple risks not covered by other policies.
72 – Riscos Nucleares	72 – Nuclear Insurance	This insurance contract covers losses from a nuclear spillover or a nuclear event.
73 – Global de Bancos	73 – Bank Insurance	This insurance contract is a general policy that covers most risks Banks incur in their regular operation, such as: theft, robbery, property destruction ¹⁹ , fidelity and forgery.
74 – Satélites	74 – Satellite Insurance	This contract covers satellite losses. ²⁰
76 – Riscos Diversos – Planos Conjugados	76 – Multiple Peril – Fire And Allied Lines (Run Off)	All insurance contracts "so-called" multi combine several coverages into a single policy. They are "multi risks." This specific contract covers material losses in accidents arising from exterior elements. Multi risks usually encompass several specific risks for which there is no coverage in standard policies ²¹ .
79 – Seguros no Exterior	79 – Risks Abroad	Sometimes circumstances determine the need to contract insurance abroad. ²²
16 – Compreensivo Condomínio	16 – Condominium Multiple Peril	This insurance contract covers losses to third parties on accidents during use and maintenance of condominium facilities.
17 – Tumultos	17 – Riot and Civil Commotion (Run Off)	This insurance contract covers personal and material losses during riots or agglomerations that may disturb public order, such as: strikes, lockouts, and protests.

¹⁹ Property coverage excludes arson or explosions.

²⁰ Satellites are mostly used in Brazil in the agricultural and telecommunications business.

²¹ One example is the multi risk residential policy, which covers fire, theft, breaking of glass, liability, etc.

²² To purchase insurance coverage abroad is forbidden (in most cases) according to the terms of the Decree-Law 73 from 1966, which regulates the insurance industry for the most part in Brazil.

Table 2e – Cont.

Contract Name in Portuguese	Contract Name in English	Property Contract Definition
22 – Transporte International	22 – International Transport	This insurance contract covers the carrier against loss of merchandise. This contract follows the same principles explained in contract 20.
41 – Lucros Cessantes	41 – Loss of Profit	This contract covers legal entities in case of profit volatility linked to a specific loss that caused total or partial business interruption. This policy rides together with property insurance standard coverage.
42 – Lucros Cessantes Cobertura Simples	42 – Loss of Profit – Simple Coverage (Run Off)	Same as above, runoff.
43 – Fidelidade	43 – Fidelity (Run Off)	This insurance policy is the standard fidelity employee coverage. This policy protect legal entities in case an employee steals company property, secrets, clients and even their whole books of business.
69 – Turístico	69 – Travel Insurance	This insurance contract covers losses to travelers, personal and material damages, incurred during a trip. Travel agents usually purchase this coverage.
96 – Riscos Nomeados e Operacionais	96 – Specified And All Risks	This insurance contract is very similar to contract 45, but its coverage is directed to businesses.
99 – Sucursais no Exterior	99 – Branches Abroad	This is insurance for international branches of Brazilian companies.

Sources: http://www.susep.gov.br/menuatendimento/index_seguros.asp the SUSEP website. Insurance company federation, at www.fenaseg.org.br. Global risk brokerage firm: http://www.globalrisk.com.br/emp_patr_garantia.html.

Table 2f – Insurance Contracts Considered by the Regulator as Protecting Agriculture Risk

Contract Name in Portuguese	Contract Name in English	Agriculture Contract Definition
01 – Seguro Agrícola sem cobertura do FESR	01 – Crop Ins. without Rural Ins. Stability Fund (FESR)	This insurance contract covers farmers, but insurers have no access to FESR.
02 – Seguro Agrícola com FESR	02 – Crop Ins. with Rural Ins. Fund	This contract is the same as above, but it allows insurers access to FESR.
03 – Seguro Pecuário sem cob. do FESR	03 – Cattle Ins. without Rural Ins. Stability Fund	This contract covers cattle losses, but insurers have no access to FESR.
04 – Seguro Pecuário com cob. do FESR	04 – Cattle Ins. with Rural Ins. Stability Fund	This contract covers cattle losses, but it allows insurers to draw funds from FESR in the cases described in the legislation.
05 – Seguro Aquícola sem cob. do FESR	05 – Fish Insurance without FESR	This contract covers fish farming, but insurers have no access to FESR.
06 – Seguro Aquícola com cob. do FESR	06 – Fish Insurance with FESR	This contract covers fish farming losses, but it allows insurers to draw funds from FESR in the cases described in the legislation.
07 – Seguro Florestas sem cob. do FESR	07 – Forest Insurance without FESR	This contract covers paper production, but insurers have no access to FESR.
08 – Seguro Florestas com cob. do FESR	08 – Forest Insurance with FESR	This contract covers paper production, but it allows insurers to draw funds from FESR in the cases described in the legislation.
09 – Seguro da Cédula do Produto Rural	09 – Rural Bond Insurance	This insurance contract covers bondholders in the case that farmers default on their bond operations.
28 – Pecuário	28 – Cattle Insurance (run off)	This insurance contract covers losses related to cattle farming. It is running off now.
29 – Aquícola	29 – Fish Insurance	This contract covers losses related to fish farming. It is running off now.
30 – Benfeitorias e Produtos Agropecuários	30 – Farm owners Multiple Peril	This insurance contract covers farm owners against multiple risks related to the activity and property.
61 – Agrícola	61 – Crop Insurance Run Off	This insurance contract is the traditional crop insurance coverage policy, which is being replaced by more specific contracts.

Table 2f – Cont.

Contract Name in Portuguese	Contract Name in English	Agriculture Contract Definition
62 – Penhor Rural Instituições Financeiras Privadas	62 – Rural Pledge Ins. Private Fin. Institutions	This insurance contract guarantees private agriculture lending
63 – Penhor Rural Instituições Financeiras Públicas	63 – Rural Pledge Ins Public	This insurance contract guarantees lending to public sector banks.
64 – Animais	64 – Animal Insurance	This insurance contract guarantees the beneficiary against the loss or disability of an animal. The object insured is usually a prized horse, a track animal, or a show dog, or cat, etc.
65 – Compreensivo de Florestas	65 – Forest (Run Off)	Forest comprehensive – This insurance contract covers against losses in forest areas usually set to produce paper or other materials.

Sources: http://www.susep.gov.br/menuatendimento/index_seguros.asp the SUSEP website. Insurance company federation, at www.fenaseg.org.br. Global risk brokerage firm: http://www.globalrisk.com.br/emp_patr_garantia.html.

FESR – The "Fundo de Estabilidade do Seguro Rural" (Rural Insurance Stability Fund) was created in 1962 to support rural lending insurance. Private insurers selling agricultural insurance can increase reserves making withdraws from this fund under some specific circumstances, notably in the case losses on this line of business reach above and beyond 100% of earned premium. Thanks to FESR insurance premium in agriculture remains at a lower level than a commercially viable level requires. FESR funds come from sporadic contributions of the federal government. Insurance companies also contribute to the fund. Agricultural Insurers' contributions are triggered after they reach a certain profit margin on the agriculture business.

Table 2g – Insurance Premium Divided by Type of Risk, Selected States, 2003 to 2006, in Nominal R\$

State of Brazil	Year	1 - Social Protection risks	2 - Liability risks	3 - Property risks	4 - Commercial risks	5 - Agric. risks	Total Premium
Amazonas	2003	52,917,620	17,781,445	36,082,154	3,106,357	26,860	109,914,436
Amazonas	2004	73,829,723	23,056,176	51,138,005	4,617,622	22,098	152,663,624
Amazonas	2005	85,407,488	32,072,645	77,505,419	3,825,064	17,406	198,828,023
Amazonas	2006	134,259,411	41,041,160	87,531,103	6,149,964	31,935	269,013,572
Bahia	2001	452,991,424	65,532,675	248,917,607	5,845,149	510,934	773,797,788
Bahia	2002	116,740,979	70,234,755	272,847,957	13,534,247	821,187	474,179,125
Bahia	2003	242,667,160	98,373,690	287,492,500	37,253,359	4,214,544	670,001,251
Bahia	2004	368,110,186	109,600,543	366,311,256	32,500,954	5,568,778	882,091,717
Bahia	2005	490,706,856	133,159,331	398,486,357	16,079,962	3,669,419	1,042,101,924
Bahia	2006	575,130,882	167,597,536	396,937,178	53,714,552	4,245,764	1,197,625,912
Distrito Federal	2001	362,506,820	70,843,566	260,683,353	293,804,285	1,785,490	1,005,692,924
Distrito Federal	2002	185,294,683	103,335,253	335,214,346	345,359,126	792,244	969,995,652
Distrito Federal	2003	243,371,327	97,629,553	386,060,900	187,613,980	1,282,403	915,958,162
Distrito Federal	2004	279,293,736	110,543,569	379,848,649	283,253,209	1,814,077	1,054,753,240
Distrito Federal	2005	345,387,915	113,714,795	491,779,630	333,790,934	2,069,029	1,286,742,303
Distrito Federal	2006	541,775,010	158,965,778	572,869,398	287,883,820	5,511,389	1,567,005,395
Goiás	2003	192,035,487	88,551,162	178,426,775	24,161,222	15,410,733	498,585,380
Goiás	2004	275,116,205	100,592,182	226,262,091	13,915,158	19,952,323	635,837,959
Goiás	2005	256,643,624	124,364,937	253,084,886	8,020,019	12,906,900	655,020,367
Goiás	2006	382,562,517	161,404,398	259,360,660	34,511,640	15,070,927	852,910,142
Minas Gerais	2001	467,432,847	199,301,329	544,718,200	58,063,713	2,992,410	1,272,508,499
Minas Gerais	2002	449,247,568	229,718,365	669,039,451	43,553,479	2,745,646	1,394,304,509
Minas Gerais	2003	863,369,350	330,829,513	732,252,308	68,039,004	19,513,413	2,014,003,588
Minas Gerais	2004	1,233,921,798	390,157,689	857,323,820	71,364,269	39,405,655	2,592,173,230
Minas Gerais	2005	1,402,104,857	470,936,401	1,033,004,621	45,806,165	28,950,700	2,980,802,745
Minas Gerais	2006	1,709,461,788	601,288,656	2,948,427,610	79,952,196	77,039,998	3,455,945,383
Paraná	2001	440,353,199	213,403,660	485,148,553	44,623,860	7,455,708	1,190,984,980
Paraná	2002	397,469,868	209,060,846	574,165,078	61,753,026	13,164,917	1,255,613,734
Paraná	2003	811,643,101	332,511,458	684,419,646	82,964,711	39,847,380	1,951,386,296
Paraná	2004	1,033,093,445	379,548,230	832,421,187	86,526,542	49,344,586	2,380,933,989
Paraná	2005	1,033,238,697	437,326,447	912,041,041	57,347,382	38,803,172	2,478,756,739
Paraná	2006	1,367,493,770	541,047,193	914,497,519	65,487,287	72,561,240	2,961,087,009
Pernambuco	2001	306,048,788	60,717,215	175,757,532	65,788,060	140,178	608,451,773

Tabela 2g – Cont.

State of Brazil	Year	1 - Social Protection risks	2 - Liability risks	3 - Property risks	4 - Commercial risks	5 - Agric. risks	Total Premium
Pernambuco	2002	96,831,109	54,187,590	213,392,944	43,070,865	49,967	407,532,475
Pernambuco	2003	178,810,880	85,842,260	232,925,489	24,263,000	157,256	521,998,885
Pernambuco	2004	291,807,064	94,745,572	276,347,778	21,024,606	339,465	684,264,485
Pernambuco	2005	326,068,818	147,992,650	301,741,963	7,201,532	531,402	783,536,364
Pernambuco	2006	440,431,219	213,804,460	335,401,920	13,816,842	547,679	1,004,002,121
Rio de Janeiro	2001	1,618,326,478	564,743,341	1,396,449,049	140,631,630	2,247,690	3,722,398,188
Rio de Janeiro	2002	644,403,366	610,617,922	1,667,158,247	95,980,832	534,196	3,018,694,563
Rio de Janeiro	2003	1,354,628,156	419,355,259	1,842,329,743	140,978,805	695,555	3,757,987,518
Rio de Janeiro	2004	1,858,660,218	431,557,095	1,848,533,626	159,868,753	741,947	4,299,361,640
Rio de Janeiro	2005	2,155,747,194	493,227,393	2,114,120,663	132,730,853	1,879,967	4,897,706,070
Rio de Janeiro	2006	2,868,526,875	568,725,348	2,161,316,294	182,382,052	1,180,193	5,782,130,762
Rio Grande do Sul	2001	384,581,693	208,270,485	499,237,997	44,004,455	5,310,856	1,141,405,485
Rio Grande do Sul	2002	350,007,463	202,341,413	586,828,586	60,613,432	4,139,766	1,203,930,661
Rio Grande do Sul	2003	606,641,470	339,843,303	675,041,577	69,884,973	27,632,630	1,719,043,954
Rio Grande do Sul	2004	895,948,704	394,308,195	758,244,298	72,011,857	66,844,545	2,187,357,599
Rio Grande do Sul	2005	1,242,094,041	466,336,929	854,300,669	45,185,726	109,502,593	2,717,419,959
Rio Grande do Sul	2006	1,581,649,203	587,318,129	858,329,874	66,190,648	129,365,190	3,222,853,043
Santa Catarina	2001	170,214,729	105,621,253	301,410,741	14,117,869	3,466,925	594,831,516
Santa Catarina	2002	122,781,501	106,287,688	329,073,081	21,880,997	1,533,404	581,556,670
Santa Catarina	2003	277,553,254	214,621,123	394,216,632	22,557,434	5,169,807	914,118,251
Santa Catarina	2004	436,643,204	251,269,737	482,884,906	24,121,835	9,777,451	1,204,697,133
Santa Catarina	2005	487,110,396	301,799,840	555,497,577	15,195,323	10,992,422	1,370,595,559
Santa Catarina	2006	644,198,138	367,719,655	559,607,045	25,150,820	18,078,937	1,614,754,595
São Paulo	2001	5,363,253,161	1,924,422,325	4,728,440,045	469,837,444	39,879,172	12,525,832,147
São Paulo	2002	5,602,809,707	2,090,619,204	5,034,434,244	536,243,764	79,687,621	13,343,794,541
São Paulo	2003	7,463,513,147	1,956,867,607	5,700,901,857	621,426,738	53,643,948	15,796,353,297
São Paulo	2004	9,701,045,474	2,206,203,206	6,417,439,401	801,499,676	49,358,732	19,175,546,489
São Paulo	2005	10,812,474,508	2,305,769,866	7,754,803,938	685,042,598	36,250,595	21,594,341,505

Tabela 2g – Cont.

State of Brazil	Year	1 - Social Protection risks	2 - Liability risks	3 - Property risks	4 - Commercial risks	5 - Agric. risks	Total Premium
São Paulo	2006	12,449,815,055	2,752,369,662	8,220,661,353	786,836,413	49,346,441	24,259,028,924
Total	2001	10,101,770,248	3,583,233,741	9,330,710,033	1.178.079.532	81,137,185	24,274,930,740
Total	2002	8,365,630,477	3,863,995,889	10,461,105,231	1.285.399.253	105,441,012	24,081,571,862
Total	2003	12,982,473,032	4,309,752,593	11,825,874,953	1.375.648.200	194,987,309	30,688,736,087
Total	2004	17,450,757,458	4,877,307,234	13,290,920,596	1.652.340.091	283,890,848	37,555,216,227
Total	2005	19,673,485,575	5,537,130,710	15,685,363,381	1.393.993.955	269,448,954	42,559,422,575
Total	2006	24,173,655,711	6,864,157,071	15,651,503,910	1.703.853.951	1,136,368,246	49,529,538,890

Source: SUSEP website, which provided the data figures, and a tailor-made classification of these contracts, after a consultation.

Table 2h – Volume of Insurance Premium, Selected Contracts, 2001–2006, in Nominal R\$

State of Brazil	Year	88 – DPVAT – Auto Liability (all types of vehicles)	18 – Commercial Multiple Peril	67 – Engineering Risks Insurance	68 – Mortgage Ins. out of the Housing Fin. System)	63 – Rural Pledge Ins – Public Fin. Inst.
Alagoas	2003	7.848.491	788.021	70.156	15.440	25.670
Alagoas	2004	8.243.147	1.019.433	22.199	11.842	56.818
Alagoas	2005	12.584.122	1.263.290	104.291	1.251.809	39.023
Alagoas	2006	17.394.759	1.792.144	131.540	2.359.822	46.342
Amazonas	2003	7.492.676	2.502.524	43.332	16.995	3.932
Amazonas	2004	9.102.783	4.593.080	93.608	11.473	12.143
Amazonas	2005	12.937.940	6.196.005	96.294	887.744	17.406
Amazonas	2006	18.179.480	8.973.941	272.332	1.676.882	24.772
Bahia	2001	11.931.816	0	21.546.484	7.949.940	0
Bahia	2002	13.928.418	0	5.679.401	7.480.520	5.563.156
Bahia	2003	36.530.366	14.148.606	4.463.110	10.423.912	3.199.539
Bahia	2004	40.810.121	17.015.372	17.563.840	8.115.741	3.726.700
Bahia	2005	55.165.108	18.195.192	6.794.089	8.221.274	2.621.557
Bahia	2006	80.059.781	17.119.555	14.438.233	15.110.149	2.813.133
Distrito Federal	2001	28.346.078	0	572.956	16.611.181	1.637.300
Distrito Federal	2002	52.650.884	0	2.000.379	20.920.359	446.147
Distrito Federal	2003	40.192.072	9.671.013	827.001	43.908.212	958.986
Distrito Federal	2004	41.829.442	14.445.610	2.385.077	45.337.241	1.253.305
Distrito Federal	2005	41.771.862	35.569.165	4.709.422	89.265.951	1.494.548
Distrito Federal	2006	75.923.900	37.699.082	17.234.879	77.562.534	1.417.952
Goiás	2003	46.266.321	8.900.510	244.273	7.493.127	11.920.288
Goiás	2004	50.941.274	13.031.705	1.139.653	2.616.750	15.591.358
Goiás	2005	66.880.170	13.693.797	1.386.936	3.667.834	12.683.752
Goiás	2006	0	13.488.489	2.896.956	6.842.823	13.628.201

Tabela 2h – Cont.

State of Brazil	Year	88 – DPVAT – Auto Liability (all types of vehicles)	18 – Commercial Multiple Peril	67 – Engineering Risks Insurance	68 – Mortgage Ins. out of the Housing Fin. System)	63 – Rural Pledge Ins – Public Fin. Inst.
Mato Grosso do Sul	2003	12.821.124	6.079.917	112.749	1.216.058	10.322.555
Mato Grosso do Sul	2004	15.424.035	9.332.999	264.401	2.430.633	12.859.706
Mato Grosso do Sul	2005	29.262.111	7.635.621	264.898	1.701.639	8.223.456
Mato Grosso do Sul	2006	43.596.937	7.645.076	1.180.247	3.328.626	7.740.639
Minas Gerais	2001	36.670.946	0	5.699.107	93.235.915	0
Minas Gerais	2002	54.174.986	0	11.484.009	65.767.764	16.115.648
Minas Gerais	2003	141.458.795	37.658.722	7.404.061	23.113.287	8.333.296
Minas Gerais	2004	172.084.059	44.230.982	14.226.253	27.966.292	11.839.332
Minas Gerais	2005	213.037.055	47.039.851	23.123.045	22.971.708	10.432.058
Minas Gerais	2006	317.905.057	50.420.523	32.073.157	42.129.485	0
Paraíba	2003	11.475.648	953.819	5.691	1.133.054	18.818
Paraíba	2004	10.864.725	1.114.689	7.770	2.371.304	38.267
Paraíba	2005	16.206.781	1.204.302	13.975	1.945.363	44.699
Paraíba	2006	22.465.788	1.519.420	27.979	3.681.238	31.675
Paraná	2001	56.067.295	0	3.965.756	9.734.106	0
Paraná	2002	35.631.183	0	2.395.398	7.887.152	13.122.622
Paraná	2003	120.495.679	57.361.889	5.300.688	20.458.373	19.035.136
Paraná	2004	133.273.262	71.994.005	4.744.000	20.887.476	26.435.936
Paraná	2005	162.926.516	81.458.133	3.999.701	17.729.470	27.961.546
Paraná	2006	242.373.947	83.084.119	3.688.185	23.665.974	27.745.306
Rio de Janeiro	2001	34.816.763	0	38.321.183	23.095.733	244.884
Rio de Janeiro	2002	36.172.518	0	84.715.723	23.730.483	156.005
Rio de Janeiro	2003	97.457.538	92.569.936	38.666.976	52.154.642	63.392
Rio de Janeiro	2004	113.943.015	97.233.320	24.854.681	60.438.009	187.072
Rio de Janeiro	2005	137.480.795	100.784.230	49.308.245	53.698.818	152.245
Rio de Janeiro	2006	213.753.816	104.489.245	48.305.384	73.899.396	167.740
Rio Grande do Sul	2001	46.470.410	0	4.814.769	31.305.240	0
Rio Grande do Sul	2002	34.288.099	0	6.037.685	32.788.027	49.250.781
Rio Grande do Sul	2003	135.523.736	61.540.830	3.680.629	18.820.980	19.812.270
Rio Grande do Sul	2004	147.885.737	79.113.745	2.662.429	18.741.989	28.943.835
Rio Grande do Sul	2005	167.642.745	85.366.945	10.280.697	17.375.988	27.594.216
Rio Grande do Sul	2006	254.372.219	88.661.687	2.588.106	29.117.862	30.667.201

Tabela 2h – Cont.

State of Brazil	Year	88 – DPVAT – Auto Liability (all types of vehicles)	18 – Commercial Multiple Peril	67 – Engineering Risks Insurance	68 – Mortgage Ins. out of the Housing Fin. System)	63 – Rural Pledge Ins – Public Fin. Inst.
Santa Catarina	2001	0	0	5,199,073	3,408,948	0
Santa Catarina	2002	0	0	1,299,932	2,236,009	5,124,673
Santa Catarina	2003	80,405,647	30,564,417	2,609,138	7,212,702	3,038,059
Santa Catarina	2004	87,702,818	40,657,295	837,737	7,745,542	5,870,875
Santa Catarina	2005	113,960,597	47,662,996	3,370,802	7,054,372	6,385,864
Santa Catarina	2006	164,422,348	49,513,842	9,325,869	13,084,524	7,412,991
São Paulo	2001	693,943,757	0	77,288,005	86,398,760	14,686,752
São Paulo	2002	790,780,371	0	84,251,077	89,584,807	37,401,469
São Paulo	2003	530,655,666	374,667,590	72,104,748	143,233,130	8,665,079
São Paulo	2004	541,171,496	442,522,825	87,883,234	166,548,405	11,857,943
São Paulo	2005	650,304,657	453,967,936	111,804,592	158,720,068	10,031,958
São Paulo	2006	955,325,314	479,309,347	99,961,090	229,591,224	10,090,367
Total	2001	1,249,028,940	0	159,703,317	290,457,360	31,062,204
Total	2002	1,365,234,219	0	206,323,113	335,220,755	38,726,993
Total	2003	1,434,530,380	741,057,508	138,241,872	356,084,154	97,529,143
Total	2004	1,562,590,192	894,636,397	161,225,382	376,079,194	134,527,459
Total	2005	1,941,384,454	964,928,896	220,424,210	405,814,475	118,815,728
Total	2006	2,792,600,476	1,002,220,393	256,833,055	484,715,052	110,342,084

Source: SUSEP, at www.susep.gov.br.

Table 21 – Percentage of Liability Premium Paid by SMEs and Other Companies Market Estimates from SUSEP, IADB, a Law Firm, and a Brokerage Firm in Brazil

Name of Contract In Portuguese, According to SUSEP Website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - according to Law Firm in Brazil	Average share of total premium paid by Legal entities
10 – RC de Adm. e Diretores (D&O)	10 – Directors & Officers Liability	companies	20%	25%	23%	100%	100%	100%
20 – Acidentes de Passageiros	20 – Private Passengers Auto	individuals	5%	2%	4%	100%	100%	100%
23 – RC T Rod. Interest. e Internac.	23 - Liability, Intern. and Interstate Road Carrier	companies	10%	10%	10%	100%	100%	100%
24 – Garantia Estendida	24 – Extended Guarantee	individuals	5%	2%	4%	100%	100%	100%
25 – Carta Verde	25 – Carta Verde (auto liability comp. in Mercosul)	individuals	10%	10%	10%	20%	20%	20%
27 – Resp. Civil do Transp. Intermodal	27 – Civil Liability of the Intermodal Carrier	companies	2%	2%	2%	100%	100%	100%
32 – Rc Do Trans. Viagem Internac. Carga	32 – Civil Liability of the Carrier in International Transport – Cargo	companies	2%	2%	2%	100%	100%	100%
37 Responsab. Civil Hangar	37 – Hangar Liability Insurance	companies	5%	5%	5%	100%	100%	100%
38 – RC do Transp. Ferroviário Carga	38 – Liability, Rail Carrier – Cargo	companies	1%	1%	1%	100%	100%	100%
44 – RCT Viagem Intern – Pess. Transp. ou não	44 – Liability, International carrier Personal Injury	companies	1%	5%	3%	100%	100%	100%
51 Responsab. Civil Geral	51 – General Liability	Indifferent	1%	1%	1%	50%	50%	50%
52 – Resp. Civil do Transp. Aéreo Carga	52 – Civil Liability of the Air Carrier – Cargo	companies	2%	2%	2%	90%	100%	95%

Table 21 – Cont.

Name of Contract In Portuguese, According to SUSEP Website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - according to Law Firm in Brazil	Average share of total premium paid by Legal entities
53 – Resp. Civil Facultativa	53 – Auto Liability – Facultative	individuals	1%	1%	1%	90%	50%	70%
54 – Resp. C. Transportador Rodov. – Carga	54 – Liability of the Road Carrier – Cargo	companies	5%	5%	5%	95%	90%	93%
55 – Resp. Civil Desvio de Carga	55 – Civil Liability – Cargo Deviation	companies	3%	5%	4%	95%	90%	93%
56 – Resp. Civil Armador	56 – Civil Liability – Ship-owner	companies	1%	1%	1%	99%	100%	100%
57 – DPEM	57 – DPEM	individuals	5%	5%	5%	20%	20%	20%
58 – Responsabilidade Civil Transporte Multimodal	58 – Liability, Multimodal Transp.	companies	1%	1%	1%	99%	100%	100%
78 – RC Profissional	78 – Prof. Liability	individuals	5%	5%	5%	20%	40%	30%
84 – Aeronáuticos – Bilhete	84 – Aircraft – Simple Policy (Run Off)		3%	5%	4%	100%	90%	95%
88 – DPVAT a Partir Jan 05	88 – Auto Liability	individuals	5%	5%	5%	15%	15%	15%
89 – DPVAT Run Off	89 – DPVAT, run off	Indifferent	5%	5%	5%	15%	15%	15%
Total Liability	total liability		4%	5%	5%	78%	76%	77%

Sources: Estimates from the Authors, insurance regulators, brokers, and law firm.

Table 2j – Percentage of Commercial Premium Paid by SMEs and Other Companies
Market Estimates from SUSEP, IADB, a Law Firm, and a Brokerage Firm in Brazil

Name of contract in Portuguese, according to SUSEP website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - Law Firm in Brazil	Average share of total premium paid by Legal entities
19 – Crédito a Exp. Risco Comercial	19 – Export Credit Insurance – Commercial Risks	companies	5%	5%	5%	100%	100%	100%
39 – Garantia Financeira	39 – Guarantee Insurance – Financial Obligations	companies	5%	1%	3%	80%	70%	75%
40 – Garantia de Obrigações Privadas	40 – Guarantee Insurance – Private Obligations	companies	5%	1%	3%	80%	50%	65%
45 – Garantia de Obrigações Públicas	45 – Guarantee Insurance – Public Obligations	companies	1%	100%	51%	100%	100%	100%
46 – Fiança Locatícia	46 – Rental Surety Insurance	individuals	10%	10%	10%	30%	50%	40%
47 – Garantia de Concessões Públicas	47 – Guarantee Insurance – Public Concessions	companies	10%	5%	8%	100%	100%	100%
48 – Crédito Interno	48 – Domestic Credit Insurance (Run Off)	(runoff)	8%	5%	7%	100%	100%	100%
49 – Crédito à Exportação	49 – Export Credit Insurance (Run Off)	(runoff)	2%	4%	3%	100%	100%	100%
50 – Garantia Judicial	50 – Third-Party Coverage	companies	2%	1%	2%	100%	25%	63%
59 – Crédito à Exportação Risco Político	59 – Export Credit Insurance – Political Risks	companies	2%	2%	2%	98%	100%	99%

Table 2j – Cont.

Name of contract in Portuguese, according to SUSEP website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - Law Firm in Brazil	Average share of total premium paid by Legal entities
60 – Crédito Doméstico Risco Comercial	60 – Domestic Credit Insurance – Commercial Risks	companies	10%	20%	15%	90%	90%	90%
66 – Habitacional – SFH	66 – Mortgage Ins. (within the Housing Finance System)	individuals	20%	100%	60%	0%	0%	0%
68 – Habitacional – Fora do SFH	68 – Mortgage Ins. (out of the Housing System)	individuals	20%	50%	35%	0%	0%	0%
70 – Crédito Doméstico Risco P. Física	70 – Domestic Credit – Natural Persons Risks	companies	30%	30%	30%	0%	0%	0%
75 – Garantia	75 – Guarantee (Run Off)	(runoff)	1%	0%	1%	99%	100%	100%
90 – Renda de Eventos Aleatórios	90 – Random Events	companies	1%	0%	1%	90%	80%	85%
Total commercial risks premium	Total commercial risks premium		8%	21%	15%	73%	67%	70%

Sources: Estimates from the Authors, insurance regulators, brokers, and law firm.

Table 2k – Percentage of Social Protection Premium Paid by SMEs and Other Companies
Market Estimates from SUSEP, IADB, a Law Firm, and a Brokerage Firm in Brazil

Name of contract in Portuguese, according to SUSEP website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - Law Firm in Brazil	Average share of total premium paid by Legal entities
36 – PCHV	36 – Pilot's License Loss	individuals	5%	5%	5%	100%	100%	100%
77 – Prestamista	77 – Credit Life Insurance	individuals	30%	30%	30%	0%	0%	0%
80 – Seguro Educacional	80 – Educational Insurance	individuals	10%	20%	15%	0%	0%	0%
81 – Acidentes Pessoais – Individual	81 – Accident Insurance – Individual	individuals	20%	15%	17%	0%	5%	3%
82 – Acidentes Pessoais – Coletivo	82 – Accident Insurance – Group	individuals	5%	4%	5%	80%	80%	80%
86 – Saúde Individual	86 – Health – Individual (Run Off)	(runoff)	5%	13%	9%	0%	0%	0%
87 – Saúde Grupal	87- Health – Group (Run Off)	(runoff)	2%	4%	3%	100%	80%	90%
91 – Vida Individual		individuals	15%	10%	12%	0%	0%	0%
92 – VGBL/VAGP/VRGP/VRSA/ PRI individual	92 – VGBL/VAGP/VRGP (Redeemable Life Insurance) – Individual	individuals	20%	14%	17%	0%	0%	0%
93 – Vida em Grupo	93 – Life-Group	individuals	10%	6%	8%	98%	90%	94%
94 – VGBL/VAGP/VRGP/VRSA/ PRI coletivo	94 – VGBL/VAGP/VRGP (Redeemable Life Insurance) – Group	individuals	10%	6%	8%	98%	75%	87%
97 – VG/APC	97 – VG/APC		10%	6%	8%	98%	75%	87%
Total social protection premium	Total social protection premium		12%	11%	11%	48%	42%	45%

Sources: Estimates from the Authors, insurance regulators, brokers, and law firm.

Table 21 – Percentage of Property Premium Paid by SMEs and Other Companies
Market Estimates from SUSEP, IADB, a Law Firm, and a Brokerage Firm in Brazil

Name of contract in Portuguese, according to SUSEP website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - Law Firm in Brazil	Average share of total premium paid by Legal entities
11 – Incêndio	11 – Fire	Indifferent	20%	25%	23%	50%	80%	65%
12 – Incêndio – Bilhetes	12 – Fire – Simplified runoff	(runoff)	20%	25%	23%	50%	80%	65%
13 – Vidros	13 – Glass runoff	(runoff)	20%	25%	23%	50%	80%	65%
14 – Compreensivo Residencial	14 – Homeowners	individuals	10%	10%	10%	0%	0%	0%
15 – Roubo	15 – Burglary	Indifferent	5%	2%	4%	50%	45%	48%
18 – Compreensivo Empresarial	18 – Commercial Multiple Peril	companies	20%	30%	25%	80%	80%	80%
21 – Transporte Nacional	21 – National Transport	companies	15%	35%	25%	100%	100%	100%
31 – Automóveis	31 – Auto	individuals	20%	40%	30%	30%	60%	45%
33 – Marítimos	33 – Maritime	companies	2%	1%	2%	100%	100%	100%
34 – Riscos de Petróleo	34 – Petroleum Risks	companies	1%	1%	1%	100%	100%	100%
35 – Aeronáuticos	35 – Aircraft	companies	1%	20%	11%	100%	100%	100%
67 – Riscos de Engenharia	67 – Engineering Risks Insurance	companies	5%	45%	25%	40%	70%	55%
71 – Riscos Diversos	71 – Multiple Peril	Indifferent	10%	10%	10%	100%	95%	98%
72 – Riscos Nucleares	72 – Nuclear Insurance	companies	0%	0%	0%	30%	100%	65%
73 – Gobar de Bancos	73 – Bank Insurance	companies	2%	1%	2%	98%	100%	99%

Table 21 – Cont.

Name of contract in Portuguese, according to SUSEP website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - Law Firm in Brazil	Average share of total premium paid by Legal entities
74 – Satélites	74 – Satellite	companies	1%	0%	1%	99%	100%	100%
76 – Riscos Diversos – Planos Conjugados	76 – Multiple Peril – Fire And Allied Lines (Run Off)	(runoff)	10%	10%	10%	100%	95%	98%
79 – Seguros no Exterior	79 – Risks Abroad	Indifferent	1%	25%	13%	99%	45%	72%
16 – Compreensivo Condomínio	16 – Condominium Multiple Peril	companies	20%	50%	35%	0%	0%	0%
17 – Tumultos	17 – Riot Run Off	(runoff)	5%	2%	4%	50%	45%	48%
22 – Transporte Internacional	22 – Intern. Transp.	companies	5%	1%	3%	100%	100%	100%
41 – Lucros Cessantes	41 – Loss of Profit	companies	1%	10%	6%	100%	100%	100%
42 – Lucros Cessantes Simples	42 – Loss of Profit – Simple Coverage (Run Off)	(runoff)	1%	10%	6%	100%	100%	100%
43 – Fidelidades	43 – Fidelity runoff	(runoff)	1%	10%	6%	100%	100%	100%
69 – Turísticos	69 – Travel Insurance	individuals	5%	3%	4%	100%	100%	100%
96 – Riscos Nomeados e Operacionais	96 – Specified And All Risks	companies	1%	1%	1%	99%	80%	90%
99 – Sucursais no Exterior	99 – Branches Abroad		1%	5%	3%	100%	90%	95%
Total property premium	Total property premium		8%	15%	11%	75%	79%	77%

Sources: Estimates from the Authors, insurance regulators, brokers, and law firm.

Table 2m – Percentage of Agriculture Premium Paid by SMEs and Other Companies
 Market Estimates from SUSEP, IADB, a Law Firm, and a Brokerage Firm in Brazil

Name of contract in Portuguese, according to SUSEP website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - Law Firm in Brazil	Average share of total premium paid by Legal entities
01 – Seguro Agrícola sem cob. do FESR	01 – Crop Insurance (without Rural Insurance Stability Fund coverage)	companies	5%	5%	5%	90%	95%	93%
02 – Seguro Agrícola com cob. do FESR	02 – Crop Insurance (with Rural Insurance Stability Fund coverage)	companies	5%	5%	5%	90%	95%	93%
03 – Seguro Pecuário sem cob. do FESR	03 – Cattle Insurance without Rural Fund cover	companies	3%	5%	4%	95%	95%	95%
04 – Seguro Pecuário com cob. do FESR	04 – Cattle Insurance with Rural Fund cover	companies	3%	5%	4%	95%	95%	95%
05 – Seguro Aquícola sem cob. do FESR	05 Fish Insur. no Rural Fund cover	companies	3%	3%	3%	90%	95%	93%
06 – Seguro Aquícola com cob. do FESR	06 – Fish Insurance with Rural Fund cover	companies	3%	3%	3%	90%	95%	93%
07 – Seguro Florestas sem cob. do FESR	07 – Forest Insurance (without Rural Fund cover)	companies	0%	0%	0%	100%	100%	100%
08 – Seguro Florestas com cob. do FESR	08 – Forest Ins. with Rural Fund cover	companies	0%	0%	0%	100%	100%	100%
09 – Seg. da Cédula do Produtor Rural	09 – Rural Bond Insurance	companies	10%	15%	13%	90%	85%	88%
28 – Pecuário	28 – Cattle Ins. (run off)	(runoff)	3%	5%	4%	95%	95%	95%

Table 2m – Cont.

Name of contract in Portuguese, according to SUSEP website	Name of contract in English, according to SUSEP website	Main contract purchaser: Individuals or Legal entities - SUSEP estimate	Premium paid by SMEs - according to IADB and Brokers	Premium paid by SMEs - according to Law Firm in Brazil	Average percentage of total premium paid by SMEs	Premium paid by Legal entities - IADB and Brokers	Premium paid by Legal entities - Law Firm in Brazil	Average share of total premium paid by Legal entities
29 – Aquícola	29 – Fish Insurance (Run Off)	(runoff)	3%	3%	3%	95%	95%	95%
30 – Benfeitorias e Produtos Agropecuários	30 – Farm owners Multiple Peril – Farming and Cattle Products	companies	5%	2%	4%	100%	100%	100%
61 – Agrícola	61 – Crop Insurance (Run Off)	(runoff)	5%	5%	5%	90%	95%	93%
62 – Penhor Rural Instit. Fin. Priv.	62 – Rural Pledge Insurance – Private Financial Institutions	companies	10%	10%	10%	85%	90%	88%
63 – Penhor Rural Instit. Fin. Pub.	63 – Rural Pledge Insurance – Public Financial Institutions	companies	8%	1%	5%	85%	90%	88%
64 – Animais	64 – Animal Insurance	companies		1%	1%		80%	40%
65 – Compr. de Florestas	65 – Forest Multiple Peril (Run Off)	(runoff)	1%	1%	1%	100%	100%	100%
Total premium agriculture	Total premium agriculture		4%	4%	4%	93%	100%	97%

Sources: Estimates from the Authors, insurance regulators, brokers, and law firm.

3.1. Appendix – Insurance premium data in US\$

This appendix displays tables from the chapter with values that had been presented above in R\$ now converted to US\$. The conversion rate is the IMF rf, explained in the Annex. Thus, after conversion to US\$ table 2g, with all states (instead of only a few selected states) and divided by year, becomes table 2n.

Table 2n – Insurance Premium Divided by Type of Risk, Selected States, 2001-2006, in US\$

State of Brazil	Year	1 Soc. Protect.	2 Liability	3 Property	4 Commercial	5 Agriculture	Total
Bahia	2001	192,131,952	27,795,053	105,576,007	2,479,164	216,708	328,198,883
DF	2001	153,753,778	30,047,617	110,566,335	124,614,259	7,572,984	426,554,973
Minas Gerais	2001	198,257,142	84,531,740	231,036,981	24,627,165	1,269,202	539,722,230
Other states	2001	227,365,160	72,264,143	292,634,360	17,543,746	542,227	610,349,635
Parana	2001	186,771,570	90,513,108	205,771,088	18,926,781	3,162,267	505,144,814
Pernambuco	2001	129,807,647	25,752,622	74,545,865	27,903,372	59,455	258,068,962
Rio de Janeiro	2001	686,397,597	239,530,452	592,290,421	59,647,552	953,336	1,578,819,358
Rio Grande do Sul	2001	163,116,623	88,335,921	211,746,991	18,664,066	2,252,548	484,116,149
Santa Catarina	2001	72,194,939	44,798,238	127,840,464	5,987,958	1,470,463	252,292,061
São Paulo	2001	2,274,772,199	816,225,204	2,005,522,327	199,277,029	16,914,367	5,312,711,125
Total	2001	4,284,568,606	1,519,794,097	3,957,530,838	499,671,093	34,413,556	10,295,978,191
Espírito Santo	2002	39,968,427	24,046,163	93,414,528	4,633,699	281,148	162,343,965
DF	2002	63,439,051	35,378,729	114,766,811	118,240,064	271,239	332,095,895
Minas Gerais	2002	153,808,187	78,648,318	229,057,991	14,911,336	940,022	477,365,855
Other states	2002	136,962,519	64,225,871	266,688,338	21,709,407	675,173	490,261,307
Paraná	2002	136,081,137	71,575,835	196,576,000	21,142,287	4,507,252	429,882,511
Pernambuco	2002	33,151,915	18,552,120	73,059,009	14,746,105	17,107	139,526,256
Rio de Janeiro	2002	220,623,373	209,056,303	570,782,362	32,860,807	182,892	1,033,505,737
Rio Grande do Sul	2002	119,831,508	69,275,313	200,911,585	20,752,126	1,417,325	412,187,858
Santa Catarina	2002	42,036,510	36,389,550	112,664,236	7,491,363	524,989	199,106,648
São Paulo	2002	1,918,225,199	715,762,028	1,723,631,380	183,592,939	27,282,526	4,568,494,072
Total	2002	2,864,127,826	1,322,910,231	3,581,552,241	440,080,132	36,099,674	8,244,770,104
Acre	2003	578,951	783,279	400,140	30,376	9,955	1,802,701
Alagoas	2003	2,854,245	4,625,718	8,785,830	1,006,804	15,729	17,288,326
Amapa	2003	734,353	717,873	670,892	2,277	1,355	2,126,749
Amazonas	2003	17,197,294	5,778,656	11,726,064	1,009,511	8,729	35,720,254
Bahia	2003	78,862,549	31,969,715	93,429,994	12,106,685	1,369,652	217,738,594
Ceará	2003	38,409,289	18,600,415	32,241,621	11,818,070	79,295	101,148,690
DF	2003	79,091,390	31,727,883	125,462,986	60,971,236	416,758	297,670,254

Tabela 2n – Cont.

State of Brazil	Year	1 Soc. Protect.	2 Liability	3 Property	4 Commercial	5 Agriculture	Total
Espírito Santo	2003	40,556,124	18,230,092	42,207,561	2,963,455	198,806	104,156,039
Goiás	2003	62,408,148	28,777,567	57,985,556	7,851,971	5,008,217	162,031,458
Maranhão	2003	11,712,723	5,142,844	8,383,015	662,822	217,372	26,118,775
Mato Grosso	2003	27,262,965	11,105,373	27,020,932	1,639,884	3,946,553	70,975,707
Mato Grosso do Sul	2003	27,262,965	11,105,373	27,020,932	1,639,884	3,946,553	70,975,707
Minas Gerais	2003	280,579,817	107,513,759	237,969,090	22,111,477	6,341,515	654,515,659
Pará	2003	39,602,201	10,726,653	29,554,144	5,393,928	156,649	85,433,575
Paraíba	2003	12,756,045	5,537,226	8,494,029	2,114,696	10,477	28,912,473
Paraná	2003	263,769,698	108,060,362	222,424,318	26,962,068	12,949,696	634,166,143
Pernambuco	2003	58,110,383	27,897,221	75,696,677	7,885,047	51,105	169,640,435
Piauí	2003	3,187,547	3,762,213	6,344,396	471,255	45,687	13,811,098
Rio de Janeiro	2003	440,230,268	136,283,066	598,724,686	45,815,626	226,043	1,221,279,689
Rio Grande do Norte	2003	4,826,253	7,421,820	11,819,165	1,848,585	31,488	25,947,312
Rio Grande do Sul	2003	197,147,783	110,443,082	219,376,611	22,711,384	8,980,118	558,658,978
Rondônia	2003	2,501,256	2,553,013	5,495,679	17,406	63,953	10,631,307
Roraima	2003	446,365	542,431	267,970	9,279	1,503	1,267,548
Santa Catarina	2003	90,199,914	69,748,081	128,113,455	7,330,768	1,680,096	297,072,315
São Paulo	2003	2,425,510,189	635,947,472	1,852,692,595	201,952,734	17,433,337	5,133,536,327
Sergipe	2003	11,239,453	3,390,465	7,188,636	723,795	3,585	22,545,934
Tocantins	2003	2,036,680	2,201,959	3,703,891	10,390	173,210	8,126,129
Total	2003	4,219,074,851	1,400,593,610	3,843,200,866	447,061,412	63,367,438	9,973,298,177
Acre	2004	1,180,952	859,969	464,598	36,984	17,886	2,560,390
Alagoas	2004	6,135,200	5,185,193	10,239,727	1,114,970	45,266	22,720,356
Amapá	2004	1,098,493	799,939	869,609	2,588	3,899	2,774,529
Amazonas	2004	25,239,895	7,882,130	17,482,361	1,578,610	7,555	52,190,551
Bahia	2004	125,844,473	37,468,734	125,229,480	11,110,981	1,903,778	301,557,446
Ceará	2004	59,333,860	22,316,178	43,033,820	5,711,811	266,683	130,662,352
DF	2004	95,481,121	37,791,123	129,857,459	96,834,731	620,172	360,584,605
Espírito Santo	2004	55,273,393	23,206,241	47,354,798	3,293,362	269,362	129,397,156
Goiás	2004	94,052,964	34,389,079	77,351,388	4,757,124	6,821,027	217,371,581
Maranhão	2004	24,746,461	6,442,025	11,767,430	1,173,746	317,921	44,447,584
Mato Grosso	2004	47,123,297	15,140,679	36,834,867	3,182,239	6,042,164	108,323,245
Mato Grosso do Sul	2004	47,123,297	15,140,679	36,834,867	3,182,239	6,042,164	108,323,245
Minas Gerais	2004	421,836,300	133,381,772	293,090,136	24,397,040	13,471,466	886,176,714
Pará	2004	45,915,457	12,063,090	30,306,037	3,127,761	283,633	91,695,977
Paraíba	2004	21,435,089	5,825,078	10,361,022	3,031,347	32,000	40,684,536

Tabela 2n – Cont.

State of Brazil	Year	1 Soc. Protect.	2 Liability	3 Property	4 Commercial	5 Agriculture	Total
Paraná	2004	353,179,851	129,754,755	284,576,765	29,580,510	16,869,252	813,961,133
Pernambuco	2004	99,759,006	32,390,320	94,473,997	7,187,605	116,052	233,926,979
Piauí	2004	5,045,566	4,354,062	8,145,446	365,646	80,328	17,991,048
Rio de Janeiro	2004	635,413,323	147,534,834	631,951,382	54,653,742	253,647	1,469,806,927
Rio Grande do Norte	2004	7,053,175	8,708,578	15,622,834	2,668,604	33,136	34,086,328
Rio Grande do Sul	2004	306,294,683	134,800,690	259,218,185	24,618,428	22,851,899	747,783,885
Rondonia	2004	3,608,693	4,497,928	7,370,018	14,029	225,913	15,716,582
Roraima	2004	1,009,980	669,500	245,266	10,776	16,796	1,952,317
Santa Catarina	2004	149,273,604	85,900,660	165,082,084	8,246,443	3,342,581	411,845,372
São Paulo	2004	3,316,460,683	754,226,564	2,193,906,370	274,005,742	16,874,088	6,555,473,447
Sergipe	2004	14,249,972	3,953,903	7,322,363	985,385	13,705	26,525,327
Tocantins	2004	2,657,386	2,703,356	4,725,759	6,978	230,349	10,323,829
Total	2004	5,965,826,174	1,667,387,059	4,543,718,068	564,879,421	97,052,719	12,838,863,440
Acre	2005	2,152,631	2,689,418	1,651,870	103,804	3,794	6,601,517
Alagoas	2005	8,289,838	9,155,697	16,433,413	930,070	43,763	34,852,780
Amapá	2005	3,165,929	1,482,662	2,066,377	227,204	3,307	6,945,478
Amazonas	2005	35,083,589	13,174,764	31,837,586	1,571,256	7,150	81,674,344
Bahia	2005	201,571,991	54,699,035	163,689,762	6,605,308	1,507,320	428,073,416
Ceará	2005	61,850,711	34,597,272	62,689,336	3,388,446	285,837	162,811,603
DF	2005	141,878,046	46,711,631	202,012,664	137,114,252	849,913	528,566,506
Espírito Santo	2005	68,896,220	36,018,868	64,386,601	3,233,909	245,841	172,781,438
Goiás	2005	105,423,769	51,086,484	103,961,915	3,294,454	5,301,881	269,068,504
Maranhão	2005	26,773,435	11,442,532	18,383,046	1,067,252	357,169	58,023,433
Mato Grosso	2005	56,347,039	24,999,647	54,798,394	1,577,085	3,923,928	141,646,093
Mato Grosso do Sul	2005	80,646,065	23,708,723	40,694,716	1,248,890	4,172,225	150,470,619
Minas Gerais	2005	575,955,002	193,450,707	424,336,437	18,816,203	11,892,335	1,224,450,684
Pará	2005	47,703,127	17,234,505	37,279,124	1,345,497	281,533	103,843,785
Paraíba	2005	17,412,849	9,979,278	15,646,569	1,618,420	67,773	44,724,889
Paraná	2005	424,432,590	179,644,449	374,647,158	23,557,091	15,939,522	1,018,220,810
Pernambuco	2005	133,942,170	60,792,249	123,949,212	2,958,237	218,289	321,860,156
Piauí	2005	8,729,496	7,380,212	12,947,500	613,980	59,192	29,730,381
Rio de Janeiro	2005	885,535,325	202,607,375	868,436,026	54,523,026	772,251	2,011,874,002
Rio Grande do Norte	2005	11,481,839	9,687,821	24,884,635	1,579,735	64,183	47,698,213
Rio Grande do Sul	2005	510,225,945	191,561,341	350,928,635	18,561,340	44,981,348	1,116,258,609
Rondonia	2005	6,836,397	6,521,476	10,604,832	252,634	91,089	24,306,429
Roraima	2005	1,445,742	6,397,992	1,485,085	67,411	22,743	9,418,974

Tabela 2n – Cont.

State of Brazil	Year	1 Soc. Protect.	2 Liability	3 Property	4 Commercial	5 Agriculture	Total
Santa Catarina	2005	200,094,642	123,972,987	228,186,649	6,241,917	4,515,454	563,011,649
São Paulo	2005	4,441,535,700	947,161,463	3,185,509,340	281,401,002	14,890,977	8,870,498,482
Sergipe	2005	15,832,991	6,649,097	13,047,932	503,317	48,133	36,081,469
Tocantins	2005	8,208,439	1,728,426	8,720,509	221,478	136,978	19,015,830
Total	2005	8,081,451,518	2,274,536,112	6,443,215,322	572,623,215	110,683,928	17,482,510,09
Acre	2006	3,516,796	2,776,223	1,085,755	287,879	8,399	7,675,051
Alagoas	2006	11,108,383	13,230,554	20,693,394	1,962,602	87,839	47,082,773
Amapa	2006	3,788,525	2,267,624	2,633,320	513,032	2,245	9,204,746
Amazonas	2006	61,719,100	18,866,636	40,238,080	2,827,141	14,681	123,665,638
Bahia	2006	264,387,877	77,044,649	182,472,166	24,692,599	1,951,779	550,549,071
Ceara	2006	163,625,628	50,246,851	79,992,192	6,201,100	456,162	300,521,935
DF	2006	249,054,171	73,076,627	263,348,273	132,340,298	2,533,587	720,352,956
Espírito Santo	2006	103,813,362	54,391,042	79,924,669	6,035,258	611,528	244,775,859
Goiás	2006	175,864,130	74,197,661	119,228,191	15,865,014	6,928,111	392,083,106
Maranhão	2006	41,619,328	17,850,335	2,760,056	11,597,000	18,788,531	92,615,251
Mato Grosso	2006	87,201,375	39,789,939	58,307,503	3,514,755	5,590,331	194,403,903
Mato Grosso do Sul	2006	92,776,143	33,848,986	45,035,494	2,999,725	5,716,579	180,376,926
Minas Gerais	2006	785,840,212	276,412,616	135,539,326	36,754,054	354,153,154	1,588,699,362
Pará	2006	79,471,778	27,147,021	56,373,078	3,147,831	315,113	166,454,821
Paraíba	2006	38,952,860	14,444,142	18,176,300	4,054,337	123,506	75,751,145
Paraná	2006	628,637,388	248,719,593	420,394,845	30,104,530	33,356,429	1,361,212,786
Pernambuco	2006	202,466,393	98,285,989	154,184,386	6,351,607	251,768	461,540,144
Piauí	2006	10,195,054	13,058,795	16,415,127	1,244,754	46,211	40,959,941
Rio de Janeiro	2006	1,318,662,858	261,443,252	993,557,894	83,841,096	542,535	2,658,047,635
Rio Grande do Norte	2006	14,675,081	22,079,619	32,052,152	2,762,231	125,232	71,694,316
Rio Grande do Sul	2006	727,084,720	269,990,359	394,574,558	30,427,865	59,469,225	1,481,546,728
Rondônia	2006	8,344,559	12,323,881	13,215,781	626,332	73,221	34,583,775
Roraima	2006	1,922,328	2,130,771	1,673,059	146,791	29,150	5,902,100
Santa Catarina	2006	296,138,121	169,040,860	257,251,564	11,561,841	8,310,894	742,303,281
São Paulo	2006	5,723,184,554	1,265,265,344	3,779,041,043	361,708,988	22,684,577	11,151,884,507
Sergipe	2006	11,949,078	9,704,171	15,851,952	1,195,354	69,193	38,769,748
Tocantins	2006	6,638,608	7,821,985	10,981,937	498,271	148,918	26,089,719
Total	2006	11,112,638,409	3,155,455,527	7,195,002,096	783,262,287	522,388,900	22,768,747,220

Source: SUSEP, at www.susep.gov.br. US\$ conversion rate available at www.imf.org, rf rate. Data in R\$ nominal value converted to US\$ at the IMF rf, period average rate.

After conversion to US\$ table 2h becomes table 2o:

Table 2o – Volume of Insurance Premium, Selected Contracts, 2001–2006, in US\$

State of Brazil	Year	88 – DPVAT auto liability (all types of vehicles)	18 – Commercial Multiple Peril	67 – Engineering Risks Insurance	68 – Mortgage Ins. out of the Housing Fin. System)	63 – Rural Pledge Ins. – Public Fin. Instit.
Bahia	2001	5,060,765	0	9,138,734	3,372	0
DF	2001	12,022,716	0	243,014	70,454,728	6,944,452
Minas Gerais	2001	15,553,629	0	2,417,222	395,451	0
Other states	2001	3,974,580	0	708,893	272,280	0
Parana	2001	23,780,404	0	1,682,037	4,128,627	0
Pernambuco	2001	7,660,017	0	264,925	26,831	0
Rio de Janeiro	2001	147,671,949	0	16,253,561	9,795,833	1,039
Rio Grande do Sul	2001	19,709,977	0	2,042,138	1,327,782	0
Santa Catarina	2001	0	0	2,205,137	144,587	0
São Paulo	2001	294,329,564	0	32,780,963	36,645,203	6,229,245
Total	2001	529,763,601	0	67,736,625	123,194,693	13,174,735
Espírito Santo	2002	4,768,651	0	1,944,448	2,561	19,046
DF	2002	18,026,001	0	684,867	71,624,707	15,275
Minas Gerais	2002	18,547,806	0	3,931,763	225,168	55,175
Other states	2002	3,965,707	0	718,659	129,048	129,157
Parana	2002	12,198,993	0	820,109	2,700,312	44,928
Pernambuco	2002	3,585,262	0	2,177,609	92,518	3,538
Rio de Janeiro	2002	123,843,284	0	29,003,990	8,124,568	534
Rio Grande do Sul	2002	11,739,163	0	2,067,113	1,122,559	168,619
Santa Catarina	2002	0	0	445,056	76,554	17,545
São Paulo	2002	270,738,239	0	28,844,910	30,671,010	12,805,083
Total	2002	467,413,105	0	70,638,522	114,769,006	13,258,900
Acre	2003	711,917	74,551	5,604	0	740
Alagoas	2003	2,550,621	256,093	22,800	5,018	8,342
Amapa	2003	520,378	31,495	501	0	0
Amazonas	2003	2,434,988	813,276	14,082	5,523	1,278
Bahia	2003	11,871,725	4,598,048	1,450,432	3,387,588	1,039,794
Ceará	2003	9,506,042	1,854,926	162,522	3,460,054	18,758
DF	2003	13,061,715	3,142,909	268,761	14,269,395	311,654
Espírito Santo	2003	7,845,444	1,825,759	101,314	851,636	131,953
Goiás	2003	15,035,739	2,892,509	79,384	2,435,134	3,873,883
Maranhão	2003	3,266,685	401,824	11,514	93,283	145,605
Mato Grosso	2003	4,166,639	1,975,866	36,641	395,197	3,354,648
Mato Grosso do Sul	2003	4,166,639	1,975,866	36,641	395,197	3,354,648
Minas Gerais	2003	45,971,615	12,238,421	2,406,189	7,511,411	2,708,174
Pará	2003	4,600,578	2,058,892	114,797	1,173,573	73,059
Paraíba	2003	3,729,383	309,974	1,850	368,223	6,115
Paraná	2003	39,158,971	18,641,603	1,722,630	6,648,610	6,186,084
Pernambuco	2003	11,563,897	4,563,268	228,922	2,356,219	36,790
Piauí	2003	2,307,708	309,657	2,115	901	23,360

Tabela 2o – Cont.

State of Brazil	Year	88 – DPVAT auto liability (all types of vehicles)	18 – Commercial Multiple Peril	67 – Engineering Risks Insurance	68 – Mortgage Ins. out of the Housing Fin. System)	63 – Rural Pledge Ins. – Public Fin. Instit.
Rio de Janeiro	2003	31.671.982	30.083.597	12.566.085	16.949.339	20.601
Rio Grande do Norte	2003	4.381.669	536.500	5.716	369.751	24.197
Rio Grande do Sul	2003	44.042.825	19.999.685	1.196.140	6.116.487	6.438.638
Rondônia	2003	1.200.626	246.386	1.007	257	19.257
Roraima	2003	512.210	10.555	0	110	430
Santa Catarina	2003	26.130.418	9.932.897	847.924	2.344.001	987.316
São Paulo	2003	172.453.736	121.760.361	23.432.772	46.548.242	2.815.998
Sergipe	2003	1.803.514	184.973	14.679	35.594	1.881
Tocantins	2003	1.529.420	110.736	195.148	330	112.048
Total	2003	466.197.082	240.830.625	44.926.171	115.721.072	31.695.252
Acre	2004	769.018	74.787	4.368	0	2.557
Alagoas	2004	2.818.054	348.510	7.589	4.048	19.424
Amapá	2004	582.991	50.126	913	0	1.334
Amazonas	2004	3.111.935	1.570.219	32.001	3.922	4.151
Bahia	2004	13.951.606	5.816.983	6.004.485	2.774.499	1.274.033
Ceará	2004	11.003.798	2.710.814	159.799	842.247	26.087
DF	2004	14.300.077	4.938.468	815.377	15.499.276	428.463
Espírito Santo	2004	9.820.214	1.901.353	49.982	908.783	185.152
Goiás	2004	17.415.106	4.455.101	389.609	894.579	5.330.160
Maranhão	2004	3.899.459	512.256	668.532	103.854	227.789
Mato Grosso	2004	5.272.958	3.190.638	90.390	830.952	4.396.300
Mato Grosso do Sul	2004	5.272.958	3.190.638	90.390	830.952	4.396.300
Minas Gerais	2004	58.829.743	15.121.083	4.863.477	9.560.733	4.047.469
Pará	2004	5.514.947	2.851.058	4.553	26.193	151.299
Paraíba	2004	3.714.284	381.075	2.656	810.669	13.082
Paraná	2004	45.561.639	24.612.325	1.621.814	7.140.724	9.037.556
Pernambuco	2004	13.198.475	6.599.318	535.630	837.496	79.087
Piauí	2004	2.495.395	394.688	18.012	284	57.709
Rio de Janeiro	2004	38.953.279	33.240.797	8.496.978	20.661.720	63.954
Rio Grande do Norte	2004	4.773.168	794.859	8.262	813.001	24.869
Rio Grande do Sul	2004	50.557.152	27.046.325	910.195	6.407.255	9.894.922
Rondônia	2004	2.750.116	297.388	1.525	244	92.838
Roraima	2004	625.690	11.388	0	161	14.979
Santa Catarina	2004	29.982.639	13.899.360	286.394	2.647.940	2.007.054
São Paulo	2004	185.008.306	151.283.648	30.044.318	56.937.290	4.053.831
Sergipe	2004	2.216.303	351.709	5.793	31.572	2.783
Tocantins	2004	1.797.642	201.135	4.486	417	157.222
Total	2004	534.196.953	305.846.050	55.117.527	128.568.809	45.990.407
Acre	2005	2.246.242	162.535	2.022	45.108	3.794

Tabela 2o – Cont.

State of Brazil	Year	88 – DPVAT auto liability (all types of vehicles)	18 – Commercial Multiple Peril	67 – Engineering Risks Insurance	68 – Mortgage Ins. out of the Housing Fin. System)	63 – Rural Pledge Ins. – Public Fin. Instit.
Alagoas	2005	5.169.291	518.933	42.841	514.217	16.030
Amapá	2005	1.001.258	95.725	130.093	202.987	3.307
Amazonas	2005	5.314.632	2.545.188	39.556	364.667	7.150
Bahia	2005	22.660.659	7.474.200	2.790.868	3.377.125	1.076.880
Ceará	2005	18.361.738	3.280.975	170.231	1.453.312	27.699
DF	2005	17.158.997	14.611.060	1.934.531	36.668.563	613.929
Espírito Santo	2005	16.095.024	2.608.999	412.978	1.288.620	233.987
Goiás	2005	27.472.958	5.625.122	569.724	1.506.668	5.210.217
Maranhão	2005	7.345.223	752.193	59.473	696.971	248.200
Mato Grosso	2005	8.949.666	5.661.045	382.128	858.645	3.459.481
Mato Grosso do Sul	2005	12.020.256	3.136.551	108.815	698.997	3.378.022
Minas Gerais	2005	87.511.114	19.322.975	9.498.457	9.436.292	4.285.269
Pará	2005	9.254.464	2.808.544	82.655	737.482	162.809
Paraíba	2005	6.657.402	494.702	5.741	799.114	18.361
Paraná	2005	66.926.765	33.461.277	1.642.993	7.282.891	11.486.011
Pernambuco	2005	22.028.228	8.140.903	1.028.154	1.390.066	100.547
Piauí	2005	4.546.677	549.697	21.857	421.023	57.586
Rio de Janeiro	2005	56.474.201	41.400.029	20.254.784	22.058.338	62.539
Rio Grande do Norte	2005	3.589.857	1.062.032	-186.892	803.439	19.516
Rio Grande do Sul	2005	68.864.092	35.066.934	4.223.093	7.137.688	11.335.120
Rondônia	2005	3.776.826	575.166	2.407	173.298	90.389
Roraima	2005	6.208.007	172.340	0	45.291	22.743
Santa Catarina	2005	46.812.602	19.578.950	1.384.654	2.897.787	2.623.178
São Paulo	2005	267.131.391	186.480.420	45.926.960	65.198.845	4.120.916
Sergipe	2005	3.901.934	423.530	11.884	461.464	5.688
Tocantins	2005	145	362.344	5.598	181.100	137.618
Total	2005	797.479.648	396.372.369	90.545.601	166.699.998	48.806.987
Acre	2006	2.554.518	183.289	18.239	95.395	8.070
Alagoas	2006	7.996.377	823.849	60.469	1.084.811	21.303
Amapá	2006	1.637.643	160.931	1.353	429.278	2.245
Amazonas	2006	8.357.114	4.125.324	125.191	770.863	11.388
Bahia	2006	36.803.511	7.869.866	6.637.261	6.946.141	1.293.198
Ceará	2006	28.927.395	0	962.697	3.058.013	34.438
DF	2006	34.902.245	17.330.282	7.922.880	35.655	651.833
Espírito Santo	2006	27.040.216	3.388.710	1.970.545	2.631.290	446.669
Goiás	2006	0	6.200.663	1.331.732	3.145.648	6.264.889
Maranhão	2006	0	0	0	1.434.512	0
Mato Grosso	2006	21.354.634	5.427.315	761.149	1.842.746	2.877.384
Mato Grosso do Sul	2006	20.041.528	3.514.444	542.560	1.530.171	3.558.375
Minas Gerais	2006	146.141.071	23.178.333	14.744.042	19.366.939	0

Tabela 2o – Cont.

State of Brazil	Year	88 – DPVAT auto liability (all types of vehicles)	18 – Commercial Multiple Peril	67 – Engineering Risks Insurance	68 – Mortgage Ins. out of the Housing Fin. System	63 – Rural Pledge Ins. – Public Fin. Instit.
Pará	2006	15.549.782	3.755.980	6.716.721	1.562.704	164.909
Paraíba	2006	10.327.531	698.478	12.862	1.692.266	14.561
Paraná	2006	111.419.393	38.193.800	1.695.460	10.879.257	12.754.527
Pernambuco	2006	35.381.386	10.164.624	760.565	2.944.928	105.692
Piauí	2006	9.381.157	704.595	8.776	890.365	44.080
Rio de Janeiro	2006	98.262.708	48.033.744	22.206.003	33.971.579	77.110
Rio Grande do Norte	2006	13.995.777	1.227.835	52.044	1.723.863	31.457
Rio Grande do Sul	2006	116.935.002	40.757.810	1.189.753	13.385.492	14.097.724
Rondônia	2006	8.420.788	770.560	16.434	367.559	61.219
Roraima	2006	1.899.107	206.705	1.832	95.563	27.516
Santa Catarina	2006	75.585.014	22.761.532	4.287.106	6.014.961	3.407.755
São Paulo	2006	439.163.398	220.338.683	45.952.150	105.543.170	4.638.545
Sergipe	2006	6.047.859	494.791	72.884	995.368	6.998
Tocantins	2006	5.634.313	408.941	15.541	385.150	122.408
Total	2006	1.283.759.464	460.721.083	118.066.250	222.823.687	50.724.296

Source: SUSEP, at www.susep.gov.br. US\$ conversion rate available at www.imf.org, rf rate. Data in R\$.

4. Small and medium-sized enterprises and startups

This Chapter presents tables and data definitions of small and medium-sized enterprises, (SMEs), one of the many known indicators of entrepreneurship. This chapter has five tables on SME's: Table 3a shows SMEs' total volume of revenue calculated in Reais, R\$, and table 3e has the same data converted to US\$. Table 3b shows the number of SMEs declaring earnings, filling taxes, or, in other words, within the formal economy in Brazil. The Brazilian IRS is the source of these data (tables 3a and 3b). Table 3c shows the number of start-up companies on each state, and table 3d shows the number of start-ups that are Limited Liability Companies, or LLCs²³, on each state. The Brazilian Department of Commerce is the source of these data (tables 3c and 3d).

Table 3d focuses on LLCs due to their relevance as one of many indicators of entrepreneurship. In Brazil, individuals willing to start a legal entity to evade taxes and bypass labor laws look for other than LLCs (LLPs, associations, not-for-profits, etc.). LLCs have burdensome requirements to start and continue business activity, which makes those willing to start LLCs more prone to perform entrepreneurial activity than those starting other legal entities.

²³ Limited Liability Companies, LLCs, are known in Brazil as sociedade de responsabilidade civil limitada, LTDA. In this particular type of company, stakeholders are only liable for the total value of their quotas. Stakeholders' assets cannot be sold to satisfy outstanding credits and liabilities, according to Brazilian legislation. The legal, accounting, and bureaucratic requirements are more burdensome than other legal entities usually created by tax evaders. Hence, LLCs are a very good variable to measure real startup entrepreneurial companies.

The definition of SME is plenty in the Brazilian legislation. Definitions usually take into consideration labor statutes and rules on revenue limits. Brazil has mainly two statutes defining SMEs: the MERCOSUR resolution (GMC no. 59 of 1998) and SME Act (Act 9841, 1999). The former statute assists bankers in underwriting procedures for export lending. The latter statute further defines the broad Constitutional principles²⁴ that mandate government to stimulate SMEs with lower taxes and simpler rules. The Brazilian IRS definition of SME tackles both constitutional requests.

The IRS rule states that if a company has revenue under R\$1.2 million, per year, the tax aliquot is up to 8%, and if the company has revenue between R\$1,2 million and R\$2.4 million, per year, it is subject to a 16% aliquot.²⁵ Compared to what is demanded from large companies, this rule puts SMEs in a lower tax bracket and under simplified rules. The name of this simplified tax system for SMEs is SIMPLES (simple system). SMEs' declared revenue is the best estimate of the total level of wealth created by entrepreneurs in the formal sector. Thus, IRS's data and definition of SMEs are the best indicators for the purposes of this document.

Table 3a shows volume of revenue in thousands of R\$, while table 3b shows the number of SMEs in each state. The data in tables 3a and 3b are defined as follow

1. Definition of variables: volume of revenue and number of companies on each state that paid federal taxes on that year under SIMPLES²⁶ (simple system).
2. Source of information: COREM, at the Brazilian IRS, attending a special request of the authors. Broad data on the topic can be found at www.receita.fazenda.gov.br/historico/EstTributarios/Estatisticas/default.htm.
3. Availability of information: The data are available from 1998 to 2003. Aggregate data (i.e. not divided by states) are available on the website.
4. Method used to collect information: administrative. This information is collected from SIMPLES tax fillings. The data represent total output of all SMEs on the "formal economy." There are many SMEs outside²⁷ the "formal economy." The data presented in this document does not include any estimates about SMEs out of the formal economy.

²⁴ These principles are in the Brazilian Federal Constitution's articles 170 and 179.

²⁵ These aliquots represent the minimum tax paid by a legal entity to be allowed to establish a business in Brazil.

²⁶ Legislative Act 9317, of December 5, 1996, created SIMPLES as a federal tax collection bracket and program. On July 1, 2007, it will be updated with the National SIMPLES, as defined by Article 89 of Act 123 from December 14, 2006. It has been recently reenacted in July 2007 under the denomination of "Super Simples Tax System."

²⁷ These SMEs do not pay SIMPLES tax or most taxes.

- 4.1 SMEs out of the formal economy (informal SMEs) – The number of SMEs in this category is impressive: 10 million. But their total revenue is only six percent of that of formal sector SMEs. In fact, 92%²⁸ of informal SMEs are beneath the lowest income tax bracket.²⁹
 - 4.2 Tax evasion and SMEs – The 10 million informal SMEs are a small part of informality in Brazil, which is roughly 40% of the GDP, according to a McKinsey³⁰ report and several other estimates. Informal SMEs total revenue represents 0.48% of Brazilian companies' revenue.³¹ Thus, most of the informal economy in Brazil trades away from the informal SMEs universe.
 - 4.3 Informal economy and large companies – Many large companies trade on both sides of the formal economy. Some large companies declare only part of their revenue, or even part of their activities, using strategies that range from simply making informal payments to officials and withholding information, to complicated tax-engineering schemes. These large companies, and not the 10 million SMEs, represent most of the informal economy problem in Brazil.³²
 - 4.4 Other elements in the Brazilian informality – Corruption and illegal activities are very large sources of wealth in the country. Illegal activities such as: gambling, criminal organizations, drug dealing, weapons smuggling and money laundering are likely to contaminate part of the revenue declared by SMEs, but there is no statistical evidence about that.
 - 4.5 Conclusion – The SMEs SIMPLES tax data is the best available source to measure entrepreneurship, even though it lacks information about the informal SMEs.
- 5 Frequency of the information: SIMPLES tax data starts in 1998 and goes up to 2003 on a yearly basis.

Table 3c presents start-up companies registered by state trade associations. This data includes all commercial legal entities in the same group: For-profit companies, large companies, joint-stock companies, LLCs, individual companies, and legal entities used as vehicles for tax and labor laws evasion. This table is a very good

²⁸ This 92% estimate is based on an IBGE-SEBRAE study, available at http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=366&id_pagina=1.

²⁹ Which is R\$ 12,000 per year, or approximately US\$ 6,500 per year, with July 2007 exchange rates.

³⁰ See page, http://www.mckinsey.com/ideas/pdf/Diagnostico_da_Informalidade-final.pdf.

³¹ According to IBGE SEBRAE data, Informal SMEs total revenue is 6% of formal SMEs' revenue. Formal SMEs total revenue is 8% of large companies' revenue. Thus, 0.48% is the market share of SMEs in the large picture.

³² Unfortunately, there is very little data and research on the topic, other than off-the-record information shared by high-level officials in the country. Rule of law is lacking in Brazil, as it is in most developing countries, which makes it difficult to find data on this type of operations.

depository of start-up companies, but it is hardly a measure of entrepreneurship. The data in table 3c are defined as follow:

1. Definition of variables: Number of start-up companies in each state, according to the state trade association. The state registration number – the CNPJ (National Charter for Legal Entities) – is the number companies use to pay taxes.
2. Source of information: The state registries database fills the national database from the Department of Commerce. <http://www.dnrc.gov.br/>.
3. Availability of information: 1995-2005.
4. Method used to get the information: Administrative.
5. Frequency of the information: Yearly.

Table 3a – Total Revenue of SMEs, 1998-2003, in Millions R\$

State of Brazil	2003	2002	2001	2000	1999	1998
Acre (AC)	191.6	216.6	169.6	156	113.4	90.5
Alagoas (AL)	835.5	814.2	624.3	550.8	421.6	380.9
Amapá (AP)	182.8	171.8	146	126.3	97.5	87.9
Amazonas (AM)	849.4	887.7	697	576.8	439.6	372.9
Bahia (BA)	7,101.50	6,564.50	5,710.10	4,940.40	3,570.10	2,688.20
Ceará (CE)	2,870.00	3,132.30	2,291.00	2,034.80	1,617.30	1,431.10
Distrito Federal (DF)	3,397.00	2,898.60	2,557.80	2,340.60	2,006.70	1,724.20
Espírito Santo (ES)	2,452.50	2,592.90	1,970.60	1,723.60	1,397.40	1,259.40
Goiás (GO)	5,652.00	6,078.60	4,150.90	3,492.80	2,568.80	2,034.80
Maranhão (MA)	1,314.40	1,233.60	1,062.00	985	776.5	686.2
Mato Grosso (MT)	2,509.10	2,123.60	1,778.80	1,513.50	1,195.10	987.4
Mato Grosso do Sul (MS)	1,911.20	1,712.20	1,515.90	1,321.00	1,049.00	875.5
Minas Gerais (MG)	20,695.10	18,238.40	15,683.20	14,000.50	12,309.90	9,977.40
Para (PA)	1,791.70	1,655.90	1,385.30	1,207.50	965.2	846.3
Paraíba (PB)	1,300.80	1,263.50	1,089.10	970.1	789.8	691.8
Paraná (PR)	15,362.30	12,752.00	10,983.50	9,521.60	7,653.10	6,676.40
Piauí (PI)	3,232.20	3,214.00	2,717.60	2,417.60	1,934.80	1,577.70
Pernambuco (PE)	863.8	913.7	662.2	597.8	462.4	520.6
Rio de Janeiro (RJ)	14,355.50	13,650.70	12,324.40	10,923.00	9,006.70	7,695.60
Rio Grande do Norte (RN)	1,354.00	1,283.10	1,074.30	925.2	723	623.7
Rio Grande do Sul (RS)	17,125.90	16,135.70	13,325.80	11,734.10	9,515.50	8,431.60
Roraima (RR)	1,143.10	1,110.20	905.9	859.5	695.2	482.2
Rondônia (RO)	199.6	209.7	196.6	171	113.7	109.1
Santa Catarina (SC)	11,743.20	10,723.10	8,591.70	7,195.50	5,473.60	4,380.10
Sao Paulo (SP)	60,229.10	54,926.20	48,681.70	42,497.50	34,469.50	30,083.50
Sergipe (SE)	829.3	1,399.40	655.8	572.6	453.7	429.5
Tocantins (TO)	891.6	820	687.1	543.8	409.2	318.1
Total – Brasil	180,384.30	166,722.40	141,638.40	123,898.80	100,228.20	85,462.70

Source: MF/SRF/COPAT, Anuário Estatístico do IR, income tax annual statistical book, Ministry of Finance; data in R\$.

Table 3b – Number of SMEs, 1998-2003

State of Brazil	2003	2002	2001	2000	1999	1998
Acre (AC)	2,303	2,369	2,383	2.406	2,067	1,745
Alagoas (AL)	11,319	11,235	11,130	11.067	10,140	7,636
Amapá (AP)	2,077	2,119	2,114	2.004	1,825	1,409
Amazonas (AM)	8,709	9,099	9,076	8.746	7,793	6,252
Bahia (BA)	74,041	75,500	75,451	72.784	65,376	50,960
Ceara (CE)	46,763	47,907	47,596	47.000	43,434	35,684
Distrito Federal (DF)	24,405	25,160	24,429	24.750	22,711	18,646
Espírito Santo (ES)	32,437	32,365	31,123	30.588	29,091	25,780
Goiás (GO)	54,192	54,209	53,040	50.587	46,154	37,210
Maranhão (MA)	16,998	17,276	17,134	16.864	15,871	14,424
Mato Grosso (MT)	23,273	23,409	22,822	21.159	19,760	15,977
Mato Grosso do Sul (MS)	19,814	20,142	20,260	19.770	18,535	14,994
Minas Gerais (MG)	224,509	229,454	228,931	229.171	220,309	188,172
Para (PA)	16,414	16,377	15,861	14.835	13,239	10,957
Paraíba (PB)	18,237	18,724	18,763	18.421	16,874	13,679
Paraná (PR)	145,925	142,118	140,210	137.167	130,030	111,363
Pernambuco (PE)	37,733	38,605	38,840	37.869	34,622	28,420
Piauí (PI)	12,261	12,176	12,372	12.452	11,679	9,537
Rio de Janeiro (RJ)	119,619	125,785	126,943	124.649	119,492	106,534
Rio Grande do Norte (RN)	15,324	15,578	15,168	14.489	13,273	10,777
Rio Grande do Sul (RS)	192,843	194,924	193,841	191.962	181,001	154,982
Rondônia (RO)	10,577	10,834	10,972	10.862	10,115	7,575
Roraima (RR)	2,024	2,183	2,209	2.172	1,987	1,530
Santa Catarina (SC)	106,424	104,802	101,983	99.025	91,501	76,693
Sao Paulo (SP)	576,612	581,167	571,696	558.688	529,076	455,848
Sergipe (SE)	8,732	8,598	8,508	8.449	8,046	7,139
Tocantins (TO)	8,221	8,316	8,613	8.134	7,282	6,057
Total – Brasil	1,811,786	1,830,431	1,811,468	1.776.070	1,671,283	1,418,507

Source: MF/SRF/COPAT, Anuário Estatístico do IR, income tax annual statistical book, Ministry of Finance; data in R\$.

Table 3d presents start-up companies created as LLCs. The data in table 3d are defined as follow

1. Definition of variables: Number of start-up LLC companies registered on state trade associations. The state registration is necessary to earn the CNPJ, which is the number companies use to pay taxes and contract with other companies.
2. Source of information: The state registries database fills the national database from the Department of Commerce. <http://www.dnrc.gov.br/>.
3. Availability of information: 1995-2005.
4. Method used to get the information: Administrative.
5. Frequency of the information: Yearly.

Table 3c – Number of Startup Companies, 1995-2005

State of Brazil	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995
Acre (AC)	1,165	1,097	1,222	901	1,101	1,177	959	930	979	912	941
Alagoas (AL)	4,041	3,809	3,642	3,709	3,851	4,582	5,231	5,322	4,906	5,149	4,588
Amazonas (AM)	4,386	4,041	4,071	4,269	4,964	4,611	6,035	4,168	4,974	4,948	4,906
Amapá (AP)	1,331	1,211	1,526	1,253	1,361	1,311	1,308	1,029	1,222	1,297	1,181
Bahia (BA)	28,952	25,858	24,922	26,22	28,703	27,313	28,769	29,309	29,451	25,603	23,704
Ceará (CE)	14,467	13,006	12,977	13,339	13,815	13,305	14,218	14,074	15,353	15,786	18,392
Distrito Federal (DF)	15,168	7,809	7,935	9,127	9,482	8,974	10,107	8,312	12,194	8,025	7,994
Espírito Santo (ES)	9,383	8,849	8,953	8,862	9,187	8,284	7,732	7,543	9,619	9,125	9,619
Goiás (GO)	18,231	19,794	16,938	15,456	18,292	12,716	16,519	15,296	16,871	14,625	14,787
Maranhão (MA)	7,693	6,139	6,423	6,841	8,841	6,994	8,028	7,967	9,492	8,581	8,471
Mato Grosso (MT)	6,125	6,296	5,899	5,984	7,047	6,471	6,817	6,214	6,851	6,098	6,139
Minas Gerais (MG)	49,405	47,443	45,801	46,712	51,154	51,014	52,142	52,463	58,235	53,562	57,316
Mato Grosso do Sul (MS)	9,885	9,533	8,877	8,895	10,204	8,982	8,181	8,394	8,883	7,966	8,786
Pará (PA)	8,372	7,609	7,095	6,852	8,159	8,196	7,367	6,826	7,355	6,758	5,715
Paraíba (PB)	4,534	4,078	4,213	5,603	5,954	6,235	7,597	6,396	6,334	4,871	4,514
Pernambuco (PE)	15,783	14,294	12,907	13,794	15,192	15,177	15,503	16,225	17,614	16,628	15,827
Piauí (PI)	3,934	3,014	3,193	2,886	3,562	3,216	3,551	3,017	3,289	2,541	2,814
Paraná (PR)	40,482	37,643	36,349	35,584	38,883	36,280	37,815	36,843	40,689	36,938	37,346
Rio de Janeiro (RJ)	27,598	27,031	39,872	27,537	29,788	27,285	29,815	27,851	34,428	30,995	32,356
Rio Grande do Norte (RN)	7,457	5,017	8,603	4,824	4,976	4,765	4,851	4,753	6,317	4,511	5,145
Rondônia (RO)	3,292	3,318	3,009	2,939	3,506	3,795	3,569	3,471	4,222	3,049	4,174
Roraima (RR)	894	859	913	827	1,143	1,076	1,564	1,067	1,014	1,215	1,192
Rio Grande do Sul (RS)	44,745	44,266	42,812	39,086	46,965	44,589	45,489	43,403	53,808	49,403	60,871
Santa Catarina (SC)	25,647	23,923	22,672	24,074	26,016	24,462	24,781	25,559	28,927	27,719	30,407
Sergipe (SE)	3,122	2,977	2,729	2,744	3,014	3,451	3,453	3,431	3,278	2,991	2,618
São Paulo (SP)	131,358	129,185	136,033	124,028	132,351	123,069	123,450	124,663	143,628	130,687	147,853
Tocantins (TO)	3,123	2,891	2,638	2,837	3,378	3,278	3,307	2,695	3,307	2,762	3,235
Total – Brasil	490,542	460,983	472,213	445,158	490,916	460,665	477,359	467,134	533,221	482,697	519,492

 Sources: State trade associations, national Department of Commerce, legal entities registry, available at www.dnrc.gov.br.

Table 3d – Number of Startup Companies registered as LLCs, 1995-2005

State of Brazil	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995
Acre (AC)	298	273	342	286	323	321	249	244	282	275	307
Alagoas (AL)	1,364	1,311	1,197	1,282	1,399	1,567	1,346	1,479	1,405	1,276	1,379
Amazonas (AM)	1,251	1,116	1,249	1,256	1,365	1,316	1,435	1,405	1,785	1,634	1,705
Amapá (AP)	370	293	467	266	310	266	280	166	276	265	247
Bahia (BA)	11,793	10,706	10,509	11,639	12,948	12,501	12,304	13,507	14,128	12,106	11,738
Ceara (CE)	4,219	3,752	3,863	4,014	4,075	3,841	3,923	3,922	3,976	3,379	3,525
Distrito Federal (DF)	5,438	4,979	4,852	5,016	4,399	4,073	4,472	4,468	5,078	4,795	5,174
Espírito Santo (ES)	9,991	4,997	4,941	5,566	5,661	5,563	5,933	4,966	6,537	5,096	5,084
Goiás (GO)	10,236	10,273	10,227	10,058	10,857	8,236	9,805	8,512	9,303	7,525	7,819
Maranhão (MA)	1,900	1,645	1,897	2,028	2,775	2,076	2,373	2,155	2,384	2,052	2,248
Mato Grosso (MT)	2,779	2,857	2,723	2,881	3,177	2,923	2,827	2,721	2,956	2,578	2,664
Minas Gerais (MG)	27,974	27,647	24,811	25,426	27,400	27,947	25,406	24,432	25,954	24,651	28,418
Mato Grosso do Sul (MS)	4,301	4,206	3,602	3,654	4,319	3,806	3,254	3,307	3,497	3,059	3,487
Para (PA)	3,675	3,262	3,152	3,223	3,947	3,733	3,517	3,158	3,215	2,537	1,983
Paraná (PR)	1,431	1,233	1,401	2,002	2,027	2,007	1,818	1,828	1,883	1,578	1,637
Pernambuco (PE)	5,451	5,24	4,914	5,808	6,226	6,069	6,146	6,613	6,993	6,354	6,356
Piauí (PI)	1,068	937	979	1,074	1,296	1,141	1,095	735	678	455	551
Paraná (PR)	23,876	22,407	21,095	22,321	24,293	22,518	21,918	20,817	21,727	18,411	19,181
Rio de Janeiro (RJ)	20,178	20,357	29,586	20,695	22,033	20,389	21,162	20,127	24,158	22,829	24,401
Rio Grande do Norte (RN)	2,627	1,858	3,211	1,829	1,828	1,745	1,517	1,429	1,762	1,345	1,627
Rondônia (RO)	1,797	1,757	1,592	1,490	1,679	1,723	1,497	1,364	1,489	1,212	1,737
Roraima (RR)	260	235	241	226	351	301	339	207	197	260	310
Rio Grande do Sul (RS)	20,333	19,748	19,419	18,300	21,133	19,866	19,249	18,531	22,526	19,805	26,227
Santa Catarina (SC)	16,263	15,259	13,993	15,870	16,928	15,972	15,448	16,046	17,532	15,703	17,039
Sergipe (SE)	1,803	1,771	1,545	1,565	1,816	2,069	2,055	1,893	1,834	1,607	1,428
São Paulo (SP)	64,642	66,713	67,572	58,570	61,439	58,466	58,758	58,785	71,422	64,986	77,041
Tocantins (TO)	1,420	1,247	1,156	1,204	1,394	1,225	1,043	879	1,077	971	1,283
Total – Brasil	246,726	236,072	240,530	227,549	245,398	231,654	229,162	223,689	254,029	226,721	254,581

Sources: State trade associations, national Department of Commerce, legal entities registry, available at www.dnrc.gov.br.

4.1. Appendix – Small and medium-sized enterprises data, in US\$

Table 3a, which details the volume of revenue for all taxpaying SMEs, was converted to US\$. The US\$ rate used in the conversion was the IMF rf rate. All the remaining tables list only the number of SMEs in the market.

Chapter 4 presented five tables showing SMEs under different measures of performance in the past 10 years. Revenue, number of companies paying taxes, number of companies registered with the state trade associations, and, finally, number of LLCs, are the indicators used in this chapter to measure SMEs. SMEs are a reliable measure of entrepreneurship.

But, in order to run regressions and identify a relation between insurance and entrepreneurship, future research will need to use control variables. Chapter 4 presents a good number of those over the next 19 tables.

Table 3e – Total Revenue of SMEs, 1998-2003, in thousands US\$

State of Brazil	2003	2002	2001	2000	1999	1998
Acre (AC)	62,267	74,157	71,934	85,239	62,489	77,982
Alagoas (AL)	271,523	278,756	264,791	300,961	232,321	328,215
Amazonas (AM)	276,040	303,920	295,626	315,167	242,240	321,321
Amapá (AP)	59,407	58,819	61,924	69,011	53,727	75,742
Bahia (BA)	2,307,862	2,247,478	2,421,884	2,699,466	1,967,290	2,316,375
Ceará (CE)	932,699	1,072,401	971,706	1,111,828	891,207	1,233,154
Distrito Federal (DF)	1,103,965	992,389	1,084,866	1,278,919	1,105,784	1,485,713
Espírito Santo (ES)	797,019	887,727	835,811	941,786	770,032	1,085,203
Goiás (GO)	1,836,800	2,081,121	1,760,564	1,908,488	1,415,527	1,753,352
Maranhão (MA)	427,157	422,346	450,437	538,210	427,887	591,287
Minas Gerais (MG)	6,725,543	6,244,252	6,651,878	7,649,961	6,783,323	8,597,353
Mato Grosso (MT)	621,106	586,203	642,954	721,803	578,047	754,403
Mato Grosso do Sul (MS)	815,413	727,054	754,461	826,986	658,555	850,825
Pará (PA)	582,271	566,928	587,562	659,786	531,870	729,242
Paraná (PR)	4,992,477	4,365,882	4,658,546	5,202,662	4,217,211	5,752,938
Paraíba (PB)	422,737	432,583	461,931	530,069	435,216	596,112
Pernambuco (PE)	1,050,408	1,100,372	1,152,644	1,320,992	1,066,164	1,359,477
Piauí (PI)	280,720	312,822	280,866	326,642	254,804	448,592
Rio de Janeiro (RJ)	4,665,284	4,673,569	5,227,276	5,968,396	4,963,107	6,631,165
Rio Grande do Norte (RN)	440,026	439,293	455,654	505,535	398,406	537,431
Rondônia (RO)	371,487	380,097	384,229	469,636	383,087	415,503
Roraima (RR)	64,866	71,795	83,386	93,435	62,654	94,010
Rio Grande do Sul (RS)	5,565,616	5,524,354	5,652,010	6,411,586	5,243,480	7,265,364
Santa Catarina (SC)	3,816,333	3,671,251	3,644,087	3,931,666	3,016,206	3,774,256
Sergipe (SE)	269,508	479,110	278,151	312,872	250,010	370,093
São Paulo (SP)	19,573,396	18,804,997	20,647,874	23,220,901	18,994,286	25,922,431
Tocantins (TO)	289,754	280,742	291,427	297,136	225,488	274,101
Total – Brasil	58,621,717	57,080,487	60,074,564	67,699,083	55,230,365	73,641,730

Note: Data in R\$, converted to US\$ at the IMF rf rate.

5. Control variables to include in the econometric analysis

This chapter presents 19 tables with control variables as population, education, infrastructure, housing, the financial sector, GDP, energy consumption, government spending on pensions, and health care. All these data are disaggregated by states of Brazil.

Table 4a presents population data, according to IBGE projections. The data are defined as follow:

1. Definition of variables: Population estimates disaggregated by Brazilian States.
2. Source of information: IBGE, population projections based on the Brazilian Demographic Census from 1980, 1991 and 2000. IBGE population projections use the method of demographic components (fertility, mortality and migration), which incorporates information related to mortality rates, birthrates, and migration rates on a national level.
3. Availability of the information: This projection comprehends an interval of 70 years, from 1980 to 2050.
4. Method used to collect information: This information is based on Demographic Census from 1980, 1991, and 2000 and the Populations Headcounts from 1985 and 1995.
5. Frequency of the information :Data is presented on a yearly basis.

Table 4b presents the Brazilian GDP disaggregated by, in nominal local currency, Reais, R\$. The data in table 4b are defined as follow:

1. Definition of variables: GDP by State.
2. Source of information: IBGE, Department of National Accounts.
3. Availability of information: 1985-2004.
4. Method used to collect this information: This information presents current values and volume indexes (1995 = 100) on a quarterly basis to the GDP at market prices, taxation over products, value added to basic prices, personal consumption, government consumption, gross formation of fixed capital, stock variation, and exports and imports of goods and services. The series projected is adjusted twice a year, which allows the calculation of the taxation variation in relation to the previous quarter. In 2007, in order to continue with the current system, the quarterly national accounts were also reshaped, to become a reference in 2000. The new figures for total GDP have been published, going back to 1998, but IBGE has not provided the state contribution for these new GDP figures.
5. Frequency of the information: Yearly.

Table 4c shows data on state taxes revenue. This data does not include federal taxes collected and earned on the state level. This table only

includes taxes, social contributions (includes some labor taxes), and tariffs under state jurisdiction. This table also includes federal funds transferred to states. The data in table 4c are defined as follow:

1. Definition of variables: Total state tax revenue.
2. Source of information: Ministry of Economy, Federal Revenue Secretary.
3. Availability of information: 1965-2005.
4. Method used to collect the information: Administrative data.
5. Frequency of the information: Yearly.

Table 4d presents State budgets, including not only current revenues (taxation) but also capital revenue (financial management of state assets). The table shows budget figures in thousands of Reais, R\$. The data in table 4d are defined as follow:

1. Definition of variables: State Budget.
2. Source of information: Brazilian Treasury, within the ministry of finance.
3. Availability of information: 1941-2005.
4. Method used to collect this information: Administrative data.
5. Frequency of the information: Yearly.

Table 4e presents total pension payments for state workers per year. It is a good measure of state's social spending. The data in table 4e are defined as follow:

1. Definition of variables: State expenditures on social security.
2. Source of information: This table is available at: <http://www.ipeadata.gov.br/ipeaweb.dll/?ipeadata?65370046>.
3. Availability of information: 1965-2005.
4. Method used to collect information: These administrative data are from COREM, in the Ministry of Finance.
5. Frequency of the information: Yearly.

Table 4f shows the number of private households on each state. The data in table 4f are defined as follow:

1. Definition of variables: The number of private households on each state.

2. Source of information: IPEA, Ministry of Planning, available at: <http://www.ipeadata.gov.br/ipeaweb.dll/ipeadata?65370046>.
3. Availability of information: 1981-2005.
4. Method used to collect information: IPEA estimates.
5. Frequency of the information: Yearly.

Table 4g shows percentage of households with access to piped water, according to the Ministry of Planning, IPEA database. The data in table 4g are defined as follow:

1. Definition of variables: Percentage of households with access to piped water.
2. Source of information: IPEA, Ministry of Planning, available at: <http://www.ipeadata.gov.br/ipeaweb.dll/ipeadata?65370046>.
3. Availability of information: 1981-2005.
4. Method used to collect information: IPEA Estimates.
5. Frequency of the information: Yearly.

Table 4h shows percentage of private households with access to sewage system, according to the Ministry of Planning, IPEA database. The data in table 4h are defined as follow:

1. Definition of variables: Percentage of households with access to sewage system.
2. Source of information: IPEA database, Ministry of Planning, available at: <http://www.ipeadata.gov.br/ipeaweb.dll/ipeadata?65370046>.
3. Availability of information: 1981-2005.
4. Method used to collect information: IPEA estimates.
5. Frequency of the information: Yearly.

Table 4i shows percentage of households built with durable materials, according to the IPEA database. The data in table 4i are defined as follow:

1. Definition of variables: Percentage of households built with durable materials.
2. Source of information: IPEA, Ministry of Planning, available at: <http://www.ipeadata.gov.br/ipeaweb.dll/ipeadata?65370046>.
3. Availability of information: 1981-2005.
4. Method used to collect information: IPEA estimates.

5. Frequency of the information: Yearly.

Table 4j shows the average number of years of formal education, for the population 25 years of age or older, on each state of Brazil. The data in table 4j are defined as follow:

1. Definition of variables: Average years of school education for adults. IPEA created this table by dividing the number of years of education of those 25 years of age and older by the number of people who are 25 years old and older, on each state of Brazil.
2. Source of information: IPEA database, Ministry of Planning, available at: <http://www.ipeadata.gov.br/ipeaweb.dll/ipeadata?65370046>.
3. Availability of information: 1981-2005.
4. Method used to collect information: IPEA estimates.
5. Frequency of the information: Yearly.

Table 4k shows the total electricity consumption by Brazilian State. On one hand, It is a significant measure of economic activity simply because it is not heavily influenced by currency fluctuations and inflation as are other common measures, such as volume of retail bank lending, for instance. On the other hand, a long period of energy rationing adversely affected the data presented in this table. It started at the end of 2000 and lasted until 2002. The data in table 4k are defined as follow:

1. Definition of variables: electricity consumption measured in megawatts divided by state of Brazil, 1995-2002.
2. Source of information: IPEA database, Ministry of Planning, available at: <http://www.ipeadata.gov.br/ipeaweb.dll/ipeadata?65370046>.
3. Availability of data: 1990-2002.
4. Method used to collect information: Administrative.
5. Frequency of the information: Yearly.

Table 4l shows total financial transactions in rural operations. These data consist mostly of lending, but it also includes investments and trading of goods. The data in table 4l are defined as follow:

1. Definition of variables: Financial intermediation in rural operations, including lending, investments, and trading (within the agricultural cycle done by municipal institutions all over Brazil). Notably, these data use R\$ in 2000 as the base year, and not its nominal value as all other tables in this document.
2. Source of information: Central Bank of Brazil.
3. Availability of data: 1990-2004.

4. Method used to collect information: Administrative.

5. Time period: Yearly.

Table 4m presents the number of people covered by health insurance in Brazil. The data in table 4m are defined as follow:

1. Definition of variables: Number of beneficiaries of health plans.
2. Source of information: ANS (National Health Agency) the Brazilian health plans regulator, publishes these data on its website.
3. Availability of data: 1999-2006. Data was drawn from the last month (December) of every year, except for the year 1999, which has data from March 2000.
4. Method used to collect information: Administrative.
5. Frequency of the information: Quarterly.

Table 4n shows volume of health plans premiums on each state. These data was drawn according to authors' estimates, which were made with advice from ANS staff.

The estimates

The ANS website had a section called "tab net" which shows the number of beneficiaries enrolled in health plans every year, from 1999 to 2006. At another section of the website called information notebook (Caderno de informação) one can find data on premium volume on national level. In order to break it down to estimate state premium³³, several calculations were needed. Here are the most important calculations:

- Divide total national premium volume by total number of beneficiaries in Brazil, each year from 2001 to 2006, to arrive to a yearly average national premium. Multiply this figure by the number of beneficiaries in each state, to reach the estimate for total volume of state premium, per year.
- At this point, the only years missing were 1999 and 2000, and so some further estimates had to be done. First, one must find the average growth rate for 2001 to 2006, and then divide the national premium volume for 2001 to reach 2000's national premium volume, and then divide it again to reach 1999's national premium volume. Then one multiplies it by the number of beneficiaries on state to finally reach the state premium volume estimate for the two year. We have kept 1999 and 2000 on a separate database, but we have disclosed these values in US\$ on table 4S, on this chapter's appendix. The data in table 4n are defined as follow:

³³ According to ANS staff, it is impossible to identify volume of premiums on each state of Brazil because companies purchase coverage for their employees (80% of the total market) and pay all premiums at central headquarters. Thus it concentrates all premiums in one or two states, where most companies are based.

1. Definition of variables: Health insurance premium volume on each state.
2. Source of information: ANS. The name of the database is DIOPS, and it has data on premium revenue, reserves allocation, and loss ratio.
3. Availability of data: 2001-2006. There are estimates for the years 2000 and 1999, available only on a separate database (R\$) and on the appendix (US\$)
4. Method used to collect information: Administrative.
5. Frequency of the information: Yearly.

Table 4a – Population, 2001-2005

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	636,258	620,634	604,994	589,393	573,945
Alagoas (AL)	3,015,803	2,980,910	2,945,985	2,911,145	2,876,644
Amazonas (AM)	3,228,083	3,148,420	3,068,681	2,989,142	2,910,376
Amapá (AP)	567,689	547,400	527,093	506,836	486,778
Bahia (BA)	13,823,050	13,687,080	13,550,979	13,415,214	13,280,769
Ceará (CE)	8,096,899	7,976,563	7,856,112	7,735,959	7,616,973
Espírito Santo (ES)	2,332,948	2,282,049	2,231,101	2,180,279	2,129,951
Distrito Federal (DF)	3,408,189	3,352,024	3,295,805	3,239,726	3,184,191
Goiás (GO)	5,619,568	5,508,245	5,396,815	5,285,660	5,175,586
Maranhão (MA)	6,103,072	6,021,504	5,939,859	5,858,415	5,777,763
Minas Gerais (MG)	19,236,689	18,993,720	18,750,518	18,507,918	18,267,675
Mato Grosso (MT)	2,264,362	2,230,702	2,197,009	2,163,399	2,130,117
Mato Grosso do Sul (MS)	2,803,105	2,749,145	2,695,132	2,641,254	2,587,899
Pará (PA)	6,991,422	6,850,181	6,708,803	6,567,773	6,428,112
Paraíba (PB)	3,595,800	3,568,350	3,540,874	3,513,466	3,486,324
Pernambuco (PE)	8,413,313	8,323,911	8,234,425	8,145,159	8,056,761
Piauí (PI)	3,006,793	2,977,259	2,947,696	2,918,207	2,889,005
Paraná (PR)	10,261,461	10,135,388	10,009,194	9,883,312	9,758,653
Rio de Janeiro (RJ)	15,382,846	15,203,750	15,024,482	14,845,658	14,668,571
Rio Grande do Norte (RN)	3,002,959	2,962,107	2,921,215	2,880,425	2,840,032
Rondônia (RO)	1,591,135	1,562,085	1,533,007	1,504,001	1,475,275
Roraima (RR)	394,080	381,896	369,700	357,534	345,487
Rio Grande do Sul (RS)	10,844,715	10,726,063	10,607,297	10,488,824	10,371,504
Santa Catarina (SC)	5,866,279	5,774,178	5,681,988	5,590,026	5,498,958
Sergipe (SE)	1,967,687	1,934,596	1,901,472	1,868,430	1,835,710
São Paulo (SP)	40,440,864	39,825,226	39,209,003	38,594,303	37,985,573
Tocantins (TO)	1,289,195	1,262,644	1,236,067	1,209,556	1,183,302

Source: IBGE, national statistical department of Brazil, available at www.ibge.gov.br.

Table 4b – GDP, 2000-2004, in thousands R\$

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	3,241,847.44	2,716,123.05	2,259,000.00	1,920,769.50	1,702,620.88
Alagoas (AL)	11,556,231.65	10,325,908.16	8,767,000.00	7,569,187.61	7,022,922.85
Amazonas (AM)	35,888,581.05	28,062,624.05	25,030,000.00	20,736,037.00	18,872,885.02
Amapá (AP)	3,720,358.98	3,083,012.86	2,652,000.00	2,253,041.17	1,968,365.45
Bahia (BA)	86,882,057.01	73,166,488.00	62,103,000.00	52,249,320.35	48,197,173.78
Ceara (CE)	33,260,671.70	28,425,174.92	24,204,000.00	21,581,141.14	20,799,548.01
Espírito Santo (ES)	43,521,629.02	37,752,658.07	35,672,000.00	33,051,370.60	29,587,137.29
Distrito Federal (DF)	34,487,904.52	28,979,694.43	24,723,000.00	22,538,118.81	21,530,247.27
Goiás (GO)	41,316,490.56	36,835,110.64	31,299,000.00	25,048,231.05	21,665,356.27
Maranhão (MA)	16,547,449.02	13,983,802.30	11,420,000.00	10,293,103.45	9,206,844.79
Minas Gerais (MG)	166,586,326.69	144,544,822.41	125,389,000.00	113,529,800.02	106,168,725.15
Mato Grosso (MT)	19,953,528.62	18,969,504.68	15,343,000.00	13,736,054.57	11,861,168.42
Mato Grosso do Sul (MS)	27,935,498.73	22,615,132.31	17,888,000.00	14,452,677.76	13,428,289.49
Pará (PA)	34,195,676.42	29,215,268.25	25,530,000.00	21,747,997.24	18,913,684.30
Paraíba (PB)	14,863,056.88	13,710,913.48	11,634,000.00	10,271,929.97	9,237,736.76
Pernambuco (PE)	47,697,442.23	42,260,926.37	36,510,000.00	31,724,961.52	29,126,795.62
Piauí (PI)	8,611,415.34	7,325,106.31	6,166,000.00	5,574,648.37	5,329,536.36
Paraná (PR)	108,698,901.36	98,999,740.24	81,449,000.00	72,770,350.21	65,968,713.27
Rio de Janeiro (RJ)	222,563,502.61	190,384,406.46	170,114,000.00	148,033,351.61	137,876,530.79
Rio Grande do Norte (RN)	15,906,123.89	13,695,516.52	11,633,000.00	9,833,650.25	9,293,319.28
Rondônia (RO)	9,744,450.65	8,491,977.25	7,284,000.00	6,082,841.50	5,624,964.11
Roraima (RR)	1,864,150.71	1,677,317.51	1,488,000.00	1,218,984.16	1,116,580.64
Rio Grande do Sul (RS)	142,874,226.33	128,039,610.89	104,451,000.00	94,084,498.45	85,137,542.55
Santa Catarina (SC)	70,207,923.77	62,213,541.17	51,828,000.00	46,534,518.97	42,428,003.69
Sergipe (SE)	13,120,855.33	11,704,013.08	9,496,000.00	8,204,017.84	5,920,725.12
São Paulo (SP)	546,606,818.53	494,813,615.59	438,148,000.00	400,629,082.60	370,818,992.14
Tocantins (TO)	4,767,935.52	4,189,864.32	3,545,000.00	3,066,502.07	2,450,497.87

Source: IBGE, national statistical department of Brazil, available at www.ibge.gov.br.

Table 4c – Tax Revenue, 2001-2005, in thousands R\$

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	404,512	320,324	265,455	220,084	147,086
Alagoas (AL)	1,244,419	1,068,029	885,868	742,195	615,679
Amazonas (AM)	3,205,311	2,779,878	2,346,663	2,077,610	1,689,249
Amapá (AP)	290,329	232,402	187,621	162,194	126,727
Bahia (BA)	7,649,955	7,259,580	6,263,074	5,383,114	4,440,338
Ceará (CE)	3,519,658	3,276,953	2,882,396	2,624,605	2,224,544
Espírito Santo (ES)	4,790,379	4,180,318	3,499,531	2,939,354	2,267,363
Distrito Federal (DF)	5,038,440	4,118,369	3,237,224	2,705,984	2,536,304
Goiás (GO)	4,894,332	4,546,892	4,213,036	3,353,349	2,866,392
Maranhão (MA)	1,676,006	1,382,644	1,137,513	1,028,522	856,084
Minas Gerais (MG)	17,839,012	15,212,266	12,762,120	11,152,093	9,856,465
Mato Grosso (MT)	2,719,126	2,376,261	1,872,896	1,508,424	1,288,491
Mato Grosso do Sul (MS)	3,404,880	3,189,206	2,623,772	2,033,963	1,438,447
Pará (PA)	3,102,967	2,628,005	2,266,758	1,903,336	1,361,294

Tabela 4c – Cont.

State of Brazil	2005	2004	2003	2002	2001
Paraíba (PB)	1,549,886	1,330,710	1,195,328	1,013,223	933,845
Pernambuco (PE)	4,911,183	4,146,649	3,590,512	3,236,951	2,573,294
Piauí (PI)	1,034,869	891,712	510,479	598,795	515,125
Paraná (PR)	9,857,560	8,753,775	7,515,293	6,295,975	5,228,243
Rio de Janeiro (RJ)	17,022,749	16,438,176	14,171,144	12,089,144	10,121,227
Rio Grande do Norte (RN)	1,908,624	1,626,290	1,376,924	1,187,914	978,947
Rondônia (RO)	1,391,019	1,175,630	963,185	697,028	579,578
Roraima (RR)	222,371	177,576	159,994	138,456	124,756
Rio Grande do Sul (RS)	12,629,704	10,946,229	10,084,160	8,016,084	7,330,709
Santa Catarina (SC)	6,583,637	5,818,027	4,656,211	4,272,004	3,506,007
Sergipe (SE)	1,149,619	982,413	840,512	724,335	586,505
São Paulo (SP)	57,066,143	51,192,595	44,682,133	41,102,869	37,263,330
Tocantins (TO)	764,134	683,236	605,446	466,621	380,746

Source: Data from the secretary of treasury, in the Ministry of Finance of Brazil available at www.tesouro.fazenda.gov.br.

Table 4d – Budget, 2001-2005, in thousands R\$

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	1,841,371	1,363,908	1,188,420	1,160,125	937,554
Alagoas (AL)	2,969,933	2,607,732	2,304,447	2,415,029	1,552,239
Amazonas (AM)	5,241,634	4,515,371	3,757,293	3,659,238	3,006,144
Amapá (AP)	1,539,869	1,282,893	1,000,122	963,864	814,647
Bahia (BA)	14,446,993	13,048,648	10,913,916	9,868,801	8,319,985
Ceará (CE)	7,787,383	6,934,719	6,418,190	5,889,150	4,929,393
Espírito Santo (ES)	6,862,631	5,914,821	5,190,993	7,232,406	6,143,616
Distrito Federal (DF)	7,327,287	5,925,393	4,929,919	3,710,820	3,693,433
Goiás (GO)	7,681,594	7,069,007	6,159,112	5,083,561	4,182,380
Maranhão (MA)	4,383,377	3,546,294	3,452,687	3,397,667	2,871,425
Minas Gerais (MG)	25,513,724	21,817,259	18,820,850	16,313,227	15,699,217
Mato Grosso (MT)	3,960,339	3,853,685	3,157,019	2,565,540	2,354,089
Mato Grosso do Sul (MS)	5,356,924	4,796,454	3,984,961	2,900,229	2,710,381
Pará (PA)	5,834,955	5,090,086	4,372,687	3,977,189	3,381,996
Paraíba (PB)	3,702,968	2,882,374	2,622,580	2,291,265	2,685,292
Pernambuco (PE)	9,479,968	7,914,186	6,729,347	6,494,212	5,800,987
Piauí (PI)	2,758,546	2,211,448	1,628,205	1,711,654	1,547,989
Paraná (PR)	13,701,426	12,226,333	10,805,328	9,942,099	8,911,045
Rio de Janeiro (RJ)	30,274,363	27,647,995	24,392,822	19,204,878	17,791,979
Rio Grande do Norte (RN)	3,946,192	3,174,686	2,661,200	2,409,034	2,275,304
Rondônia (RO)	2,554,557	2,142,167	1,797,894	1,566,691	1,265,246
Roraima (RR)	1,120,413	856,010	758,956	792,427	649,896
Rio Grande do Sul (RS)	16,649,669	14,471,485	13,844,998	12,239,654	10,717,418
Santa Catarina (SC)	8,941,937	7,575,522	6,248,733	6,983,128	5,078,830
Sergipe (SE)	3,016,652	2,532,055	2,099,527	2,044,847	1,748,961
São Paulo (SP)	76,110,011	65,772,915	57,966,317	53,038,998	47,204,489
Tocantins (TO)	2,730,027	2,297,362	2,071,470	1,891,241	1,499,471

Source: Data from the secretary of treasury, in the Ministry of Finance of Brazil available at www.tesouro.fazenda.gov.br.

Table 4e – Workers' Pension, 2001-2005, in thousands R\$

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	16,104	19,850	5,524	9,114	10,720
Alagoas (AL)	253,589	245,738	235,990	208,152	103,886
Amazonas (AM)	222,685	192,940	225,408	241,518	72,202
Amapá (AP)	62,714	28,131	26,506	13,478	24,224
Bahia (BA)	1,466,247	1,736,729	1,560,127	1,247,136	894,315
Ceara (CE)	1,354,860	1,248,152	1,126,236	932,021	676,200
Espírito Santo (ES)	876,284	767,428	828,404	1,501,390	1,372,746
Distrito Federal (DF)	886,309	793,873	792,068	649,829	542,892
Goiás (GO)	901,093	926,752	1,007,226	845,662	782,316
Maranhão (MA)	638,545	584,020	496,370	424,246	361,130
Minas Gerais (MG)	3,385,024	3,344,450	1,143,372	1,145,909	824,538
Mato Grosso (MT)	576,206	490,276	466,280	363,821	295,997
Mato Grosso do Sul (MS)	532,726	509,724	483,805	392,586	306,478
Pará (PA)	837,893	724,081	682,256	521,965	401,887
Paraíba (PB)	450,091	538,974	449,401	332,509	278,274
Pernambuco (PE)	1,472,749	1,332,657	1,136,236	1,094,232	889,761
Piauí (PI)	227,535	204,779	177,793	126,221	132,321
Paraná (PR)	2,092,754	1,873,548	1,671,452	1,474,079	1,405,710
Rio de Janeiro (RJ)	2,428,318	2,223,601	2,136,264	1,811,687	1,573,563
Rio Grande do Norte (RN)	566,548	482,217	427,174	384,393	255,472
Rondônia (RO)	134,606	76,709	54,923	48,848	47,558
Roraima (RR)	27,132	25,884	57,668	23,755	9,940
Rio Grande do Sul (RS)	4,204,449	2,699,038	1,114,082	922,050	689,703
Santa Catarina (SC)	384,933	342,629	337,662	293,789	286,065
Sergipe (SE)	336,209	297,668	231,640	223,576	205,325
São Paulo (SP)	4,003,316	3,445,195	3,310,535	2,925,026	2,810,490
Tocantins (TO)	117,263	48,285	66,096	57,640	43,916

Source: Data from the secretary of treasury, in the Ministry of Finance of Brazil, available at www.tesouro.fazenda.gov.br.

Table 4f – Number of Private Households, 2001-2005

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	181,293	172,583	119,548	112,527	108,074
Alagoas (AL)	828,767	840,095	804,827	793,067	770,819
Amazonas (AM)	930,143	856,022	634,049	610,757	578,349
Amapá (AP)	146,051	135,318	117,716	112,486	133,789
Bahia (BA)	4,090,318	4,027,594	3,896,221	3,772,498	3,723,450
Ceará (CE)	2,370,177	2,279,713	2,221,701	2,119,656	2,108,554
Espírito Santo (ES)	728,514	701,361	687,681	663,556	642,023
Distrito Federal (DF)	1,082,406	1,044,520	1,009,911	985,188	954,899
Goiás (GO)	1,811,916	1,781,648	1,702,341	1,654,424	1,595,975
Maranhão (MA)	1,649,722	1,606,790	1,533,120	1,533,432	1,462,501
Minas Gerais (MG)	6,023,105	5,888,349	5,734,564	5,597,442	5,504,343
Mato Grosso (MT)	725,063	701,758	701,803	670,277	652,891
Mato Grosso do Sul (MS)	843,659	839,756	796,244	768,642	767,922

Tabela 4f – Cont.

State of Brazil	2005	2004	2003	2002	2001
Pará (PA)	1,972,231	1,905,819	1,344,959	1,273,693	1,191,321
Paraíba (PB)	1,047,622	1,037,454	1,050,992	961,705	970,944
Pernambuco (PE)	2,494,770	2,455,967	2,374,413	2,354,797	2,274,375
Piauí (PI)	856,293	840,652	828,502	797,996	780,153
Paraná (PR)	3,298,663	3,238,406	3,149,931	3,077,924	2,992,122
Rio de Janeiro (RJ)	5,267,967	5,197,656	5,105,874	4,977,646	4,839,541
Rio Grande do Norte (RN)	902,340	872,088	858,228	830,456	814,409
Rondônia (RO)	451,878	460,436	284,699	278,119	263,772
Roraima (RR)	111,680	104,395	80,546	75,189	68,802
Rio Grande do Sul (RS)	3,682,683	3,618,045	3,540,889	3,453,393	3,396,640
Santa Catarina (SC)	1,906,787	1,844,667	1,793,197	1,733,892	1,703,279
Sergipe (SE)	607,801	576,166	565,627	531,681	533,664
São Paulo (SP)	13,002,744	12,641,743	12,401,932	11,993,007	11,677,924
Tocantins (TO)	382,374	370,517	359,652	345,901	329,917

Source: Data from the Ministry of Planning, IPEA, available at www.ipea.gov.br.

Table 4g – Percentage of Houses with Access to Piped Water, 2001-2005

State of Brazil	2005	2004	2003	2002	2001
AC – Acre	50%	45%	57%	62%	61%
AL – Alagoas	71%	69%	67%	66%	66%
AM – Amazonas	80%	74%	81%	84%	78%
AP – Amapá	91%	88%	87%	93%	82%
BA – Bahia	73%	73%	68%	68%	65%
CE – Ceará	73%	73%	71%	68%	66%
DF – Distrito Federal	99%	98%	98%	99%	97%
ES – Espírito Santo	99%	98%	97%	97%	95%
GO – Goiás	97%	96%	95%	93%	92%
MA – Maranhão	52%	49%	55%	54%	48%
MG – Minas Gerais	95%	95%	94%	93%	92%
MS – Mato Grosso do Sul	98%	97%	96%	96%	93%
MT – Mato Grosso	90%	83%	84%	82%	80%
PA – Pará	61%	60%	69%	70%	67%
PB – Paraíba	78%	77%	77%	70%	70%
PE – Pernambuco	75%	73%	73%	73%	71%
PI – Piauí	61%	60%	58%	51%	51%
PR – Paraná	98%	97%	97%	97%	95%
RJ – Rio de Janeiro	98%	98%	97%	97%	96%
RN – Rio Grande do Norte	85%	81%	82%	77%	76%
RO – Rondônia	86%	81%	82%	83%	79%
RR – Roraima	81%	88%	83%	97%	87%
RS – Rio Grande do Sul	98%	97%	97%	97%	96%
SC – Santa Catarina	99%	98%	96%	99%	98%
SE – Sergipe	86%	86%	84%	85%	82%
TO – Tocantins	99%	99%	99%	99%	99%

Note: Data as a percentage of total private households.

Source: Data from the Ministry of Planning, IPEA, available at www.ipeadata.gov.br.

Table 4h – Percentage of Houses with Access to Sewage, 2001-2005

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	39%	38%	54%	54%	45%
Alagoas (AL)	28%	13%	19%	24%	24%
Amazonas (AM)	51%	55%	67%	65%	52%
Amapá (AP)	56%	17%	13%	54%	56%
Bahia (BA)	44%	47%	45%	46%	43%
Ceará (CE)	39%	37%	42%	39%	36%
Espírito Santo (ES)	93%	95%	95%	95%	88%
Distrito Federal (DF)	72%	72%	69%	70%	60%
Goiás (GO)	35%	31%	35%	32%	35%
Maranhão (MA)	47%	46%	41%	37%	34%
Minas Gerais (MG)	73%	75%	73%	71%	70%
Mato Grosso (MT)	15%	11%	14%	17%	19%
Mato Grosso do Sul (MS)	44%	37%	46%	47%	37%
Pará (PA)	53%	51%	57%	57%	51%
Paraíba (PB)	50%	52%	41%	45%	44%
Pernambuco (PE)	38%	36%	39%	34%	38%
Piauí (PI)	51%	50%	44%	39%	43%
Paraná (PR)	68%	66%	65%	59%	57%
Rio de Janeiro (RJ)	87%	88%	86%	85%	85%
Rio Grande do Norte (RN)	54%	51%	51%	42%	55%
Rondônia (RO)	48%	36%	31%	45%	56%
Roraima (RR)	74%	79%	82%	74%	83%
Rio Grande do Sul (RS)	78%	79%	76%	76%	71%
Santa Catarina (SC)	81%	80%	81%	82%	79%
Sergipe (SE)	71%	73%	58%	61%	65%
São Paulo (SP)	92%	90%	91%	91%	89%
Tocantins (TO)	22%	27%	16%	19%	12%

Note: Data as a percentage of total private households.

 Source: Data from the Ministry of Planning, IPEA, available at www.ipeadata.gov.br.

Table 4i – Percentage of Houses Built with Durable Materials, 2001-2005

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	89%	88%	97%	99%	97%
Alagoas (AL)	96%	97%	95%	95%	95%
Amazonas (AM)	88%	88%	94%	96%	98%
Amapá (AP)	99%	97%	94%	95%	87%
Bahia (BA)	96%	97%	96%	96%	95%
Ceará (CE)	94%	94%	93%	92%	91%
Espírito Santo (ES)	99%	98%	98%	97%	96%
Distrito Federal (DF)	99%	99%	98%	98%	98%
Goiás (GO)	99%	99%	99%	99%	99%
Maranhão (MA)	76%	71%	74%	72%	66%
Minas Gerais (MG)	99%	99%	99%	99%	99%
Mato Grosso (MT)	99%	99%	98%	98%	99%
Mato Grosso do Sul (MS)	97%	96%	95%	96%	95%

Tabela 4i – Cont.

State of Brazil	2005	2004	2003	2002	2001
Pará (PA)	92%	92%	97%	95%	95%
Paraíba (PB)	98%	98%	96%	96%	96%
Pernambuco (PE)	96%	96%	97%	96%	96%
Piauí (PI)	88%	88%	87%	83%	83%
Paraná (PR)	98%	98%	98%	99%	98%
Rio de Janeiro (RJ)	100%	100%	99%	99%	100%
Rio Grande do Norte (RN)	98%	98%	97%	97%	97%
Rondônia (RO)	95%	93%	98%	97%	92%
Roraima (RR)	96%	87%	98%	96%	94%
Rio Grande do Sul (RS)	98%	98%	98%	98%	98%
Santa Catarina (SC)	99%	98%	98%	99%	99%
Sergipe (SE)	97%	96%	96%	95%	95%
São Paulo (SP)	99%	99%	99%	99%	99%
Tocantins (TO)	88%	87%	86%	86%	85%

Note: Data as a percentage of total private households.

Source: Data from the Ministry of Planning, IPEA, available at www.ipeadata.gov.br.

Table 4j – Years of Education of Adults, 2001-2005

State of Brazil	2005	2004	2003	2002	2001
Acre (AC)	5.35	5.18	5.64	6.19	5.88
Alagoas (AL)	4.23	4.18	4.31	3.98	3.90
Amazonas (AM)	6.89	6.67	7.07	6.84	6.66
Amapá (AP)	7.38	6.77	6.66	6.68	7.29
Bahia (BA)	5.06	4.86	4.67	4.53	4.36
Ceará (CE)	5.05	4.94	4.71	4.62	4.43
Espírito Santo (ES)	8.96	8.75	8.71	8.54	8.24
Distrito Federal (DF)	6.83	6.56	6.17	6.03	5.97
Goiás (GO)	6.31	6.20	6.02	5.76	5.65
Maranhão (MA)	4.50	4.59	4.31	4.14	4.18
Minas Gerais (MG)	6.20	6.11	5.94	5.80	5.66
Mato Grosso (MT)	6.44	6.19	6.08	6.16	5.84
Mato Grosso do Sul (MS)	6.23	6.13	6.01	5.96	5.45
Pará (PA)	5.76	5.52	6.04	6.02	5.94
Paraíba (PB)	4.95	4.78	4.60	4.44	4.33
Pernambuco (PE)	5.57	5.42	5.24	5.14	5.00
Piauí (PI)	4.46	4.37	4.10	4.04	3.96
Paraná (PR)	6.78	6.68	6.56	6.33	6.02
Rio de Janeiro (RJ)	7.73	7.63	7.47	7.36	7.22
Rio Grande do Norte (RN)	5.53	5.21	5.16	5.20	5.00
Rondônia (RO)	5.46	5.56	5.99	5.83	5.58
Roraima (RR)	6.30	6.25	6.46	5.54	5.30
Rio Grande do Sul (RS)	6.92	6.83	6.67	6.50	6.33
Santa Catarina (SC)	7.14	6.88	6.84	6.56	6.36
Sergipe (SE)	5.48	5.76	5.55	5.25	5.01
São Paulo (SP)	7.55	7.44	7.31	7.15	6.94
Tocantins (TO)	5.63	5.36	5.31	4.92	4.74

Note: Data in years of formal education per adult over 25 years of age.

Source: Data from the Ministry of Planning, IPEA, available at www.ipeadata.gov.br.

Table 4k – Electricity Consumption, 1995-2002, in Megawatts

State of Brazil	2002	2001	2000	1999	1998	1997	1996	1995
Acre (AC)	380,803	365,023	352,008	324,707	314,860	284,114	260,373	242,060
Alagoas (AL)	3,061,604	2,899,908	3,399,589	3,341,528	3,393,186	1,628,192	3,071,713	2,934,938
Amazonas (AM)	3,140,652	2,920,694	2,862,466	2,647,184	2,710,324	2,187,552	2,294,194	2,088,178
Amapá (AP)	481,968	457,571	437,637	383,343	387,970	205,670	352,618	318,792
Bahia (BA)	14,495,222	13,906,802	15,498,518	14,376,486	14,726,272	8,551,101	12,839,935	11,721,537
Ceará (CE)	5,591,127	5,434,717	5,915,997	5,792,283	5,479,299	4,900,614	4,470,793	4,030,682
Espírito Santo (ES)	3,465,003	3,320,565	3,785,426	3,622,530	3,441,281	ND	2,974,822	2,752,820
Distrito Federal (DF)	6,287,107	6,032,504	6,729,092	6,306,793	6,163,578	5,827,403	5,501,499	5,235,908
Goiás (GO)	6,581,341	6,115,757	6,616,240	6,321,366	5,901,396	5,269,851	5,222,770	4,843,064
Maranhão (MA)	8,444,169	7,595,292	8,261,316	8,040,775	8,000,982	2,082,884	7,538,039	7,409,733
Minas Gerais (MG)	36,892,647	35,748,490	39,088,146	37,088,178	37,094,371	37,485,580	33,609,374	30,925,268
Mato Grosso (MT)	2,918,343	2,813,636	2,977,151	2,823,412	2,636,742	2,330,054	2,487,366	2,324,377
Mato Grosso do Sul (MS)	3,312,556	3,019,636	3,178,436	2,857,092	2,705,850	2,353,288	2,141,130	2,001,961
Pará (PA)	10,742,865	9,387,865	10,248,825	9,785,625	9,618,956	2,757,982	9,031,602	8,566,021
Paraíba (PB)	2,550,345	2,410,031	2,587,828	2,507,361	2,394,380	1,902,765	1,933,780	1,819,788
Pernambuco (PE)	7,066,032	6,941,126	7,623,336	7,196,588	7,094,725	6,493,968	6,215,172	5,859,582
Piauí (PI)	1,324,952	1,253,979	1,506,412	1,314,825	1,298,830	1,163,844	1,079,431	982,442
Paraná (PR)	17,107,018	16,682,046	17,204,319	16,110,740	15,483,954	11,941,343	13,867,847	12,951,575
Rio de Janeiro (RJ)	27,746,632	28,869,081	32,280,106	32,026,827	31,542,782	28,811,707	28,509,928	27,265,022
Rio Grande do Norte (RN)	2,694,139	2,600,076	2,749,919	2,663,132	2,521,648	2,256,993	2,130,822	1,928,145
Rondônia (RO)	1,198,916	1,106,098	1,067,283	1,056,726	984,156	881,966	837,343	763,246
Roraima (RR)	351,574	322,233	304,336	274,020	263,324	15,331	195,942	182,274
Rio Grande do Sul (RS)	19,877,461	19,499,608	19,876,420	18,376,840	17,223,950	15,530,405	15,762,077	15,253,280
Santa Catarina (SC)	13,544,540	13,026,997	12,645,448	11,836,260	11,142,687	9,760,285	9,712,295	9,162,998
Sergipe (SE)	2,106,350	2,016,418	2,190,253	2,101,014	1,963,460	1,442,812	1,645,653	1,554,687
São Paulo (SP)	88,382,640	87,836,323	97,418,930	92,856,672	92,462,452	79,199,931	84,300,587	80,367,549
Tocantins (TO)	719,547	674,851	723,336	644,583	579,231	297,502	457,366	403,968

Source: IPEA, Ministry of Planning. Data available at www.ipeadata.gov.br.

Table 4I – Financial Intermediation in Rural Areas, in R\$ Base Year 2000

State of Brazil	2004	2003	2002	2001	2000	1999
Acre (AC)	46,839,104	52,141,583	32,371,535	34,233,535	31,514,982	21,836,312
Alagoas (AL)	74,140,897	76,739,642	67,517,723	75,418,050	31,747,905	47,132,025
Amazonas (AM)	38,349,694	32,187,968	32,894,244	106,531,068	50,765,204	17,121,152
Amapá (AP)	7,725,231	2,295,636	3,746,141	4,366,160	3,025,055	1,032,980
Bahia (BA)	826,655,492	565,978,782	430,892,279	336,854,872	303,447,491	470,779,292
Ceará (CE)	218,482,824	130,887,253	129,959,682	200,137,043	149,547,807	145,053,585
Espírito Santo (ES)	87,602,352	66,272,039	62,558,020	38,797,674	30,384,275	43,214,990
Distrito Federal (DF)	234,774,887	204,711,872	188,295,164	173,455,803	175,821,779	165,636,740
Goiás (GO)	2,342,693,636	1,698,764,104	1,541,535,837	1,301,359,621	1,078,332,061	919,506,389
Maranhão (MA)	273,956,936	200,406,742	113,068,909	97,983,317	97,527,614	109,074,088
Minas Gerais (MG)	2,471,753,375	2,201,782,612	1,900,687,482	1,705,888,281	1,533,268,182	1,549,485,859
Mato Grosso (MT)	1,364,349,503	1,097,736,337	840,581,554	720,205,815	536,002,104	479,818,546
Mato Grosso do Sul (MS)	2,255,453,641	1,922,390,230	1,479,038,878	1,235,030,429	855,523,391	697,295,039
Pará (PA)	407,659,452	324,962,118	191,705,643	234,761,794	274,285,551	234,974,344
Paraíba (PB)	145,780,144	101,805,727	110,008,216	126,129,442	122,994,259	92,603,316
Pernambuco (PE)	170,422,319	86,150,115	39,662,182	54,273,759	75,684,212	135,918,564
Piauí (PI)	155,183,878	96,445,256	56,803,086	55,273,410	57,901,373	131,802,905
Paraná (PR)	4,670,973,887	3,869,482,859	3,170,346,622	2,799,770,208	2,207,359,360	2,063,256,054
Rio de Janeiro (RJ)	63,749,934	49,047,286	50,628,584	66,303,607	49,924,633	33,955,833
Rio Grande do Norte (RN)	109,831,125	91,315,861	76,226,407	58,156,036	34,443,787	50,033,065
Rondônia (RO)	315,880,009	243,143,801	134,439,457	118,204,965	161,239,175	116,151,584
Roraima (RR)	22,781,173	10,527,331	4,768,928	5,036,910	7,327,899	1,543,062
Rio Grande do Sul (RS)	4,741,980,466	4,056,197,547	3,363,310,115	3,018,438,560	2,409,202,003	2,214,515,469
Santa Catarina (SC)	1,891,547,049	1,753,830,039	1,496,623,058	1,399,500,394	1,147,334,349	953,104,308
Sergipe (SE)	64,574,739	49,961,699	40,104,737	46,702,134	34,171,867	52,539,574
São Paulo (SP)	4,194,291,528	3,650,558,760	3,498,454,846	3,184,545,282	2,537,999,281	2,116,511,056
Tocantins (TO)	358,757,737	287,787,924	170,966,585	192,659,991	204,330,112	131,285,379

 Source: Data from the Central Bank of Brazil. www.bacen.gov.br.

Table 4m – Number of People with Private Health Insurance, 1999-2006

State of Brazil	2006	2005	2004	2003	2002	2001	2000	1999
Acre (AC)	39,748	40,376	30,058	24,685	22,257	20,066	19,705	18,572
Alagoas (AL)	325,165	288,240	243,816	213,120	193,197	167,768	163,840	148,586
Amapá (AP)	43,711	40,771	40,888	45,908	30,698	24,452	21,715	16,313
Amazonas (AM)	474,608	462,776	431,066	346,334	328,371	284,822	277,593	244,828
Bahia (BA)	1,731,978	1,588,735	1,462,223	1,358,154	1,260,780	1,107,900	1,176,613	1,608,697
Ceará (CE)	1,041,653	929,875	794,040	729,831	660,212	611,331	613,246	648,658
Distrito Federal (DF)	742,764	691,992	682,314	677,422	656,184	623,092	642,335	608,972
Espírito Santo (ES)	874,042	784,800	717,250	685,138	708,169	682,773	665,899	656,323
Goiás (GO)	634,339	599,549	520,314	475,653	462,829	502,358	485,331	421,183
Maranhão (MA)	271,452	265,219	259,203	259,640	254,345	230,420	217,817	212,444
Mato Grosso (MT)	269,208	330,251	289,451	257,836	237,742	206,944	196,979	142,872
Mato Grosso do Sul ³⁴	333,689	328,346	319,822	293,028	290,328	208,736	210,147	195,717
Minas Gerais (MG)	4,143,098	3,860,775	3,652,724	3,505,957	3,461,355	3,525,565	3,548,790	3,374,210
Pará (PA)	659,454	602,341	624,527	569,371	479,068	364,049	355,730	328,334
Paraná (PB)	368,192	345,741	330,643	290,251	250,355	242,787	246,138	256,431
Paraná (PR)	2,290,826	2,183,121	2,026,614	1,874,188	1,738,915	1,683,402	1,591,409	1,550,763
Pernambuco (PE)	1,211,909	1,165,735	1,162,217	1,080,371	1,037,596	937,405	957,933	895,886
Piauí (PI)	151,986	139,281	133,875	120,222	110,720	103,366	112,745	104,004
Rio de Janeiro (RJ)	5,510,417	5,261,596	4,936,080	4,399,762	4,245,845	4,231,419	4,324,010	4,078,646
Rio Grande do Norte	405,556	377,348	358,472	322,384	291,877	278,721	282,534	299,329
Rio Grande do Sul	2,075,551	1,921,007	1,760,291	1,538,753	1,382,922	1,271,066	1,182,225	1,083,575
Rondônia (RO)	80,157	78,159	71,128	65,749	57,928	51,114	50,618	49,023
Roraima (RR)	9,406	9,547	9,468	8,681	8,548	8,168	8,310	7,374
Santa Catarina (SC)	1,411,762	1,150,087	1,129,276	1,027,644	994,557	963,147	1,036,137	954,703
São Paulo (SP)	19,298,517	17,874,870	16,603,487	15,789,929	15,602,678	15,752,814	15,956,043	15,890,541
Sergipe (SE)	254,805	221,834	190,011	168,181	161,662	153,629	141,341	123,317
Tocantins (TO)	44,213	51,690	48,221	46,299	40,225	38,373	33,884	27,139
TOTAL	44,704,135	41,599,954	38,832,523	36,178,677	34,973,931	34,279,559	34,521,859	33,996,506

Source: ANS, National Health Agency of Brazil, available at www.ans.gov.br.

³⁴ Note: in order to fit 8 years of data in this table, the states with longer names had to be included without their abbreviations.

Table 4n – Health Insurance Premium Volume, Nominal R\$

State of Brazil	2006	2005	2004	2003	2002	2001
Acre (AC)	34,925,445	34,876,758	24,673,078	19,203,425	16,189,376	12,731,088
Alagoas (AL)	285,713,305	248,981,492	200,136,110	165,794,364	140,528,319	106,442,196
Amapá (AP)	38,407,622	35,217,959	33,562,872	35,713,624	22,329,220	15,513,832
Amazonas (AM)	417,024,650	399,745,555	353,840,078	269,426,732	238,851,662	180,708,354
Bahia (BA)	1,521,840,171	1,372,348,078	1,200,264,230	1,056,560,990	917,070,624	702,918,964
Ceará (CE)	915,271,083	803,225,314	651,786,909	567,764,012	480,227,344	387,865,469
Espírito Santo (ES)	652,645,757	597,742,160	560,076,738	526,993,006	477,297,443	395,327,361
Distrito Federal (DF)	767,996,029	677,909,640	588,753,917	532,995,584	515,110,477	433,192,608
Goiás (GO)	557,375,771	517,889,968	427,099,206	370,029,028	336,654,198	318,726,388
Maranhão (MA)	238,517,209	229,095,969	212,766,513	201,984,087	185,006,367	146,192,425
Mato Grosso (MT)	236,545,469	285,270,561	237,595,553	200,580,685	172,929,618	131,297,827
Mato Grosso do Sul (MS)	293,203,104	283,625,024	262,525,556	227,957,915	211,179,810	132,434,780
Minas Gerais (MG)	3,640,423,244	3,334,934,493	2,998,334,700	2,727,420,749	2,517,732,667	2,236,832,294
Pará (PA)	579,443,612	520,301,695	512,642,339	442,935,917	348,466,180	230,974,769
Paraíba (PB)	323,519,916	298,650,811	271,407,963	225,797,578	182,104,107	154,038,800
Pernambuco (PE)	2,012,884,131	1,885,778,250	1,663,543,996	1,458,003,974	1,264,858,155	1,068,052,343
Piauí (PI)	1,064,870,224	1,006,961,002	954,004,617	840,462,756	754,730,256	594,746,594
Paraná (PR)	133,545,807	120,310,821	109,891,155	93,525,385	80,535,906	65,581,660
Rio de Janeiro (RJ)	8,264,787,741	8,246,691,654	7,771,798,785	6,753,289,201	6,217,675,235	5,182,275,352
Rio Grande do Sul (RS)	4,841,847,847	4,544,962,601	4,051,776,139	3,422,746,534	3,088,357,783	2,684,668,888
Rio Grande do Norte (RN)	356,350,607	325,952,914	294,251,369	250,795,093	212,306,527	176,837,509
Rondônia (RO)	1,823,728,066	1,659,364,378	1,444,933,038	1,197,055,999	1,005,914,705	806,441,372
Roraima (RR)	70,431,693	67,513,684	58,385,345	51,148,713	42,135,874	32,429,822
Santa Catarina (SC)	1,240,475,412	993,444,271	926,965,031	799,444,365	723,424,395	611,078,880
Sao Paulo (SP)	16,957,055,899	15,440,299,036	13,628,955,052	12,283,601,875	11,349,131,218	9,994,540,754
Sergipe (SE)	223,889,960	191,620,040	155,970,332	130,834,562	117,590,278	97,471,557
Tocantins (TO)	38,848,715	44,649,782	39,582,158	36,017,799	29,259,003	24,346,159
TOTAL	39,280,261,331	35,934,008,452	31,875,636,155	28,144,804,490	25,439,461,874	21,749,031,599

Note: Data in R\$, nominal value. Data estimated from the total premium volume, divided by the number of beneficiaries.

Source: Data from ANS, health insurance regulator of Brazil, available at [tabnet at www.ans.gov.br](http://www.ans.gov.br).

5.1. Appendix – Control variables in US\$

In the appendix to Chapter 5, the tables converted to US\$ detail state GDP, state budget, state tax revenue, state social security spending, and finally, total health insurance premium volume. Here are the tables:

After conversion to US\$ table 4b becomes table 4o.

After conversion to US\$ table 4c becomes table 4p.

After conversion to US\$ table 4d becomes table 4q.

After conversion in US\$ table 4e becomes table 4r.

After conversion in US\$ table 4n becomes table 4s.

This Chapter presents over 19 tables listing control variables to assist future work with regressions. The chapter tables and definitions of education, infrastructure, financing intermediation, energy consumption, health insurance coverage, public pension system, state GDP, and many others. It is a large database to assist research on the relationship between insurance and entrepreneurship in Brazil.

These tables are important to be used as the so-called control variables to assist in the research to be developed in the future, using this document as a basis. This database will allow a comparison between the states of Brazil, and perhaps future comparisons with states of other countries, such as Argentina, Mexico, Colombia, and the United States.

Table 4o – GDP, 1999-2004, in thousands R\$, converted to US\$

State of Brazil	2004	2003	2002	2001	2000	1999
Acre (AC)	1,108,278	882,692	773,410	814,676	930,323	858,086
Alagoas (AL)	3,950,686	3,355,738	3,001,544	3,210,398	3,837,369	3,542,728
Amazonas (AM)	12,269,097	9,119,858	8,569,482	8,794,990	10,312,263	8,571,400
Amapá (AP)	1,271,865	1,001,925	907,961	955,606	1,075,527	872,858
Bahia (BA)	29,702,049	23,777,819	21,262,107	22,161,046	26,335,239	23,166,040
Ceará (CE)	11,370,703	9,237,681	8,286,686	9,153,433	11,365,004	10,751,410
Espírito Santo (ES)	14,878,579	12,268,948	12,212,967	14,018,421	16,166,598	12,264,317
Distrito Federal (DF)	11,790,253	9,417,890	8,464,375	9,559,326	11,764,262	10,344,319
Goiás (GO)	14,124,716	11,970,762	10,715,790	10,623,966	11,838,087	9,874,668
Maranhão (MA)	5,657,015	4,544,489	3,909,848	4,365,721	5,030,678	4,363,395
Minas Gerais (MG)	56,950,254	46,974,519	42,929,236	48,152,572	58,011,259	51,659,679
Mato Grosso (MT)	6,821,439	6,164,755	5,252,959	5,826,015	6,481,017	6,006,971
Mato Grosso do Sul (MS)	9,550,206	7,349,519	6,124,287	6,129,964	7,337,302	6,447,929
Para (PA)	11,690,350	9,494,447	8,740,666	9,224,204	10,334,556	9,188,097
Paraná (PB)	5,081,179	4,455,805	3,983,114	4,356,740	5,047,557	4,373,460
Pernambuco (PE)	16,306,149	13,734,056	12,499,872	13,455,837	15,915,064	14,339,038
Piauí (PI)	2,943,953	2,380,530	2,111,044	2,364,433	2,912,092	2,608,547
Paraná (PR)	37,160,493	32,173,170	27,885,567	30,864,844	36,045,720	34,012,750
Rio de Janeiro (RJ)	76,086,965	61,871,576	58,241,664	62,786,921	75,336,603	63,050,402
Rio Grande do Norte (RN)	5,437,768	4,450,801	3,982,772	4,170,848	5,077,928	4,214,280
Rondônia (RO)	3,331,299	2,759,743	2,493,812	2,579,979	3,073,516	2,768,095
Roraima (RR)	637,290	545,099	509,444	517,020	610,107	450,311
Rio Grande do Sul (RS)	48,843,885	41,610,616	35,760,726	39,905,034	46,519,688	41,576,685
Santa Catarina (SC)	24,001,724	20,218,304	17,744,271	19,737,168	23,182,928	19,662,347
Sergipe (SE)	4,485,578	3,803,598	3,251,131	3,479,655	3,235,121	2,994,592
São Paulo (SP)	186,866,460	160,805,701	150,008,046	169,922,969	202,617,828	187,510,803
Tocantins (TO)	1,629,997	1,361,632	1,213,696	1,300,627	1,338,967	1,160,597
TOTAL	603,948,233	505,731,673	460,836,475	508,432,414	601,732,604	536,633,808

Source: IBGE. Data in local currency, thousands of R\$, converted to US\$, see www.ibge.gov.br.

Table 4p – Tax Revenue, 1999-2005, in thousands R\$, converted to US\$

State of Brazil	2005	2004	2003	2002	2001	2000	1999
Acre (AC)	166,165	109,508	86,268	75,350	62,385	65,849	45,092
Alagoas (AL)	511,181	365,123	287,892	254,104	261,134	298,577	248,380
Amazonas (AM)	1,316,674	950,347	762,624	711,308	716,479	783,662	620,746
Amapá (AP)	119,261	79,450	60,974	55,530	53,750	56,983	40,648
Bahia (BA)	3,142,439	2,481,806	2,035,388	1,843,008	1,883,327	2,129,321	1,753,497
Ceará (CE)	1,445,801	1,120,280	936,728	898,582	943,519	1,072,182	882,413
Espírito Santo (ES)	1,967,786	1,429,110	1,137,286	1,006,342	961,680	1,085,545	890,480
Distrito Federal (DF)	2,069,684	1,407,932	1,052,041	926,443	1,075,749	1,163,210	918,836
Goiás (GO)	2,010,488	1,554,429	1,369,162	1,148,081	1,215,753	1,228,873	1,021,069
Maranhão (MA)	688,468	472,680	369,672	352,134	363,100	366,457	268,623
Minas Gerais (MG)	7,327,889	5,200,561	4,147,464	3,818,125	4,180,525	4,510,309	3,776,366
Mato Grosso (MT)	1,116,959	812,363	608,658	516,437	546,501	595,263	510,863
Mato Grosso do Sul (MS)	1,398,652	1,090,282	852,680	696,365	610,104	809,695	653,884
Pará (PA)	1,274,633	898,426	736,656	651,642	577,380	673,958	472,609
Paraná (PB)	636,660	454,925	388,460	346,895	396,081	410,020	346,479
Pernambuco (PE)	2,017,410	1,417,600	1,166,853	1,108,230	1,091,438	1,234,838	1,048,113
Piauí (PI)	425,102	304,846	165,897	205,008	218,485	248,207	212,749
Paraná (PR)	4,049,277	2,992,621	2,442,338	2,155,543	2,217,509	1,826,187	1,465,478
Rio de Janeiro (RJ)	6,992,585	5,619,659	4,605,372	4,138,941	4,292,821	4,820,662	4,255,558
Rio Grande do Norte (RN)	784,022	555,974	447,476	406,704	415,211	464,684	369,150
Rondônia (RO)	571,401	401,908	313,018	238,640	245,823	295,981	217,494
Roraima (RR)	91,345	60,707	51,995	47,403	52,914	62,246	39,627
Rio Grande do Sul (RS)	5,188,015	3,742,147	3,277,174	2,744,454	3,109,250	3,347,517	2,801,234
Santa Catarina (SC)	2,704,419	1,988,987	1,513,186	1,462,599	1,487,039	1,609,320	1,329,989
Sergipe (SE)	472,239	335,854	273,152	247,989	248,761	277,255	224,378
Sao Paulo (SP)	23,441,564	17,501,024	14,520,905	14,072,325	15,804,883	18,104,642	15,283,164
Tocantins (TO)	313,890	233,575	196,759	159,756	161,490	167,982	132,614
TOTAL	72,244,011	53,582,125	43,806,079	40,287,940	43,193,088	47,709,427	39,829,531

Source: Data from the secretary of treasury, Ministry of Finance of Brazil.

Table 4q – Budget, 1999-2005, in thousands R\$, converted to US\$

State of Brazil	2005	2004	2003	2002	2001	2000	1999
Acre (AC)	756,396	466,274	386,216	397,190	397,655	442,592	398,856
Alagoas (AL)	1,219,986	891,496	748,905	826,830	658,367	783,623	655,942
Amazonas (AM)	2,153,153	1,543,653	1,221,054	1,252,808	1,275,027	1,416,918	1,247,839
Amapá (AP)	632,545	438,578	325,022	329,997	345,525	370,981	296,286
Bahia (BA)	5,934,519	4,460,893	3,546,830	3,378,766	3,528,841	3,507,770	3,622,190
Ceará (CE)	3,198,892	2,370,747	2,085,799	2,016,259	2,090,755	2,075,634	2,766,436
Espírito Santo (ES)	2,819,024	2,022,078	1,686,981	2,476,148	2,605,755	3,119,741	3,545,558
Distrito Federal (DF)	3,009,894	2,025,692	1,602,137	1,270,468	1,566,534	1,843,463	1,445,766
Goiás (GO)	3,155,436	2,416,655	2,001,603	1,740,451	1,773,916	1,768,562	1,776,836
Maranhão (MA)	1,800,598	1,212,359	1,122,063	1,163,254	1,217,887	1,445,713	1,194,641
Minas Gerais (MG)	10,480,498	7,458,586	6,116,445	5,585,134	6,658,672	7,714,367	5,505,985
Mato Grosso (MT)	1,626,824	1,317,445	1,025,976	878,360	998,464	1,056,919	901,175
Mato Grosso do Sul (MS)	2,200,511	1,639,746	1,295,042	992,947	1,149,582	1,295,391	1,232,650
Pará (PA)	2,396,876	1,740,129	1,421,046	1,361,664	1,434,441	1,563,207	1,434,038
Paraíba (PB)	1,521,101	985,387	852,292	784,457	1,138,941	1,120,813	900,905
Pernambuco (PE)	3,894,170	2,705,594	2,186,919	2,223,413	2,460,433	3,202,267	1,999,206
Piauí (PI)	1,133,152	756,020	529,138	586,016	656,565	792,226	663,335
Paraná (PR)	5,628,256	4,179,771	3,511,541	3,403,861	3,779,534	5,557,133	5,978,650
Rio de Janeiro (RJ)	12,436,068	9,451,918	7,927,237	6,575,144	7,546,297	8,633,590	7,909,954
Rio Grande do Norte (RN)	1,621,012	1,085,318	864,843	824,777	965,048	1,090,851	974,595
Rondônia (RO)	1,049,358	732,335	584,284	536,386	536,642	614,660	474,005
Roraima (RR)	460,242	292,641	246,647	271,302	275,647	311,385	238,823
Rio Grande do Sul (RS)	6,839,332	4,947,313	4,499,380	4,190,471	4,545,690	5,237,535	4,456,258
Santa Catarina (SC)	3,673,158	2,589,816	2,030,728	2,390,803	2,154,137	3,095,220	2,111,998
Sergipe (SE)	1,239,177	865,624	682,309	700,091	741,805	847,553	746,191
São Paulo (SP)	31,264,382	22,485,544	18,838,031	18,158,879	20,021,329	23,673,992	22,345,783
Tocantins (TO)	1,121,437	785,391	673,191	647,501	635,986	686,354	520,713

Source: Data from the secretary of treasury, in the Ministry of Finance of Brazil.

Table 4r – Workers' Pension, 1999-2005, in thousands R\$, converted to US\$

State of Brazil	2005	2004	2003	2002	2001	2000	1999
Acre (AC)	6,615	6,786	1,795	3,120	4,547	1,464	2,915
Alagoas (AL)	104,169	84,010	76,693	71,265	44,062	101,354	99,528
Amazonas (AM)	91,474	65,960	73,254	82,688	30,624	97,475	129,149
Amapá (AP)	25,761	9,617	8,614	4,614	10,274	9,430	7,005
Bahia (BA)	602,303	593,729	507,014	426,980	379,315	72,469	309,677
Ceará (CE)	556,548	426,701	366,007	319,095	286,804	287,932	269,162
Espírito Santo (ES)	359,959	262,358	269,217	514,028	582,237	698,362	905,621
Distrito Federal (DF)	364,077	271,398	257,408	222,481	230,262	297,541	231,525
Goiás (GO)	370,150	316,825	327,331	289,528	331,812	246,724	255,237
Maranhão (MA)	262,301	199,657	161,312	145,248	153,170	120,773	93,904
Minas Gerais (MG)	1,390,496	1,143,355	371,576	392,323	349,720	374,269	214,842
Mato Grosso (MT)	236,693	167,609	151,533	124,561	125,544	168,096	125,823
Mato Grosso do Sul (MS)	218,833	174,258	157,228	134,409	129,990	93,925	141,993
Pará (PA)	344,189	247,539	221,721	178,704	170,456	203,560	131,827
Paraíba (PB)	184,888	184,257	146,047	113,841	118,027	130,019	183,743
Pernambuco (PE)	604,974	455,591	369,257	374,631	377,384	14,307	348,285
Piauí (PI)	93,467	70,007	57,780	43,214	56,123	34,356	76,951
Paraná (PR)	859,659	640,503	543,192	504,678	596,218	1,427,828	678,583
Rio de Janeiro (RJ)	997,502	760,174	694,248	620,265	667,411	1,492,079	1,010,478
Rio Grande do Norte (RN)	232,726	164,854	138,824	131,604	108,356	115,601	45,181
Rondônia (RO)	55,293	26,224	17,849	16,724	20,171	5,806	11,102
Roraima (RR)	11,145	8,849	18,741	8,133	4,216	1,939	8,355
Rio Grande do Sul (RS)	1,727,098	922,710	362,057	315,681	292,531	478,449	1,491,254
Santa Catarina (SC)	158,122	117,133	109,734	100,584	121,332	123,038	425,665
Sergipe (SE)	138,108	101,763	75,279	76,545	87,087	94,205	114,207
São Paulo (SP)	1,644,478	1,177,796	1,075,866	1,001,436	1,192,042	4,305,931	4,124,521
Tocantins (TO)	48,169	16,507	21,480	19,734	18,626	24,307	32,884

Source: Data from the secretary of treasury, in the Ministry of Finance of Brazil.

Table 4s – Health Insurance Premium Volume in R\$, converted to US\$

State of Brazil	2006	2005	2004	2003	2002	2001	2000	1999
Acre (AC)	16,055	14,327	8,435	6,241	5,543	5,400	6,395	5,690
Alagoas (AL)	131,343	102,276	68,420	53,880	48,112	45,146	53,172	45,526
Amapá (AP)	17,656	14,467	11,474	11,606	7,645	6,580	7,047	4,998
Amazonas (AM)	191,706	164,207	120,966	87,559	81,775	76,646	90,089	75,014
Bahia (BA)	699,590	563,732	410,330	343,364	313,976	298,136	381,854	492,894
Ceará (CE)	420,750	329,948	222,824	184,513	164,415	164,509	199,021	198,744
Espírito Santo (ES)	300,021	245,540	191,471	171,263	163,412	167,674	208,461	186,585
Distrito Federal (DF)	353,048	278,471	201,275	173,214	176,358	183,734	216,109	201,093
Goiás (GO)	256,226	212,738	146,011	120,253	115,260	135,185	157,508	129,048
Maranhão (MA)	109,646	94,108	72,738	65,641	63,340	62,006	70,690	65,091
Mato Grosso (MT)	108,740	117,183	81,226	65,185	59,206	55,689	63,927	43,775
Mato Grosso do Sul (MS)	134,786	116,507	89,749	74,082	72,301	56,171	68,200	59,966
Minas Gerais (MG)	1,673,504	1,369,921	1,025,030	886,364	861,992	948,731	1,151,712	1,033,835
Pará (PA)	266,370	213,729	175,255	143,946	119,304	97,966	115,447	100,599
Paraíba (PB)	148,722	122,679	92,785	73,380	62,347	65,334	79,881	78,569
Pernambuco (PE)	925,324	774,638	568,710	473,826	433,048	453,004	516,470	475,143
Piauí (PI)	489,521	413,638	326,142	273,136	258,396	252,256	310,884	274,493
Paraná (PR)	61,391	49,421	37,568	30,394	27,573	27,816	36,590	31,866
Rio de Janeiro (RJ)	2,225,799	1,866,974	1,385,166	1,112,332	1,057,356	1,138,676	1,403,299	1,249,670
Rio Grande do Norte (RN)	163,815	133,895	100,595	81,504	72,687	75,004	91,693	91,712
Rondônia (RO)	838,368	681,632	493,974	389,022	344,393	342,044	383,675	332,000
Roraima (RR)	32,377	27,733	19,960	16,622	14,426	13,755	16,427	15,020
Rio Grande do Sul (RS)	3,799	3,388	2,657	2,195	2,129	2,198	2,697	2,259
Santa Catarina (SC)	570,247	408,086	316,898	259,805	247,678	259,183	336,264	292,515
São Paulo (SP)	7,795,165	6,342,548	4,659,281	3,991,954	3,885,584	4,239,088	5,178,320	4,868,755
Sergipe (SE)	102,922	78,713	53,321	42,519	40,259	41,342	45,870	37,783
Tocantins (TO)	17,859	18,341	13,532	11,705	10,017	10,326	10,997	8,315
Totais – Brasil	18,057,151	14,760,930	10,897,206	9,146,565	8,709,669	9,224,642	11,203,606	10,416,300

Note: Data in R\$, nominal value, converted to US\$ according to the IMF rf rate. Data estimated from the total premium volume, divided by the number of beneficiaries.

Source: Data from ANS, health insurance regulator of Brazil, available at [tabnet at www.ans.gov.br](http://www.ans.gov.br).

6. Instrumental variables

Instrumental variables are used in a regression to find a consistent estimator when the covariates are correlated with the error terms. This correlation is caused by endogeneity among other factors. In this case, ordinary least square (OLS) regressions can produce biased estimates as one of the assumptions of OLS (i.e., the explanatory variable is uncorrelated with the error term) is not satisfied. The use of instrumental variables can be an option to change this situation. The problem is to find the instrumental variable that is highly correlated with the explanatory variable but it is uncorrelated with the error term. The best instruments are often created by exogenous policy changes, geographic differences in the application of standards, or generic randomness.

One of the first uses of instrumental variables were made while trying to calculate demand and supply curves.³⁵ If these curves shift after a while, the quantities and prices had shown several equilibrium points in the two curves. Thus, the standard least squares regression of quantities on prices could not show nor the supply nor the demand relationship. P.G. Wright (1928) found the same question while calculating elasticity of supply and demand for flaxseed. He identified the obstacles in estimating elasticity of supply and demand from market prices and quantities available. He suggested that some "curve shifters"-currently named instrumental variables- might solve the issue. Wright decided to utilize the price of a substitute good as variable for the demand curve shifter, while using yield per acre (dependent most on the weather at that time) as variable for the supply curve shifter.

David A. Kenny³⁶ provides a very useful explanation of instrumental variables: It is an alternative to models, which cannot work properly through multiple regressions. So, for path analysis, the disturbance could not be correlated to every one of the so-called causal variables. This correlation would happen for three reasons: Spuriousness: A variable that is not included in the model cause both the endogenous and one its causal variables; Reverse Causation: One of its causes is the endogenous; and measurement error; and finally, there is error in the measure of the causal variable.

Thus the disturbance of the endogenous variable is correlated with one or more causal variable. Therefore one should not use multiple regressions if willing to measure the causal coefficients. If A is the endogenous variable, and B is its disturbance, C the instrumental variable, and D a set of variables that causes A but not the instrumental variable. What limits the definition of the instrumental variable is that C does not cause A: From C to A the difference is zero. Theory gives the zero paths, while statistical analysis does not. To regress A on E, C, and D, and select C by looking

³⁵ Economists such as P.G. Wright, Henry Schultz, Elmer Working, and Ragnar Frisch tried to find elasticity of demand and supply of several products, including butter, with time series data.

³⁶ This explanation of the instrumental variable is taken entirely from <http://davidakenny.net/cm/iv.htm>.

for variables with coefficients that are not significantly different from zero is not appropriate. There are certain conditions for instrumental variable estimation: First, C must not cause A or be correlated with B; Second, For a given equation, one should try to bring along at least the same number of C variables as variables needing an instrument; third and finally, C must cause the variable with the instrument.

Even though this is not currently being used, this method shows how it is done. 2SLS estimation is made alternatively in SPSS. The first step is to regress each variable needing an instrument on C and D set of variables. With the coefficients ready, calculate the E variables. The second step is to make a Regression of A on the first step predicted variables and D variables' set. In actuality, 2SLS computer programs execute the two steps in a single stage or step. The example for 2SLS uses two structural equations: $D = sE + pA + B$ and $A = nF + wD + G$. It is important to realize that the notation changed. Now F is an instrumental variable for A in the first equation, and E is an instrumental variable for D in the second equation. For the first equation, here at the steps: first, regress A on E and F, then Regress D on the first step predicted score for A and E. For the second equation, regress D on E and F, and then regress A on the prior step predicted score for D and F³⁷.

For the purposes of this document – From an intuitive perspective, when the number of start up companies or the volume of revenue of SMEs grows in a determined year, the volume of premium will likely follow the same path. We could say that these two indicators, SMEs, and insurance grow in tune. We could compare it to a formula with chemical elements A and B that are stable at a certain point in time. We could not say which of the two elements caused the other to be stable, but we know they are stable together. Hence, a third element is needed to indicate causality. This third element must interact only with element B and never with element A. So in the case of the instrumental variable, it should interact only with insurance, and have no effect on the performance of SMEs. In the case of the chemical experiment, if the previous harmonic state is altered, then it is proved that element B had caused the previous stable environment, (because element A is indifferent to element C). In the case of insurance: If the instrumental variable affected the insurance business, and if as a result the entrepreneurship was affected as well, then it is clear that insurance has an effect on entrepreneurship (because the insurance statute has no effect on entrepreneurship).

³⁷ Angrist and Krueger (2001) find instrumental variables the signature technique for econometrics.

The equation below relates entrepreneurship and business activity and insurance:

$$\text{Entrepreneurship} = a_0 + a_1 \text{Insurance} + a_2 \text{Dummy state} + \text{Control variable} + \text{error}$$

Where entrepreneurship – measured by number of start-ups, LLCs, companies paying taxes, or the volume of revenue for SMEs in a particular state- is related to insurance, e.g., insurance premium volume. A dummy could control the difference in development between the states of the south and those of the north, and the error. Regardless of what is laid down now, the role of a so-called instrumental variable would be to increase the strength of any correlation observed.

Events that affect a covariate can be considered a type of instrumental variable. Since 2000, in Brazil, there have been many legal changes affecting branches of the insurance industry and premiums paid in each of these lines of business.

First, life insurance and other private pension schemes have faced a surge in premium volume during the last few years. The creation of a complementary pension system, private and voluntary, propelled the current leap in the sector after the enactment of Act 109, of May 29, 2001. This statute was very important, but not so much as the legislation that altered the tax structure for these contracts. The Act that enhanced life insurance products such as PGBL (Variable Benefits Capitalization Plan in Brazil) and VGBL (Variable Benefits Life Insurance Contract) 401-K type of products) is called Act No. 11.053, from December 29, 2004. One could examine the period before and after 2002, and the period before and immediately after 2005.

Second, the health insurance industry was in many ways altered forever after Act 9656, of June 4, 1998. This act promoted the beginning of health care legislation and large-scale judicial litigation. The creation of the National Health Agency, (ANS) in 2000, allowed over 200 regulations to be written and put in place to be enforced. ANS was properly staffed in 2002. The regulations it created in this period – RDCs (directors' counsel resolutions), REs (directors' resolutions), INs (normative instructions), and others – increased the scrutiny in this market, enhancing consolidation and raising the premiums for consumers. The period to be examined would be that before and after 2002, when legislation was enforced through regulations drafted by ANS.

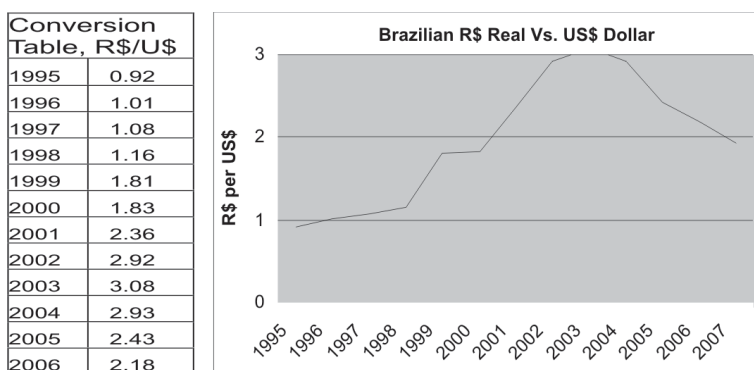
Third, the agriculture business has doubled the amount of insurance premiums paid in the country in the last few years. This surge can easily be attributed to the enactment of Act 10200 in 2001, which allows the use of the cedula do produtor rural (farmer's bond) CPR in financial institutions. With CPRs, a farmer can sell his products in the present time but deliver them in the future. Up until 2001, a farmer was not allowed to pay the bond with currency, but rather had to deliver products harvested to government warehouses. This legislation allowed financial transfers straight from farmers to bondholders. This has most certainly affected the market in the last several years, and the period to be examined is immediately before and after 2002.

This Chapter presented some policy changes that could be used as so called instrumental variables in regressions. These variables constitute the basis for comparison insurance sectors, e.g., health, agriculture, and life insurance, before and after these changes and will allow to further study the relationship between insurance and entrepreneurship.

7. Conclusion

This document provides a database (i.e. panel data) to further investigate the relationship between insurance and entrepreneurship in Brazil. The data collected is expected to be used for empirical testing of the above-mentioned relationship and thus provide policy recommendations.

The database includes different measures of entrepreneurship and insurance as well as control variables for each Brazilian State for the period 1995 to 2006. There are various measures of entrepreneurship, i.e., SMEs, startups, even large companies,³⁸ and insurance availability (e.g., volume of premium; premiums per type of policy). The database opens many opportunities for empirical analysis. For instance, the data could be used for descriptive analysis of the insurance and entrepreneurship market in Brazil and also for econometric and spatial analysis.



Fonte: IMF rate www.imf.org

The latter is a methodology to be used considering that the data are available for each Brazilian State.

The introduction of event and instrumental variables (see Chapter 6), e.g., the type of legislation introduced, is expected to help compare in an econometric setting the measures of entrepreneurship with the measures of insurance before and after a relevant event that affects one of the variable occurs, (e.g., legislation was passed), to test changes on the insurance market and changes in entrepreneurship and possibly discover an association between the two variables.

³⁸ There are some data on large companies revenue divided by state in the Excel database related to this publication.

8. Appendices

Appendix 1 – Conversion rates of Brazilian Real, R\$, to U.S. Dollar, US\$

During the period of this study, Brazil has experienced exchange rates varying from a 1:1 ratio from 1995 to 1998, to a 2:1 ratio in 2000 and 2001, to a 4:1 ratio in September 2002, rebounding to 2.2:1 in 2006 and 1.85 to 1 in July 2007. This volatility makes it harder to examine the country's economy, let alone to study a relationship between insurance and entrepreneurship.

The rate of conversion R\$ to US\$ is the official IMF rate, *rf*. As the IMF put it, according to the June 2005 edition of the IMF's International Financial Statistics: "*Series rf shows period-average national currency units per US dollar. ... Series rf data are the monthly average of market rates or official rates of the reporting country. If those are not available, they are the monthly average rates in New York. Or if the latter are not available, they are estimates based on simple averages of the end-of-month market rates quoted in the reporting country.*" That is the rate of conversion we are using in this document, for the US\$ tables given at the end of each chapter, in order to allow readers to estimate real growth in dollars, when growth expressed in the domestic currency would be misleading. Chart 1 helps in visualizing the Brazilian R\$ exchange rate volatility in the past 12 years.

As noted below, tables available at this document are both in R\$ and in US\$. Another relevant information about this period (1995 to 2006) is that consolidated inflation in Brazil was 153,3%.

Appendix 2 – Reconciliation table

The variables included in this table are available in a separate Excel database. This document only partially reproduces some of the data available in the database. The reconciliation table below includes the abbreviations of the variables to be used in the regression, the complete definition of each variable, their sources and the availability of the data, in years.

Reconciliation Table

Abbreviations Used in the Regression Table	Complete Definition of Variables Used in the Database	Source	Availability of Data (in years)
States	States of Brazil	Not applicable	Not applicable
Year	Year	Not applicable	Not applicable
ID	ID	Not applicable	Not applicable
Premium	Table 2a. Total State Insurance Premium from 1995 to 2006. Data from the Insurance Regulator in Reais (R\$) at nominal value.	SUSEP, available at: www.susep.gov.br	1995-2006
Social	Table 2g. Total Premium paid for Insurance contracts covering Social Protection Risk. Data from SUSEP, according to author's classification.	SUSEP, available at: www.susep.gov.br	2001-2006
Liability	Table 2g. Total Premium paid for Insurance contracts covering Liability Risk. Data from SUSEP, according to author's classification.	SUSEP, available at: www.susep.gov.br	2001-2006
Property	Table 2g. Total Premium paid for Insurance contracts covering Property Risk. Data from SUSEP, according to author's classification.	SUSEP, available at: www.susep.gov.br	2001-2006
Commercial	Table 2g. Total Premium paid for Insurance contracts covering Commercial Risk. Data from SUSEP, according to author's classification.	SUSEP, available at: www.susep.gov.br	2001-2006
Agriculture	Table 2g. Total Premium paid for Insurance contracts covering Agricultural Risk. Data from SUSEP, according to author's classification.	SUSEP, available at: www.susep.gov.br	2001-2006
All premium	Table 2g. Total Premium paid for Insurance contracts covering Social Protection, Liability, Property, Commercial, and Agricultural risks. Data from SUSEP, according to author's classification.	SUSEP, available at: www.susep.gov.br	2001-2006
Smerevnu	Table 3a. Total Revenue of SMEs on each state. Data includes only SMEs in the formal sector, paying federal taxes under the SIMPLES tax system. Data from the Internal revenue services Department. Data in Reais (R\$) at nominal value.	Receita, available at: www.receita.fazenda.gov.br	1998-2003

Reconciliation Table (cont.)

Abbreviations Used in the Regression Table	Complete Definition of Variables Used in the Database	Source	Availability of Data (in years)
#smes	Table 3b. Total Number of SMEs on each state. Data includes only SMEs in the formal sector, paying federal taxes under the SIMPLES tax system. Data from the Internal revenue services Department.	Receita, available at: www.receita.fazenda.gov.br	1998-2003
Startups	Table 3c. Total number of Startups. Data from the State Trade Registries, consolidated by the Ministry of Commerce.	DNRC, available at: www.dnrc.gov.br	1995-2005
Llc	Table 3d. Total number of Startups LLCs. Data from the State Trade Registries, consolidated by the Ministry of Commerce.	DNRC, available at: www.dnrc.gov.br	1995-2005
Pop	Table 4a. Population – Demographic residents. Projections divided by states, from IBGE.	IBGE, available at: www.ibge.gov.br	1995-2006
Gdp	Table 4b. State GDP in Reais (R\$) nominal value. Data from IBGE.	IBGE, available at: www.ibge.gov.br	1995-2004
Tax	Table 4c. State Tax Revenue. Data includes taxes under state jurisdiction, (i.e. excludes federal taxes). Data from IPEA (Institute of Economic Research of the Ministry of Planning) Database.	IPEA, available at: www.ipea.gov.br	1995-2005
Budget	Table 4d. State Budget. Data from IPEA Database. Data in Reais (R\$) at nominal value	IPEA, available at: www.ipea.gov.br	1995-2005, except 1996
Pension	Table 4e. Pension Plan of Public Employees on the state payroll, in Reais, R\$, nominal value. Data from IPEA database	IPEA, available at: www.ipea.gov.br	1995-2005
Houses	Table 4f. Households on each state. Data from IPEA database.	IPEA, available at: www.ipea.gov.br	1995-2005, except 2000
Water	Table 4g. Percentage of households on each state with access to pipe water. Data from IPEA database.	IPEA, available at: www.ipea.gov.br	1995-2005, except 2000
Sewage	Table 4h. Percentage of households with access to sewage system. Data from IPEA database.	IPEA, available at: www.ipea.gov.br	1995-2005, except 2000
Durahous	Table 4i. Percentage of households built with durable materials, on each state. Data from IPEA database.	IPEA, available at: www.ipea.gov.br	1995-2005, except 2000
Educat	Table 4j – Average years of education for adults (25 years of age or older), on each state of Brazil. Data from the IPEA database.	IPEA, available at: www.ipea.gov.br	1995-2005, except 2000
Eletric	Table 4k. Electricity consumption, measured in Megawatts, on each state of Brazil. Data from IPEA Database	IPEA, available at: www.ipea.gov.br	1995-2002

Reconciliation Table (cont.)

Abbreviations Used in the Regression Table	Complete Definition of Variables Used in the Database	Source	Availability of Data (in years)
Rurlend	Table 4l. Financial Intermediation in Rural Operations. It includes lending, investments, and trading. Data from the Central Bank. In Reais (R\$) from the year 2000.	Central Bank, available at: www.bacen.gov.br	1995-2004
Health	Table 4m. Number of people with private health insurance coverage on each state of Brazil.	ANS, available at: www.ans.gov.br	1999-2006
Healprem	Table 4n. Health Insurance premium on each state of Brazil. Data in Reais (R\$) nominal value.	ANS, available at: www.ans.gov.br	1999-2006
Pilot	36 – Pilot's License Loss	SUSEP, available at www.susep.gov.br	2001-2006
Credlife	77 – Credit Life Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Educati	80 – Educational Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Accident	81 – Accident Insurance – INDIVIDUAL	SUSEP, available at www.susep.gov.br	2001-2006
Accidgroup	82 – Accident Insurance – GROUP	SUSEP, available at www.susep.gov.br	2001-2006
Healind	86- Health-Individual (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Healgr	87 – Health-Group (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Lifeind	91 – Life-Individual	SUSEP, available at www.susep.gov.br	2001-2006
Vgbl	92 – VGBL/VAGP/VRGP (Redeemable Life Insurance) – INDIVIDUAL	SUSEP, available at www.susep.gov.br	2001-2006
Lifegrop	93 – Life-Group	SUSEP, available at www.susep.gov.br	2001-2006
Vgblgrop	94 – VGBL/VAGP/VRGP (Redeemable Life Insurance) – GROUP	SUSEP, available at www.susep.gov.br	2001-2006
Vg	97 – VG/APC	SUSEP, available at www.susep.gov.br	2001-2006
Social	total social protection premium	SUSEP, available at www.susep.gov.br	2001-2006
D&O	10 – Directors And Officers Civil Liability (D&O)	SUSEP, available at www.susep.gov.br	2001-2006
Passaut	20 – Private Passengers Auto	SUSEP, available at www.susep.gov.br	2001-2006
Interliab	23 – Civil Liability of the International and Interstate Road Carrier	SUSEP, available at www.susep.gov.br	2001-2006
Extguara	24 – Extended Guarantee	SUSEP, available at www.susep.gov.br	2001-2006

Reconciliation Table (cont.)

Abbreviations Used in the Regression Table	Complete Definition of Variables Used in the Database	Source	Availability of Data (in years)
Cartaver	25 – Carta Verde (auto liability compulsory insurance within Mercosul)	SUSEP, available at www.susep.gov.br	2001-2006
Intmodlb	27 – Civil Liability of the Intermodal Carrier	SUSEP, available at www.susep.gov.br	2001-2006
Liabint	32 – Civil Liability of the Carrier in International Transport – Cargo	SUSEP, available at www.susep.gov.br	2001-2006
Hangar	37 – Hangar Liability Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Railliab	38 – Civil Liability of the Rail Carrier – Cargo	SUSEP, available at www.susep.gov.br	2001-2006
Liabcari	44 – Civil Liability of the Carrier in International Trip – Personal Injury	SUSEP, available at www.susep.gov.br	2001-2006
Genliab	51 – General Liability	SUSEP, available at www.susep.gov.br	2001-2006
Airliab	52 – Civil Liability of the Air Carrier – Cargo	SUSEP, available at www.susep.gov.br	2001-2006
Autofacl	53- Auto Civil Liability – Facultative	SUSEP, available at www.susep.gov.br	2001-2006
Liabroad	54 – Civil Liability of the Road Carrier – Cargo	SUSEP, available at www.susep.gov.br	2001-2006
Cargodev	55 – Civil Liability – Cargo Deviation	SUSEP, available at www.susep.gov.br	2001-2006
Shipowne	56 – Civil Liability – Shipowner	SUSEP, available at www.susep.gov.br	2001-2006
Dpem	57 – DPEM – Personal Injury Caused by Vessels (compulsory)	SUSEP, available at www.susep.gov.br	2001-2006
Dpem	57 – DPEM – Personal Injury Caused by Vessels (compulsory)	SUSEP, available at www.susep.gov.br	2001-2006
Multimod	58 – Civil Liability of the Operator in the Multimodal Transport	SUSEP, available at www.susep.gov.br	2001-2006
Profliab	78 – Professional Liability	SUSEP, available at www.susep.gov.br	2001-2006
Aircraft	84 – Aircraft – Simplified Policy (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Dpvat	88 – DPVAT – Mandatory Personal Injury caused by Motor Vehicle (all types of vehicles)	SUSEP, available at www.susep.gov.br	2001-2006
Dpvat	89 – DPVAT – Mandatory Personal Injury caused by Motor Vehicle (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Liab	total liability	SUSEP, available at www.susep.gov.br	2001-2006
Fire	11 – Fire	SUSEP, available at www.susep.gov.br	2001-2006
Firesimp	12 – Fire – Simplified Policy (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006

Reconciliation Table (cont.)

Abbreviations Used in the Regression Table	Complete Definition of Variables Used in the Database	Source	Availability of Data (in years)
Glass	13 – Glass (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Homowne	14 – Homeowners	SUSEP, available at www.susep.gov.br	2001-2006
Theft	15 – Burglary and Theft	SUSEP, available at www.susep.gov.br	2001-2006
Multcomm	18 – Commercial Multiple Peril	SUSEP, available at www.susep.gov.br	2001-2006
Nattrans	21 – National Transport	SUSEP, available at www.susep.gov.br	2001-2006
Auto	31 – Auto	SUSEP, available at www.susep.gov.br	2001-2006
Maritime	33 – Maritime	SUSEP, available at www.susep.gov.br	2001-2006
Oilrisk	34 – Petroleum Risks	SUSEP, available at www.susep.gov.br	2001-2006
Aircraft	35 – Aircraft	SUSEP, available at www.susep.gov.br	2001-2006
Engineer	67 – Engineering Risks Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Multperi	71 – Múltiple Peril	SUSEP, available at www.susep.gov.br	2001-2006
Nuclear	72 – Nuclear Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Bank	73 – Bank Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Satelite	74 – Satellite Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Firemult	76 – Multiple Peril – Fire And Allied Lines (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Riskabro	79 – Risks Abroad	SUSEP, available at www.susep.gov.br	2001-2006
Condomul	16 – Condominium Multiple Peril	SUSEP, available at www.susep.gov.br	2001-2006
Riot	17 – Riot and Civil Commotion (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Inttrans	22 – International Transport	SUSEP, available at www.susep.gov.br	2001-2006
Lssprofit	41 – Loss of Profit	SUSEP, available at www.susep.gov.br	2001-2006
Lssprofit	42 – Loss of Profit – Simple Coverage (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Fidelity	43 – Fidelity (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006

Reconciliation Table (cont.)

Abbreviations Used in the Regression Table	Complete Definition of Variables Used in the Database	Source	Availability of Data (in years)
Travinsr	69 – Travel Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Specific	96 – Specified And All Risks	SUSEP, available at www.susep.gov.br	2001-2006
Branchab	99 – Branches Abroad	SUSEP, available at www.susep.gov.br	2001-2006
Property	total property premium	SUSEP, available at www.susep.gov.br	2001-2006
Export	19 – Export Credit Insurance – Commercial Risks	SUSEP, available at www.susep.gov.br	2001-2006
Financial	39 – Guarantee Insurance – Financial Obligations	SUSEP, available at www.susep.gov.br	2001-2006
Privoblg	40 – Guarantee Insurance – Private Obligations	SUSEP, available at www.susep.gov.br	2001-2006
Guarant	45 – Guarantee Insurance – Public Obligations	SUSEP, available at www.susep.gov.br	2001-2006
Rent	46 – Rental Surety Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Pubconsc	47 – Guarantee Insurance – Public Concessions	SUSEP, available at www.susep.gov.br	2001-2006
Domestic	48 – Domestic Credit Insurance (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Export	49 – Export Credit Insurance (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
3party	50 – Third-Party Coverage	SUSEP, available at www.susep.gov.br	2001-2006
Political	59 – Export Credit Insurance – Political Risks	SUSEP, available at www.susep.gov.br	2001-2006
Domcomme	60 – Domestic Credit Insurance – Commercial Risks	SUSEP, available at www.susep.gov.br	2001-2006
Mortgagw	66 – Mortgage Insurance (within the Housing Finance System)	SUSEP, available at www.susep.gov.br	2001-2006
Motgago	68 – Mortgage Insurance (out of the Housing Finance System)	SUSEP, available at www.susep.gov.br	2001-2006
Dcredpep	70 – Domestic Credit – Natural Persons Risks	SUSEP, available at www.susep.gov.br	2001-2006
Guarantee	75 – Guarantee (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Random	90 – Random Events	SUSEP, available at www.susep.gov.br	2001-2006
Commercial	total commercial risks premium	SUSEP, available at www.susep.gov.br	2001-2006
Cropwout	01 – Crop Insurance (without Rural Insurance Stability Fund coverage)	SUSEP, available at www.susep.gov.br	2001-2006

Reconciliation Table (cont.)

Abbreviations Used in the Regression Table	Complete Definition of Variables Used in the Database	Source	Availability of Data (in years)
Cropwith	02 – Crop Insurance (with Rural Insurance Stability Fund coverage)	SUSEP, available at www.susep.gov.br	2001-2006
Cattleou	03 – Cattle Insurance (without Rural Insurance Stability Fund coverage)	SUSEP, available at www.susep.gov.br	2001-2006
Cattlewi	04 – Cattle Insurance (with Rural Insurance Stability Fund coverage)	SUSEP, available at www.susep.gov.br	2001-2006
Fishout	05 – Fish Insurance (without Rural Insurance Stability Fund coverage)	SUSEP, available at www.susep.gov.br	2001-2006
Fishwith	06 – Fish Insurance (with Rural Insurance Stability Fund coverage)	SUSEP, available at www.susep.gov.br	2001-2006
Forestou	07 – Forest Insurance (without Rural Insurance Stability Fund coverage)	SUSEP, available at www.susep.gov.br	2001-2006
Fidelity	43 – Fidelity (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Forestw	08 – Forest Insurance (with Rural Insurance Stability Fund coverage)	SUSEP, available at www.susep.gov.br	2001-2006
Rurbond	09 – Rural Bond Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Cattlero	28 – Cattle Insurance (Run off)	SUSEP, available at www.susep.gov.br	2001-2006
Fishoff	29 – Fish Insurance (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Farmownr	30 – Farmowners Multiple Peril (Includes Farming and Cattle Products)	SUSEP, available at www.susep.gov.br	2001-2006
Cropoff	61 – Crop Insurance (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Rurplepr	62 – Rural Pledge Insurance – Private Financial Institutions	SUSEP, available at www.susep.gov.br	2001-2006
Rurplepu	63 – Rural Pledge Insurance – Public Financial Institutions	SUSEP, available at www.susep.gov.br	2001-2006
Animal	64 – Animal Insurance	SUSEP, available at www.susep.gov.br	2001-2006
Forstoff	65 – Forest Multiple Peril (Run Off)	SUSEP, available at www.susep.gov.br	2001-2006
Agricultr	total premium agriculture	SUSEP, available at www.susep.gov.br	2001-2006
Total	total volume of premium, on all lines of risk	SUSEP, available at www.susep.gov.br	2001-2006

9. Bibliographical references

ARIAS, Diego; COVARRUBIAS, Katia. **Agricultural insurance in Mesoamerica**: an opportunity to deepen rural financial markets. Washington DC: Inter-American Development Bank, 2006.

DERCON, Stefan. **Insurance against poverty** – WIDER Studies in Development Economics. Oxford: Oxford University Press, 2005.

DE SOTO, Hernando. **The other path**: the economic answer to terrorism. Reading, Mass.: Perseus Books Group, 2002 (reprint edition).

DE SOTO, Hernando. **The mystery of capital**: why capitalism triumphs in the West and fails everywhere else. New York: Basic Books, 2003 (reprint edition).

HECKMAN, J. Statistical models for discrete panel data. In **Structural analysis of discrete data with econometric applications**, ed. C. Manski and D. McFadden. Cambridge, Mass.: MIT Press, 1981.

ILLMAKUNNAS, Pekka; KANNIAINEN, Vesa. **Entrepreneurship, economic risks, and risk insurance in the welfare state**: results with OECD data 1978-1993. Working Document 356, Munich: Center for Economic Studies and Ifo Institute for Economic Research, 2000. Available at www.cesifo.de.

SADOULET, Loïc. Micro credit repayment insurance: better for the poor, better for the institution." In **Credits markets for the poor**, ed. Patrick Bolton and Howard Rosenthal. Thousand Oaks, Calif.: Sage Publications, 2005

SCHUMPETER, Joseph. **The theory of economic development**: an inquiry into profits, capital, credit, interest, and the business cycle. New Brunswick, N.J.: Transaction Publishers, 1982 (originally published 1915).

TOWNSEND, Robert M. Financial markets and poverty: an algorithm for policy-based research and research-based policy. In **Proceedings of the 2004 Inter-American Development Bank Conference**. Washington DC: Inter-American Development Bank.

WRIGHT, Phillip G. 1928. **The tariff on animal and vegetable oils**. New York: Macmillan.

ANGRIST; KRUEGER. Instrumental variables and the search for identification: from supply and demand to natural experiments. **Journal of Economic Perspectives**, vol. 15, n. 4, fall 2001, p. 69-85.

Websites

www.ans.gov.br
www.bacen.gov.br
www.bndes.gov.br
www.cia.gov
www.dnrc.gov.br
www.fazenda.gov.br
www.funenseg.gov.br
www.globalrisk.com.br
www.iadb.org
www.ibge.gov.br
www.imf.org

www.ipeadata.gov.br
www.receita.fazenda.gov.br
www.sebrae.gov.br
www.susep.gov.br
www.swissre.com
www.tesouro.gov.br
www.worldbank.org

People contacted in the elaboration of this document:

- Araújo, Vera Mello, Director at SUSEP, Rio de Janeiro.
- Conde, Luiz Felipe, Partner at Pellon law firm, based in Rio de Janeiro and New York.
- Costa, Osvaldo, Secretary General for SUSEP, Rio de Janeiro.
- De Carvalho, Raimundo Eloi, general coordinator and head of tax policy at the Internal Revenue Service of the Ministry of Finance, in Brasília, Brazil.
- De Vasconcellos, Aníbal, chief of the "technical group" at SUSEP, Rio de Janeiro, Brazil.
- Lemgruber, Andrea. From the International Monetary Fund, in Washington DC.
- Nohra, Ricardo, Superintendent's Office coordinator for SUSEP, Rio de Janeiro.
- Salles, Olavo, Secretary General Coordinator for SUSEP, Rio de Janeiro.
- Schaimberg, Marcelo, Partner at Brokers' Insurance brokerage firm, Rio de Janeiro.
- Tejerina, Luis, economist at the poverty unity of the IADB, Washington DC.